# DEFENSE

ISSUE 5

# Evolution of The National Defense Structure

★ 1789 War Department established.

★ 1798 Navy Department established.

★ 1942 Joint Chiefs of Staff established.

★ 1947 National Military Establishment created.

★ 1949 Name changed to Department of Defense.

The National Security Act of 1947 created the National Military Establishment, which came into being Sept. 18, 1947. The Army, Navy and Air Force were Cabinet-level executive departments, with the secretary of defense functioning primarily as a coordinator. In 1949, amendments to the National Security Act established the secretary of defense as principal assistant to the president on defense matters and changed the name of the National Military Establishment to the Department of Defense. The amendments also made the military departments subordinate to the Department of Defense and provided for uniform budgetary and fiscal procedures.

Under the Goldwater-Nichols Department of Defense Reorganization Act of 1986, the chain of command runs from the president to the secretary of defense to the unified commanders in chief. Orders and other communications from the president or secretary are transmitted through the chairman of the Joint Chiefs of Staff.

1. Cadets, United States Military Academy
2. Midshipmen, United States Naval Academy
3. Cadets, United States Air Force Academy
4. Cadets, United States Coast Guard Academy
5. Midshipmen, United States Merchant Marine Academy
6. United States Army
7. United States Marine Corps
8. United States Navy
9. United States Air Force
10. United States Coast Guard
11. Army National Guard of the United States
12. Army Reserve
13. Marine Corps Reserve
14. Naval Reserve
15. Air National Guard of the United States
16. Air Force Reserve
17. Coast Guard Reserve
18. Other training organizations of the Army, Marine Corps, Navy, Air Force and Coast Guard, in that order, respectively.

When the Coast Guard operates as part of the Navy, the Cadets of the Coast Guard Academy, the Coast Guard and the Coast Guard Reserve take respective precedence after Naval Academy Midshipmen, the Navy and Naval Reserve.

OASD(P&R)

# DoD at a Glance

## PEOPLE

Active duty forces in the Army, Navy, Marine Corps and Air Force number 1.7 million, with another 1.8 million in the Ready and Standby Reserves, and 1 million civilians.

## PLACES

More than 560 military installations and properties. About 470 of them in the United States, approximately 87 overseas in 20 countries and eight in U.S. territories. Approximately one-third of all active duty personnel are stationed outside of the United States.

## MONEY

Budget authority for fiscal 1993 proposed at about $259.1 billion. Outlays for fiscal 1993 proposed at $275.5 billion. This represents 4.3 percent of gross domestic product, 18.3 percent of federal outlays and 12.1 percent of net public spending. (Figures reflect the president's budget transmitted to Congress in January 1992.)

## ORGANIZATION

The Department of Defense is a Cabinet-level organization. Reporting to it are 16 Defense agencies and the three military departments (Army, Navy and Air Force). The four armed services are subordinate to their military departments. The Marine Corps is the second armed service in the Department of the Navy. (A fifth armed service, the U.S. Coast Guard, reports to the Department of Transportation in peacetime and to the Department of the Navy in wartime.) The military departments are responsible for recruiting, training and equipping their forces, but operational control of those forces in combat is assigned to one of the unified commands, which currently are: U.S. European Command, U.S. Pacific Command, U.S. Atlantic Command, U.S. Southern Command, U.S. Central Command, U.S. Space Command, U.S. Special Operations Command, U.S. Transportation Command and U.S. Strategic Command.

## MAJOR WEAPONS AND COMBAT FORCES *(As of July 31, 1993)*

**918 Intercontinental Ballistic Missiles (USAF)**

**22 Fleet Ballistic Missile Submarines**

**336 Deployed Submarine-Launched Ballistic Missiles**

**10 Air Force Bomber Wings**

**32 (19 Res/ANG) Airlift Wings**

**21 (8 Res) Army Divisions**

**3 (1 Res) Marine Divisions**

**34 (16 ANG/Res) Air Force Fighter Wings**

**11 (2 Res) Navy Carrier Air Wings**

**3 (1 Res) Marine Aircraft Wings**

**12 (1 Training) Aircraft Carriers**

**250 Other Commissioned Naval Surface Vessels**

**88 Navy Attack Submarines**

**33 Ships in the Naval Reserve**

***127 Ships in the Military Sealift Command:***

- **43 Naval Fleet Auxiliary Force (17 Surveillance, 5 Combat Stores, 12 Oilers, 1 Ammunition, 7 Fleet Ocean Tugs, 1 Fleet Ballistic Missile Carrier),**
- **17 Special Mission Vessels (4 Missile Range Instrumentation, 8 Surveying, 1 Navigation Test Support, 2 Cable Repairing, 2 Acoustic Research),**
- **67 Strategic Sealift (16 Chartered Tankers, 14 Chartered Dry Cargo, 13 Maritime Pre-positioning Ships, 12 Afloat Prepositioning Ships, 8 Fast Sealift Ships, 2 Hospital Ships, 2 Aviation Logistics Support Ships).**

**96 Ready Reserve Force Ships (These ships normally are maintained in a reduced operating status by the Maritime Administration. *When activated, the vessels are under the operational control of MSC.)***

**720 (349 Res/ANG) Air Force Airlift Aircraft**

# Office of the Secretary of Defense

*(As of Oct. 1, 1993)*

*Secretary of Defense*
**Les Aspin**

*Under Secretary of Defense for Policy*
**Frank G. Wisner**

*Principal Deputy Under Secretary of Defense for Policy*
**Walter B. Slocombe**

*Comptroller*
**vacant**

*Assistant Secretary of Defense (Regional Security Affairs)*
**Charles W. Freeman Jr.**

*Assistant Secretary of Defense (Nuclear Security and Counterproliferation)*
**Ashton B. Carter**

*Principal Deputy Comptroller*
**Alice C. Maroni**

*Assistant Secretary of Defense (Strategy, Requirements and Resources)*
**Edward L. Warner III**

*Assistant Secretary of Defense (Special Operations/ Low-Intensity Conflict)*
**vacant**

*Director, Program Analysis and Evaluation*
**William J. Lynn III**

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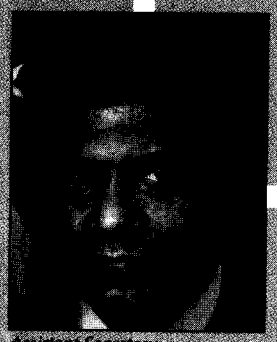
*Deputy Secretary of Defense*
**William J. Perry**



*Assistant Secretary of Defense (Personnel and Readiness)*
**Edwin Dorn**

*Assistant Secretary of Defense (Command, Control, Communications and Intelligence)*
**Emmett Paige Jr.**

*Under Secretary of Defense for Acquisition*
**John M. Deutch**

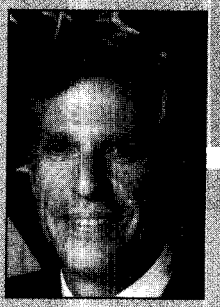
*Principal Deputy Under Secretary of Defense for Acquisition*
**vacant**

*Assistant Secretary of Defense (Reserve Affairs)*
**Deborah R. Lee**

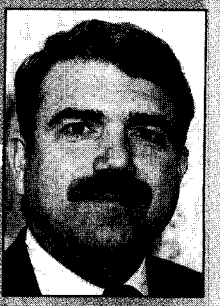
*Director, Defense Research and Engineering*
**Anita K. Jones**

*Assistant Secretary of Defense Economic Security*
**vacant**

*Assistant Secretary of Defense (Health Affairs)*
**vacant**



*Assistant to the Secretary of Defense (Atomic Energy)*
**Harold P. Smith Jr.**



*Deputy Under Secretary of Defense (Acquisition Operations)*
**Larry Caviolla**

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*Assistant Secretary of Defense (Democracy and Peacekeeping)*
**vacant**

*Assistant Secretary of Defense (Policy and Plans)*
**Graham T. Allison**

*Chief Financial Officer**
**vacant**

*Defense Advisor U.S. Mission to NATO*
**vacant**

*Director, Net Assessment*
**Andrew W. Marshall**

*Assistant to the Secretary of Defense (Legislative Affairs)*
**Sandra K. Stuart**

*General Counsel*
**Jamie S. Gorelick**

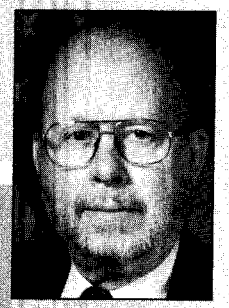
*Assistant to the Secretary of Defense (Public Affairs)*
**Kathleen M. deLaski**

*Executive Secretary of the Department of Defense*
**Col. Robert P. McAleer, USMC**

*The Special Assistant to the Secretary of Defense and Deputy Secretary of Defense*
**Rudy F. de Leon**

*Counselor to the Secretary of Defense and Deputy Secretary of Defense*
**Larry K. Smith**

*Deputy Under Secretary of Defense (Acquisition Reform)*
**Colleen A. Preston**



*Deputy Under Secretary of Defense (Advanced Technology)*
**Larry Lynn**

*Deputy Under Secretary of Defense (Environmental Security)*
**Sherri W. Goodman**

*Deputy Under Secretary of Defense (Logistics)*
**James R. Klugh**

**Per 31 USC 902(a), the Chief Financial Officer reports directly to the head of the agency on financial management matters.*

***Per 10 USC 138(c), the Director of Operational Test and Evaluation reports directly to the Secretary of Defense Personally.*

*Assistant to the Secretary of Defense*
**Vernon Guidry**

*Director of Administration and Management*
**David O. Cooke**

*Director, Operational Test and Evaluation***
**vacant**

*Inspector General (Acting)*
**Derek J. Vander Schaaf**

*Assistant to the Secretary of Defense (Intelligence Oversight)*
**Charles A. Hawkins Jr.**

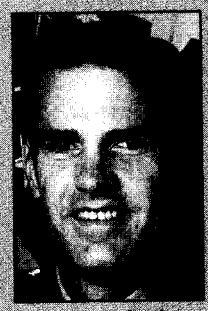
*Special Assistant to the Secretary of Defense for Personnel*
**Shelia R. Helm**

# Defense Agencies
*(As of Oct. 1, 1993)*

**Gary L. Denman**
*Director, Advanced Research Projects Agency*

**Maj. Gen. Malcolm R. O'Neill, USA**
*Director, Ballistic Missile Defense Organization*

**William F. Lackman Jr.**
*Director, Central Imagery Office*



**Maj. Gen. Richard E. Beale Jr., USA**
*Director, Defense Commissary Agency*

**William H. Reed**
*Director, Defense Contract Audit Agency*

**John P. Springett**
*Director, Defense Finance and Accounting Service*

**Lt. Gen. Alonzo E. Short Jr., USA**
*Director, Defense Information Systems Agency*

**Lt. Gen. James R. Clapper Jr., USAF**
*Director, Defense Intelligence Agency*

**John F. Donnelly**
*Director, Defense Investigative Service*

**Jamie S. Gorelick**
*Director, Defense Legal Services Agency*

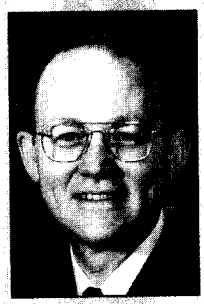
**Vice Adm. Edward M. Straw, USN**
*Director, Defense Logistics Agency*

**Maj. Gen. Raymund E. O'Mara, USAF**
*Director, Defense Mapping Agency*

**Maj. Gen. Kenneth L. Hagemann, USAF**
*Director, Defense Nuclear Agency*

**Lt. Gen. Thomas G. Rhame, USA**
*Director, Defense Security Assistance Agency*

**Vice Adm. John M. McConnell, USN**
*Director, National Security Agency/ Central Security Service*



**Brig. Gen. Gregory G. Govan, USA**
*Director, On-Site Inspection Agency*

# Secretaries of Defense
***1947-Present***

**James V. Forrestal**
*Sept. 17, 1947-*
*March 27, 1949*

**Louis A. Johnson**
*March 28, 1949-*
*Sept. 19, 1950*

**George C. Marshall**
*Sept. 21, 1950-*
*Sept. 12, 1951*

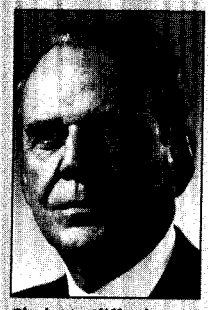
**Robert A. Lovett**
*Sept. 17, 1951-*
*Jan. 20, 1953*

**Charles E. Wilson**
*Jan. 28, 1953-*
*Oct. 8, 1957*

**Neil H. McElroy**
*Oct. 9, 1957-*
*Dec. 1, 1959*

**Thomas S. Gates Jr.**
*Dec. 2, 1959-*
*Jan. 20, 1961*

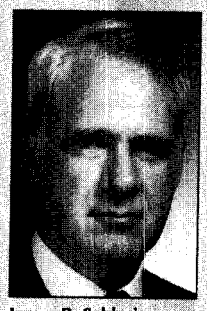
**Robert S. McNamara**
*Jan. 21, 1961-*
*Feb. 29, 1968*



**Clark M. Clifford**
*March 1, 1968-*
*Jan. 20, 1969*

**Melvin R. Laird**
*Jan. 22, 1969-*
*Jan. 29, 1973*

**Elliot L. Richardson**
*Jan. 30, 1973-*
*May 24, 1973*



**James R. Schlesinger**
*July 2, 1973-*
*Nov. 19, 1975*

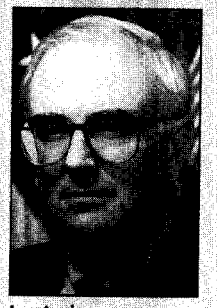
**Donald H. Rumsfeld**
*Nov. 20, 1975-*
*Jan. 20, 1977*

**Harold Brown**
*Jan. 21, 1977-*
*Jan. 20, 1981*

**Caspar W. Weinberger**
*Jan. 21, 1981-*
*Nov. 23, 1987*

**Frank C. Carlucci**
*Nov. 24, 1987-*
*Jan. 20, 1989*

**Dick Cheney**
*March 21, 1989-*
*Jan. 20, 1993*



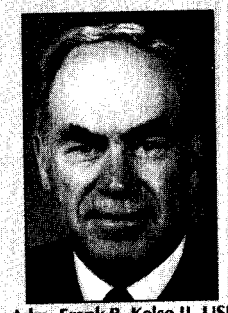
**Les Aspin**
*Jan. 20, 1993-*
*Present*

## The Joint Chiefs of Staff
*(As of Oct. 25, 1993)*

Gen. John M. Shalikashvili, USA
*Chairman*

Adm. David E. Jeremiah, USN
*Vice Chairman*

Gen. Gordon Sullivan, USA


Adm. Frank B. Kelso II, USN

Gen. Merrill A. McPeak, USAF

Gen. Carl Mundy Jr., USMC

Vice Adm. R. C. Macke, USN
*Director, Joint Staff*

Bradley

Radford

Twining

Lemnitzer

Taylor

Wheeler

Moorer

Brown

Jones

Vessey

Crowe

Powell

Shalikashvili

## Chairmen of the Joint Chiefs of Staff
*(1949-Present)*

| | From | To |
|---|---|---|
| General of the Army Omar N. Bradley, USA | August 16, 1949 | August 15, 1953 |
| Adm. Arthur W. Radford, USN | August 15, 1953 | August 15, 1957 |
| Gen. Nathan F. Twining, USAF | August 15, 1957 | September 30, 1960 |
| Gen. Lyman L. Lemnitzer, USA | October 1, 1960 | September 30, 1962 |
| Gen. Maxwell D. Taylor, USA | October 1, 1962 | July 1, 1964 |
| Gen. Earle G. Wheeler, USA | July 3, 1964 | July 2, 1970 |
| Adm. Thomas H. Moorer, USN | July 2, 1970 | July 1, 1974 |
| Gen. George S. Brown, USAF | July 1, 1974 | June 20, 1978 |
| Gen. David C. Jones, USAF | June 21, 1978 | June 18, 1982 |
| Gen. John W. Vessey Jr., USA | June 18, 1982 | September 30, 1985 |
| Adm. William J. Crowe Jr., USN | October 1, 1985 | September 30, 1989 |
| Gen. Colin L. Powell, USA | October 1, 1989 | September 30, 1993 |
| Gen. John M. Shalikashvili, USA | October 25, 1993 | Present |

# Unified Commands

***(As of Oct. 21, 1993)***

Operational control of U.S. combat forces is assigned to the nation's unified commands. The chain of command runs from the president to the secretary of defense to the unified commanders in chief. Orders and other communications from the president or secretary are transmitted through the chairman of the Joint Chiefs of Staff. A unified command is composed of forces from two or more services, has a broad and continuing mission and is normally organized on a geographical basis. The number of unified commands is not fixed by law or regulation and may vary from time to time.

## Commanders in Chief

*U.S. European Command*
*Stuttgart-Vaihingen, Germany*
**Gen. George A. Joulwan, USA**

*U.S. Pacific Command*
*Honolulu, Hawaii*
**Adm. Charles R. Larson, USN**

*U.S. Atlantic Command*
*Norfolk, Va.*
**Adm. Paul David Miller, USN**

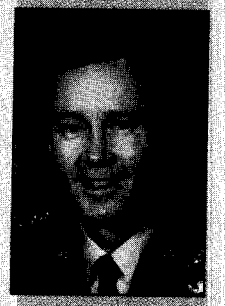
*U.S. Southern Command*
*Quarry Heights,*
*Republic of Panama*
**vacant**

*U.S. Central Command*
*MacDill Air Force Base, Fla.*
**Gen. Joseph P. Hoar, USMC**

*U.S. Space Command*
*Peterson Air Force Base, Colo.*
**Gen. Charles A. Horner, USAF**

*U.S. Special Operations Command*
*MacDill Air Force Base, Fla.*
**Gen. Wayne A. Downing, USA**

*U.S. Transportation Command*
*Scott Air Force Base, Ill.*
**Gen. Ronald R. Fogleman, USAF**

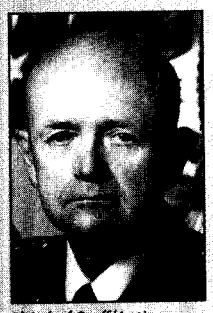


*U.S. Strategic Command*
*Offutt Air Force Base, Neb.*
**Gen. George L. Butler, USAF**

## DoD Field Activities

| ACTIVITY | LOCATION |
|---|---|
| American Forces Information Service | Alexandria, Va. |
| Defense Medical Program Activity | Falls Church, Va. |
| Defense Prisoner of War/Missing In Action Office | Washington, D.C. |
| Defense Technology Security Administration | Arlington, Va. |
| Department of Defense Education Activity | Alexandria, Va. |
| DoD Civilian Personnel Management Service | Washington, D.C. |
| Office of Civilian Health and Medical Program of the Uniformed Services (OCHAMPUS) | Aurora, Colo. |
| Office of Economic Adjustment | Washington, D.C. |
| Washington Headquarters Services | Washington, D.C. |

## Department of the Army
*(As of July 31, 1993)*

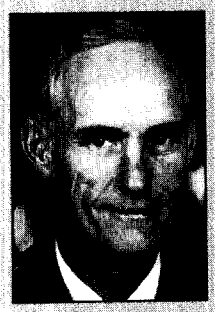


*Secretary of the Army*
**vacant**

*Chief of Staff/Acting Secretary of the Army*
**Gen. Gordon R. Sullivan**

Sergeant Major *of the Army*
**SMA Richard A. Kidd**

## Department of the Air Force
*(As of July 31, 1993)*



*Secretary of the Air Force*
**Sheila E. Widnall**

*Air Force Chief of Staff*
**Gen. Merrill A. McPeak**



*Chief Master Sergeant of the Air Force*
**CMSAF Gary R. Pfingston**

## Major Army Commands

| NAME | LOCATION OF HEADQUARTERS |
|---|---|
| **Army Materiel Command** | Alexandria, Va. |
| **Corps of Engineers** | Washington, D.C. |
| **Criminal Investigation Command** | Falls Church, Va. |
| **Eighth U.S. Army** | Seoul, Korea |
| **Forces Command** | Fort McPherson, Ga. |
| **Health Services Command** | Fort Sam Houston, Tex. |
| **Information Systems Command** | Fort Huachuca, Ariz. |
| **Intelligence and Security Command** | Fort Belvoir, Va. |
| **Military District of Washington** | Fort Lesley J. McNair, D.C. |
| **Military Traffic Management Command** | Falls Church, Va. |
| **Special Operations Command** | Fort Bragg, N.C. |
| **Training and Doctrine Command** | Fort Monroe, Va. |
| **U.S. Army Europe** | Heidelberg, Germany |
| **U.S. Army Japan** | Camp Zama, Japan |
| **U.S. Army Pacific** | Fort Shafter, Hawaii |
| **U.S. Army South** | Fort Clayton, Panama |

## Major Air Commands

| NAME | LOCATION OF HEADQUARTERS |
|---|---|
| **Air Combat Command** | Langley Air Force Base, Va. |
| **Air Force Intelligence Command** | Kelly Air Force Base, Texas |
| **Air Force Materiel Command** | Wright-Patterson Air Force Base, Ohio |
| **Air Force Space Command** | Peterson Air Force Base, Colo. |
| **Air Force Special Operations Command** | Hurlburt Field, Fla. |
| **Air Mobility Command** | Scott Air Force Base, Ill. |
| **Air Education and Training Command** | Randolph Air Force Base, Texas |
| **Pacific Air Forces** | Hickam Air Force Base, Hawaii |
| **U.S. Air Forces Europe** | Ramstein Air Base, Germany |

## Coast Guard *(As of July 31, 1993)*

*Commandant of the Coast Guard*
**Adm. J. William Kime**

*Master Chief Petty Officer of the Coast Guard*
**MCPOCG Robert J. Lloyd**

## Major Coast Guard Commands

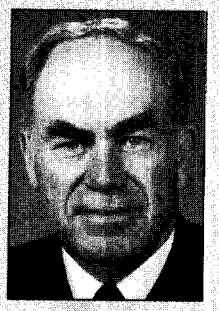
| NAME | LOCATION OF HEADQUARTERS |
|---|---|
| **Coast Guard Headquarters** | Washington, D.C. |
| **Atlantic Area** | New York, N.Y. |
| **Pacific Area** | San Francisco, Calif. |

There are also 10 Coast Guard Districts in the United States.

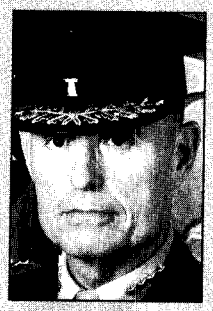
# Department of the Navy

*(As of July 31, 1993)*

*Secretary of the Navy*
**John H. Dalton**

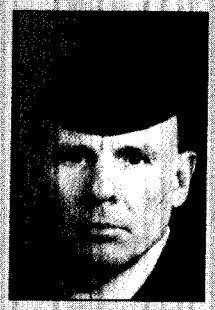


*Chief of Naval Operations*
**Adm. Frank B. Kelso II**



*Commandant of the Marine Corps*
**Gen. Carl E. Mundy Jr.**

*Master Chief Petty Officer of the Navy*
**MCPON John Hagan**



*Sergeant Major of the Marine Corps*
**SGTMAJ Harold G. Overstreet**

## Major Naval Operating Forces

| NAME | LOCATION OF HEADQUARTERS |
|---|---|
| **Pacific Fleet** | Pearl Harbor, Hawaii |
| —Third Fleet | San Diego, Calif. |
| —Seventh Fleet | Yokosuka, Japan |
| **Atlantic Fleet** | Norfolk, Va. |
| —Second Fleet | Norfolk, Va. |
| **U.S. Naval Forces, Europe** | London, England |
| —Sixth Fleet | Gaeta, Italy |
| **Military Sealift Command** | Washington, D.C. |
| **Naval Reserve Force** | New Orleans, La. |
| **Mine Warfare Command** | Ingleside, Texas |
| **Operational Test and Evaluation Force** | Norfolk, Va. |
| **Naval Forces Southern Command** | Rodman, Panama |
| **Naval Forces Central Command** | Pearl Harbor, Hawaii |
| —Middle East Force | Manama, Bahrain |
| **Naval Special Warfare Command** | Coronado, Calif. |

## Major Marine Corps Commands

| NAME | LOCATION OF HEADQUARTERS |
|---|---|
| **Fleet Marine Force, Atlantic** | Norfolk, Va. |
| **Fleet Marine Force, Pacific** | Camp H.M. Smith, Hawaii |
| **Marine Corps Combat Development Command** | Quantico, Va. |
| **Marine Corps Systems Command** | Quantico, Va. |
| **I Marine Expeditionary Force** | Camp Pendleton, Calif. |
| **II Marine Expeditionary Force** | Camp Lejeune, N.C. |
| **III Marine Expeditionary Force** | Camp Butler, Okinawa |
| **Marine Corps Air-Ground Combat Center** | Twentynine Palms, Calif. |

## Naval Shore Establishments

| | |
|---|---|
| **Bureau of Medicine and Surgery** | Washington, D.C. |
| **Bureau of Naval Personnel** | Washington, D.C. |
| **Naval Air Systems Command** | Washington, D.C. |
| **Naval Data Automation Command** | Washington, D.C. |
| **Naval Doctrine Command** | Norfolk, VA. |
| **Naval Education and Training Command** | Pensacola, Fla. |
| **Naval Facilities Engineering Command** | Alexandria, Va. |
| **Naval Intelligence Command** | Washington, D.C. |
| **Naval Legal Service Command** | Alexandria, Va. |
| **Naval Oceanography Command** | Bay St. Louis, Miss. |
| **Naval Sea Systems Command** | Washington, D.C. |
| **Naval Security and Investigative Command** | Washington, D.C. |
| **Naval Security Group Command** | Washington, D.C. |
| **Naval Space Command** | Dahlgren, Va. |
| **Naval Supply Systems Command** | Washington, D.C. |
| **Naval Telecommunications Command** | Washington, D.C. |
| **Space and Naval Warfare Systems Command** | Washington, D.C. |

**(As of July 31, 1993)**

## Senate

### DEMOCRATS

**SAM NUNN**, GEORGIA, CHAIRMAN
**J. James Exon**, Nebraska
**Carl Levin**, Michigan
**Edward M. Kennedy**, Massachusetts
**Jeff Bingaman**, New Mexico
**John Glenn**, Ohio
**Richard C. Shelby**, Alabama
**Robert C. Byrd**, West Virginia
**Bob Graham**, Florida
**Charles S. Robb**, Virginia
**Joseph I. Lieberman**, Connecticut

### REPUBLICANS

**Strom Thurmond**, South Carolina
**John W. Warner**, Virginia
**William S. Cohen**, Maine
**John McCain**, Arizona
**Trent Lott**, Mississippi
**Dan Coats**, Indiana
**Robert C. Smith**, New Hampshire
**Dirk Kempthorne**, Idaho
**D.M. (Lauch) Faircloth**, North Carolina

## House of Representatives

### DEMOCRATS

**RON V. DELLUMS**, CALIFORNIA, CHAIRMAN
**G. V. (Sonny) Montgomery**, Mississippi
**Patricia Schroeder**, Colorado
**Earl Hutto**, Florida
**Ike Skelton**, Missouri
**Dave McCurdy**, Oklahoma
**Marilyn Lloyd**, Tennessee
**Norman Sisisky**, Virginia
**John M. Spratt Jr.**, South Carolina
**Frank McCloskey**, Indiana
**Solomon P. Ortiz**, Texas
**George J. Hochbrueckner**, New York
**Owen B. Pickett**, Virginia
**H. Martin Lancaster**, North Carolina
**Lane Evans**, Illinois
**James H. Bilbray**, Nevada
**John S. Tanner**, Tennessee
**Glen Browder**, Alabama
**Gene Taylor**, Mississippi
**Neil Abercrombie**, Hawaii
**Thomas H. Andrews**, Maine
**Chet Edwards**, Texas
**Don Johnson**, Georgia
**Frank Tejeda**, Texas
**David S. Mann**, Ohio
**Bart Stupak**, Michigan
**Martin T. Meehan**, Massachusetts
**Robert A. Underwood**, Guam
**Jane, Harman**, California
**Paul McHale**, Pennsylvania
**Tim Holden**, Pennsylvania
**Pete Geren**, Texas
**Elizabeth Furse**, Oregon
**Sam Farr**, California

### REPUBLICANS

**Floyd Spence**, South Carolina
**Bob Stump**, Arizona
**Duncan Hunter**, California
**John R. Kasich**, Ohio
**Herbert H. Bateman**, Virginia
**James V. Hansen**, Utah
**Curt Weldon**, Pennsylvania
**Jon Kyl**, Arizona
**Arthur Ravenel Jr.**, South Carolina
**Robert K. Dornan**, California
**Joel Hefley**, Colorado
**Ronald K. Machtley**, Rhode Island
**H. Jim Saxton**, New Jersey
**Randy Cunningham**, California
**James M. Inhofe**, Oklahoma
**Steve Buyer**, Indiana
**Peter G. Torkildsen**, Massachusetts
**Tillie Fowler**, Florida
**John M. McHugh**, New York
**James M. Talent**, Missouri
**Terry Everett**, Alabama
**Roscoe G. Bartlett**, Maryland

**(As of July 31, 1993)**

## Senate

### DEMOCRATS

**DANIEL K. INOUYE**, HAWAII, CHAIRMAN
**Ernest F. Hollings**, South Carolina
**J. Bennett Johnston**, Louisiana
**Robert C. Byrd**, West Virginia
**Patrick J. Leahy**, Vermont
**Jim Sasser**, Tennessee
**Dennis DeConcini**, Arizona
**Dale Bumpers**, Arkansas
**Frank R. Lautenberg**, New Jersey
**Tom Harkin**, Iowa

### REPUBLICANS

**Ted Stevens**, Alaska
**Alfonse M. D'Amato**, New York
**Thad Cochran**, Mississippi
**Arlen Specter**, Pennsylvania
**Pete V. Domenici**, New Mexico
**Don Nickles**, Oklahoma
**Phil Gramm**, Texas
**Christopher (Kit) Bond**, Missouri

## House of Representatives

### DEMOCRATS

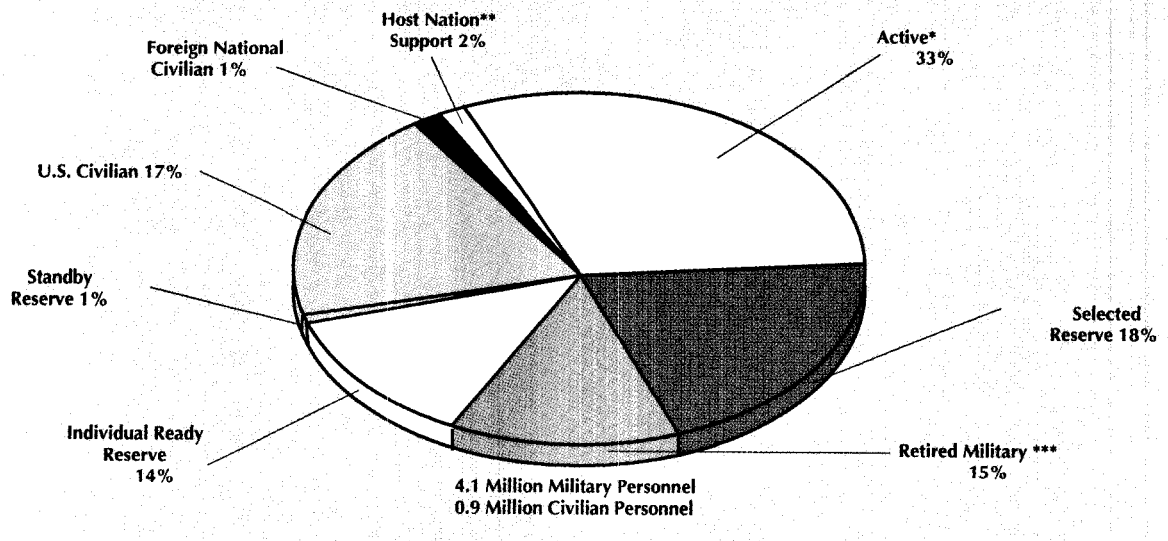
**JOHN P. MURTHA**, PENNSYLVANIA, CHAIRMAN
**Norman D. Dicks**, Washington
**Charles Wilson**, Texas
**W.G. (Bill) Hefner**, North Carolina
**Martin Olav Sabo**, Minnesota
**Julian C. Dixon**, California
**Peter J. Visclosky**, Indiana
**George Darden**, Georgia

### REPUBLICANS

**Joseph M. McDade**, Pennsylvania
**C. W. Bill Young**, Florida
**Bob Livingston**, Louisiana
**Jerry Lewis**, California
**Joe Skeen**, New Mexico

OASD(LA)

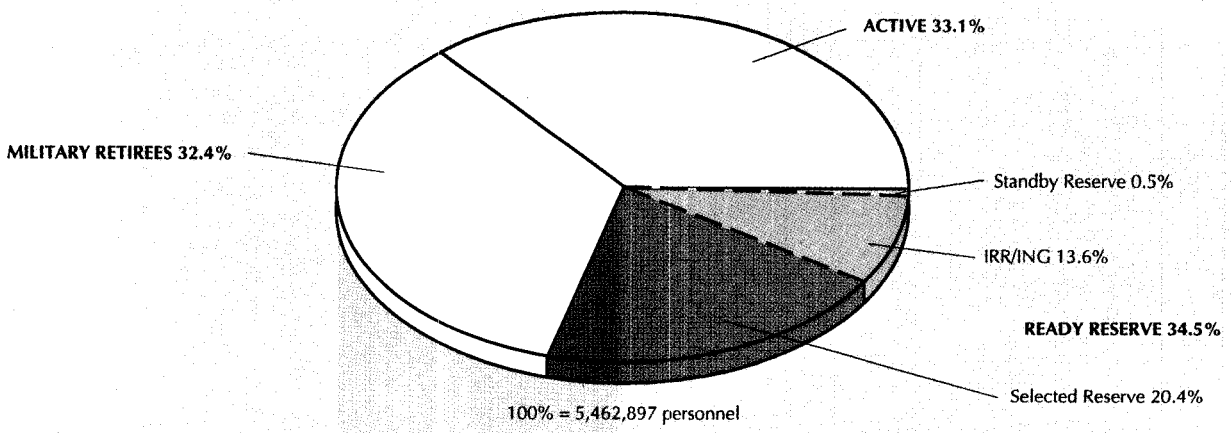
## Partners in the Total Force
*(FY 1994 estimated)*




* Does not include the U.S. Coast Guard.
**Germany only; includes military and civilian personnel.
***Does not include disabled or above age 60.

SecDef Annual Report to Congress

## Total Mobilization Personnel
*(As of Sept. 30, 1992)*




OASD(RA)

## Contributions by Reserve Forces

The objective of DoD's Total Force Policy is to achieve the most cost-effective mix of active duty, reserve, civilian and contract personnel consistent with the requirements of peacetime deployments and responsiveness to war. The United States has always relied on the reserve forces that could be called to active duty or mobilized to deal with emergencies beyond the capabilities of our active forces. The reserve components constitute the initial and primary augmentation of active forces in any emergency requiring rapid expansion of those forces. Following is a list of the contributions made by each reserve component.

Army National Guard and Army Reserve units provide essential combat, combat support and combat service support units to the total Army.

Naval Reserve units are an integral part of most mission areas of the Navy. They include fleet logistics, maritime patrol, carrier and helicopter wings; mobile construction forces; surface combatants; operational and medical support units.

The Marine Reserve Force includes a Marine division, a Marine air wing and a force service support group. These forces provide combat, combat support and combat service support of the same types as the active component.

Air National Guard and Air Force Reserve units perform many combat and combat support missions, including counterair, interdiction, close air support, reconnaissance, strategic airlift, tactical airlift, aerial refueling, aeromedical evacuation, aerospace rescue and recovery, and special operations.

The Coast Guard Reserve augments the Coast Guard in all mission areas and provides the active component with specialized port security elements.

## Contributions by the Army Reserve and Army National Guard to the Total Army

***(As of Sept. 30, 1992)***

| UNIT TYPES | ARMY NATIONAL GUARD No. of Units | ARMY RESERVE No. of Units | COMBINED PERCENT Total Army |
|---|---|---|---|
| Infantry Divisions | 5 | 0 | 100 |
| Training Divisions | 0 | 12 | 100 |
| Chemical Brigades | 1 | 3 | 100 |
| Water Supply Battalions | 2 | 3 | 100 |
| Training Brigades | 0 | 3 | 100 |
| Enemy Prisoner of War Brigades | 0 | 1 | 100 |
| Theater Area Support Groups | 0 | 1 | 100 |
| Heavy Helicopter Units | 3 | 0 | 100 |
| Judge Advocate General Units | 4 | 137 | 100 |
| Civil Affairs Units | 0 | 36 | 97 |
| Petroleum Support Battalions | 7 | 6 | 93 |
| Public Affairs Units | 32 | 26 | 87 |
| Medical Brigades | 3 | 9 | 86 |
| Chemical Battalions | 2 | 9 | 85 |
| Separate Brigades | 10 | 1 | 79 |
| Medical Groups | 3 | 7 | 77 |
| Maintenance Battalions | 21 | 17 | 73 |
| Corps Support Groups | 4 | 15 | 73 |
| Psychological Operations Units | 0 | 36 | 72 |
| Motor Battalions | 10 | 14 | 71 |
| Engineer Battalions (Combat Heavy) | 14 | 17 | 70 |
| Ordinance Battalions | 1 | 5 | 67 |
| Petroleum Groups | 0 | 2 | 67 |
| Theater Defense Brigades | 3 | 1 | 67 |
| Hospitals | 21 | 50 | 66 |
| Engineer Battalions (Combat) | 42 | 16 | 64 |
| Field Artillery Battalions | 95 | 11 | 63 |
| Assault Battalions | 12 | 5 | 61 |
| Terminal Battalions | 0 | 4 | 57 |
| Military Police Battalions | 9 | 7 | 55 |
| Medium Helicopter Battalions | 4 | 2 | 55 |
| Military Police Brigades | 4 | 2 | 55 |
| Corps Support Commands | 2 | 2 | 50 |
| Armor Divisions | 2 | 0 | 50 |
| Area Support Groups | 9 | 8 | 49 |
| Attack Helicopter Battalions | 21 | 3 | 45 |
| Special Forces Groups | 2 | 2 | 44 |
| Aviation Brigades | 15 | 0 | 41 |
| Signal Battalions | 31 | 4 | 40 |
| Theater Army Area Commands | 0 | 2 | 40 |
| Armored Cavalry Regiments | 2 | 0 | 40 |
| Military Intelligence Battalions | 7 | 15 | 39 |
| Air Defense Brigades | 3 | 0 | 33 |
| Air Defense Battalions | 17 | 0 | 33 |
| Mechanized Divisions | 2 | 0 | 29 |
| Engineer Battalions (Topographical) | 1 | 0 | 25 |
| Light Infantry Divisions | 1 | 0 | 20 |

**Notes:** Percentages determined by counting like-type units.
Army National Guard, Army Reserve, and Army (DAMO-FDF).

## Contributions by the Naval Reserve To the Total Navy

*(As of Sept. 30, 1992)*

| UNIT TYPES | No. of Units | PERCENT NAVY |
|---|---|---|
| Logistic Aircraft Squadrons (U.S. Based) | 13 | 100 |
| Mobile Inshore Undersea Warfare Units | 28 | 100 |
| Strike Rescue/Special Warfare Support Helo. Sq. | 2 | 100 |
| Naval Control of Shipping (Military Personnel) | 2,477 | 99 |
| Cargo Handling Battalions | 13 | 93 |
| Mobile Construction Battalions | 16 | 68 |
| Intelligence Program Personnel | 5,030 | 60 |
| Mobile Diving & Salvage Units | 14 | 60 |
| Special Boat Units | 4 | 57 |
| Ocean Minesweepers | 6 | 55 |
| Fighter Composite/Service Squadrons (U.S. Based) | 2 | 50 |

| UNIT TYPES | No. of Units | PERCENT NAVY |
|---|---|---|
| Mobile Mine Assembly Groups | 23 | 48 |
| Fleet Hospitals | 7 | 47 |
| Airborne Mine Countermeasures | 2 | 40 |
| Frigates (FFG-7s/FF-1052s) | 24 | 40 |
| Maritime Air Patrol Squadrons | 13 | 39 |
| LAMPS MK-I Anti-Submarine Warfare Squadrons | 3 | 33 |
| Explosive Ordnance Disposal Units | 5 | 32 |
| Naval Special Warfare Units | 17 | 28 |
| Carrier Air Wings | 2 | 14 |
| Amphibious Warfare Ships | 3 | 5 |

Percentages determined by counting like-type units or personnel.
Naval Reserve

## Contributions by the Marine Corps Reserve To the Total Marine Corps

*(As of Sept. 30, 1992)*

| UNIT TYPES* | No. of Units | PERCENT USMC |
|---|---|---|
| Civil Affairs Group | 2 | 100 |
| Air-Naval Gunfire Liaison Companies | 2 | 50 |
| Tank Battalions | 2 | 50 |
| Force Reconnaissance Companies | 2 | 40 |
| Light Armored Infantry Battalions | 1 | 33 |

| UNIT TYPES* | No. of Units | PERCENT USMC |
|---|---|---|
| Infantry Regiments | 3 | 25 |
| Engineer Support Battalions | 1 | 25 |
| Landing Support Battalions | 1 | 25 |
| Artillery Regiments | 1 | 25 |

* Percentages determined by counting like-type units.

| AIRCRAFT TYPES** | No. of Units | PERCENT USMC |
|---|---|---|
| Marine Air Control Group | 1 | 25 |
| Marine Wing Communications Squadron | 2 | 40 |
| Firing Battery | 2 | 33 |
| Headquarters and Headquarters Squadron | 1 | 25 |
| Marine Air Support Squadron | 1 | 25 |
| Low Altitude Air Defense Battalion | 1 | 25 |
| Light Antiaircraft Missile Battalion | 1 | 25 |
| Firing Battery | 2 | 25 |
| Marine Air Control Squadron | 1 | 14 |
| Marine Air Traffic Control Detachment | 1 | 8 |
| Marine Wing Support Group | 1 | 25 |
| Headquarters and Headquarters Squadron | 1 | 25 |
| Marine Wing Support Squadron | 4 | 25 |

| AIRCRAFT TYPES ** | No. of Units | PERCENT USMC |
|---|---|---|
| Marine Aircraft Wing | 1 | 25 |
| Marine Aerial Refueler Transport Squadron | 2 | 33 |
| Marine Wing Headquarters Squadron | 1 | 25 |
| Marine Aircraft Group | 4 | 25 |
| Adversary Squadron | 1 | 100 |
| Marine Observation Squadron | 1 | 33 |
| Marine Aviation Logistics Squadron | 4 | 25 |
| Marine Light Attack Helicopter Squadron | 2 | 22 |
| Marine Fighter/Attack Squadron | 4 | 21 |
| Marine Attack Squadron | 2 | 17 |
| Marine Medium Helicopter Squadron | 2 | 11 |
| Marine Heavy Helicopter Squadron | 1 | 9 |

** Percentages determined by counting primary authorized aircraft.
Marine Corps Reserve

## Contributions by the Air National Guard and Air Force Reserve to the Total Air Force

*(As of Sept. 30, 1992)*

| UNIT TYPES | AIR NATIONAL GUARD: TOTAL NUMBER OF UNITS | AIR FORCE RESERVE: TOTAL NUMBER OF UNITS | COMBINED PERCENT OF TOTAL AIR FORCE |
|---|---|---|---|
| **FLYING UNITS** | | | |
| **Aircraft*** | | | |
| Aerial Spraying | 0 | 8 | 100 |
| Strategic Interceptor Force (U.S. based) | 234 | 0 | 100 |
| Weather Reconnaissance | 0 | 8 | 100 |
| Tactical Reconnaissance | 84 | 0 | 100 |
| Air Rescue/Recovery | 24 | 22 | 66 |
| Tactical Airlift | 181 | 100 | 62 |
| Tactical Air Support | 24 | 0 | 41 |
| Tactical Fighters | 760 | 237 | 34 |
| Special Operations | 6 | 14 | 29 |
| Support Aircraft | 53 | 0 | 27 |
| Aerial Refueling/Strategic Tankers | 158 | 30 | 25 |
| Strategic Airlift | 23 | 39 | 17 |

*Percentages determined by counting primary authorized aircraft.

| | | | |
|---|---|---|---|
| **Aircrews**** | | | |
| Aeromedical Evacuation | 1,226 | 4,147 | 97 |
| Strategic Airlift (Associate) | 0 | 4,657 | 50 |
| Tanker/Cargo (Associate) | 0 | 1,381 | 43 |
| Aeromedical Evacuation (Associate) | 0 | 237 | 30 |

** Percentages determined by counting authorized personnel.

| | | | |
|---|---|---|---|
| **NON-FLYING UNITS** | | | |
| Aircraft Control & Warning | 3 | 0 | 94 |
| Aerial Port | 23 | 68 | 70 |
| Engineering Installation | 19 | 0 | 70 |
| Combat Communications | 46 | 0 | 69 |
| Combat Logistics Support Squadrons | 0 | 6 | 59 |
| Tactical Control | 37 | 0 | 49 |
| Civil Engineering*** | 98 | 54 | 44 |
| Strategic Airlift Maintenance (Associate) | 0 | 34 | 40 |
| Security Police | 89 | 42 | 24 |
| Medical**** | 92 | 91 | 18 |
| Weather | 34 | 0 | 15 |
| Reconnaissance (Technical) | 2 | 0 | 13 |
| Communications Squadrons | 3 | 34 | 6 |
| Electronic Security | 1 | 2 | 1 |

***Includes Red Horse Units.
****Excludes aeromedical evacuation personnel.
Air National Guard and Air Force Reserve

## Contributions by the Coast Guard Reserve To the Total Coast Guard

*(As of Sept. 30, 1992)*

| UNIT TYPES | No. of Billets | PERCENT USCG |
|---|---|---|
| Deployable Port Security Units | 351 | 100 |
| Marine Safety Office | 3,253 | 55 |
| Operational Shore Facilities | 4,434 | 35 |
| Command & Control | 2,273 | 30 |
| Repair/Supply/Research | 1,362 | 26 |
| Vessels | 1,480 | 13 |
| Air Stations | 84 | 2 |

Percentages determined by counting mobilization billets.
Coast Guard Reserve

## Support to Counterdrugs Financial Summary

*($ in millions—Budget Authority)*

| SUBACTIVITY/ FUNCTIONAL AREA | FY92 Actual | FY93 Estimated | FY94 Proposed |
|---|---|---|---|
| National Guard (State Plans) | 686.3 | 550.5 | 620.9 |
| Communications Network | 6.9 | 5.7 | 3.7 |
| Detection & Monitoring Programs | 166.1 | 193.6 | 188.7 |
| Operating Tempo | 275.7 | 293.1 | 269.0 |
| Demand Reduction | 91.0 | 97.8 | 85.9 |
| Total | 1,226.0 | 1,140.7 | 1,168.2 |

Coordinator for Drug Enforcement Policy and Support

# Money

## The Defense Budget

Budget authority is the authority permitted by federal law to incur financial obligations that will result in outlays. Outlays are a measure of government spending. They represent payments to liquidate obligations, usually by issuing checks or disbursing cash.

DoD's fiscal 1993 budget authority is estimated to be about $259.1 billion, reflecting the fact that Congress reduced the 1992 budget request by $7.6 billion. This leaves fiscal 1993 DoD budget authority, in real terms, 31 percent below fiscal 1985.

DoD's fiscal 1993 outlays are estimated to be $275.5 billion. That drops defense outlays, excluding Operation Desert Shield/Desert Storm, as a share of America's gross domestic product to 4.3 percent.

Figures reflect the president's budget, transmitted to Congress in January 1993.

## DoD's Slice of the Dollar

| | DEFENSE OUTLAYS AS A PERCENTAGE OF | | |
|---|---|---|---|
| FISCAL YEAR | GROSS DOMESTIC PRODUCT* | FEDERAL OUTLAYS | NET PUBLIC SPENDING** |
| 1955 | 9.2 | 51.5 | 35.6 |
| 1960 | 8.2 | 45.0 | 30.3 |
| 1965 | 6.8 | 38.8 | 25.2 |
| 1970 | 7.8 | 39.4 | 25.5 |
| 1975 | 5.6 | 25.5 | 16.5 |
| 1980 | 5.0 | 22.5 | 15.3 |
| 1981 | 5.3 | 23.0 | 15.8 |
| 1982 | 5.9 | 24.5 | 16.7 |
| 1983 | 6.2 | 25.4 | 17.3 |
| 1984 | 6.0 | 25.9 | 17.5 |
| 1985 | 6.2 | 25.9 | 17.6 |
| 1986 | 6.3 | 26.8 | 17.9 |
| 1987 | 6.2 | 27.3 | 17.7 |
| 1988 | 5.9 | 26.5 | 17.6 |
| 1989 | 5.7 | 25.8 | 17.1 |
| 1990*** | 5.3 | 23.1 | 15.6 |
| 1991*** | 5.1 | 21.2 | 14.4 |
| 1992*** | 4.7 | 20.0 | 13.2 |
| 1993*** | 4.3 | 18.3 | 12.1 |

*Data reflects the federal government's recent shift to gross domestic product from gross national product for measuring total purchases of goods and services.
**Federal, state and local net spending excluding government enterprises (such as the U.S. Postal Service and public utilities) except for any support these activities receive from tax funds.
***Excludes Operation Desert Shield/Desert Storm.
SecDef Annual Report to Congress

## Breakout of the Budget

*(Current $ in billions)*

| | BUDGET AUTHORITY | | |
|---|---|---|---|
| APPROPRIATION TITLE | FY 1991* ACTUAL | FY 1992* ESTIMATE | FY 1993 ESTIMATE |
| Military Personnel (includes retired pay) | 84.2 | 81.2 | 76.4 |
| Operation and Maintenance | 117.2 | 93.8 | 85.8 |
| Procurement | 71.7 | 63.0 | 53.8 |
| Research, Development, Test and Evaluation | 36.2 | 36.6 | 38.2 |
| Military Construction | 5.2 | 5.3 | 4.5 |
| Family Housing | 3.3 | 3.7 | 3.9 |
| Defensewide Contingency Revolving and Management Funds | 2.7 | 4.6 | -2.0 |
| Trust and Receipts | -44.3 | -5.7 | -.7 |
| Deduct, Intragov't. Receipt | - .03 | - .6 | -1.0 |
| Total | 276.2 | 281.9 | 259.0 |

*In fiscal 1991-92, increases in budget authority, especially Operation and Maintenance, were due to incremental costs of Operation Desert Shield/Storm. The fiscal 1991-92 rise in receipts reflects offsetting allied contributions.
SecDef Annual Report to Congress

## DoD's Budget by Component

*(Current $ in millions)*

| | BUDGET AUTHORITY | | |
|---|---|---|---|
| | FY 1991** ACTUAL | FY 1992** ACTUAL | FY 1993** ESTIMATE |
| Department of the Army* | 91,825 | 73,636 | 63,569 |
| Department of the Navy* | 103,470 | 90,311 | 82,582 |
| Department of the Air Force* | 91,257 | 82,340 | 78,685 |
| Defense Agencies/OSD/JCS | 21,134 | 29,151 | 21,327 |
| Defensewide | -31,477 | 6,445 | 12,889 |
| Total | 276,208 | 281,883 | 259,052 |

*Figures include retired pay accrual.
**Fiscal 1990-1993 data includes Persian Gulf War incremental costs. Fiscal 1991-93 defensewide entries include appropriations that made available allied cash contributions to offset these incremental costs. In fiscal 1992, $9.1 billion was shifted from the military services to defense agencies/OSD for the new Defense Medical Program. In fiscal 1993, that program is in the defensewide line and totals $9.3 billion.
SecDef Annual Report to Congress

# DoD's Budget for Research, Development, Test and Evaluation

*($ in thousands)*

| | TOTAL OBLIGATIONAL AUTHORITY | | |
|---|---|---|---|
| | FY 1992 ACTUAL | FY 1993 ESTIMATE | FY 1994 ESTIMATE |
| **BY COMPONENT** | | | |
| Army | 6,436,946 | 6,015,110 | 5,249,948 |
| Navy | 8,642,894 | 8,933,536 | 9,215,604 |
| Air Force | 13,139,124 | 13,155,598 | 13,694,984 |
| Defense Agencies | 9,674,405 | 9,800,638 | 10,174,549 |
| Defense Test and Evaluation | 210,225 | 259,021 | 272,592 |
| Defense Operational Test and Evaluation | 12,836 | 12,333 | 12,650 |
| Total | 38,116,430 | 38,176,236 | 38,620,327 |
| **BY RESEARCH AND DEVELOPMENT CATEGORY** | | | |
| Research | 1,145,776 | 1,323,732 | 1,255,869 |
| Exploratory Development | 2,958,521 | 3,610,733 | 3,109,448 |
| Advanced Development | 10,323,765 | 10,843,078 | 9,387,458 |
| Engineering Development | 9,822,550 | 8,885,632 | 8,890,238 |
| Management and Support | 3,043,929 | 2,786,300 | 2,984,669 |
| Research and Development (FYDP Program 6) | 27,294,541 | 27,449,475 | 25,627,682 |
| Operational Systems Development | 10,821,889 | 10,726,761 | 12,992,645 |
| Total | 38,116,430 | 38,176,236 | 38,620,327 |
| **BY BUDGET ACTIVITY** | | | |
| Technology Base | 4,104,297 | 4,920,252 | 4,376,279 |
| Advanced Technology Development | 6,313,808 | 4,052,570 | 3,607,283 |
| Strategic Programs | 4,239,734 | 6,345,017 | 4,776,019 |
| Tactical Programs | 14,313,250 | 14,130,651 | 15,904,245 |
| Intelligence & Communications | 4,920,683 | 4,702,293 | 5,113,163 |
| Defensewide Mission Support | 4,224,658 | 4,025,453 | 4,843,338 |
| Total | 38,116,430 | 38,176,236 | 38,620,327 |
| **BY FUTURE-YEAR DEFENSE PROGRAMS** | | | |
| Strategic Forces | 599,657 | 361,434 | 359,707 |
| General Purpose Forces | 2,808,179 | 2,651,858 | 3,948,007 |
| Intelligence and Communications | 6,885,245 | 7,194,394 | 7,668,894 |
| Airlift/Sealift | 10,975 | 12,082 | 32,172 |
| Research and Development (FYDP Program 6) | 27,294,541 | 27,449,475 | 25,627,682 |
| Central Supply and Maintenance | 209,666 | 262,608 | 51,752 |
| Training Medical and Other | — | — | 1,926 |
| Administration and Associated Activities | 5,309 | 5,135 | 595,169 |
| Support of Other Nations | 3,023 | 3,522 | 3,820 |
| Special Operations Forces | 299,835 | 235,728 | 331,198 |
| Total | 38,116,430 | 38,176,236 | 38,620,327 |

OASD(C)

# Procurement Dollars

*($ in millions)*

| | TOTAL OBLIGATIONAL AUTHORITY | | |
|---|---|---|---|
| | FY 1992 ACTUAL | FY 1993 ESTIMATE | FY 1994 ESTIMATE |
| **ARMY** | | | |
| Aircraft | 1,934.8 | 1,441.4 | 1,110.4 |
| Missiles | 1,083.8 | 1,048.5 | 1,043.6 |
| Weapons, Tracked Combat Vehicles | 1,063.6 | 920.7 | 874.3 |
| Ammunition | 1,384.8 | 1,094.3 | 734.4 |
| Other | 3,171.0 | 3,066.6 | 3,051.3 |
| Chemical Agents and Munitions Destruction | — | — | 433.6 |
| Total | **8,637.9** | **7,571.5** | **7,247.7** |
| **NAVY** | | | |
| Aircraft | 7,137.8 | 5,950.7 | 6,132.6 |
| Weapons | 4,246.0 | 3,716.6 | 3,040.3 |
| Shipbuilding & Conversion | 6,713.3 | 5,853.2 | 4,294.7 |
| Other | 6,102.8 | 5,508.8 | 2,968.0 |
| Marine Corps | 1,052.0 | 824.6 | 483.5 |
| Total | **25,251.9** | **21,854.0** | **16,919.0** |
| **AIR FORCE** | | | |
| Aircraft | 10,086.9 | 10,000.3 | 7,301.0 |
| Missiles | 4,745.2 | 4,334.1 | 4,361.1 |
| Other | 8,719.0 | 7,674.7 | 7,942.1 |
| Total | **23,551.2** | **22,009.0** | **19,604.1** |
| **OTHER** | | | |
| Defense Agencies | 2,503.7 | 1,994.1 | 1,730.2 |
| National Guard & Reserve Equipment | 1,909.8 | 1,567.2 | — |
| Chemical Agents and Munitions Destruction | 374.4 | 518.6 | — |
| Total | **4,787.9** | **4,079.9** | **1,730.2** |
| **TOTAL DoD PROCUREMENT** | **62,228.9** | **55,514.4** | **45,501.0** |

Some totals reflect rounding.
OASD(C)

# Top Defense Contractors

The 100 companies (including their subsidiaries) receiving the largest dollar volume of prime contract awards from the Department of Defense during fiscal 1992.

| NAME | $ IN THOUSANDS |
|---|---|
| 1. McDonnell Douglas Corp. | 5,311,15 |
| 2. Northrop Corp. | 4,851,015 |
| 3. Lockheed Corp. | 4,650,404 |
| 4. General Dynamics Corp. | 4,463,771 |
| 5. General Electric Co. | 4,007,764 |
| 6. General Motors Corp. | 3,694,122 |
| 7. Raytheon Co. | 2,840,686 |
| 8. United Technologies Corp. | 2,802,878 |
| 9. Boeing Co., The | 2,495,191 |
| 10. Martin Marietta Corp. | 2,356,077 |
| 11. Litton Industries Inc. | 2,334,436 |
| 12. Grumman Corp. | 2,182,739 |
| 13. Loral Corp. | 1,815,445 |
| 14. American Telephone & Telegraph Co. | 1,337,587 |
| 15. Rockwell International Corp. | 1,233,435 |
| 16. Textron Inc. | 1,161,072 |
| 17. Bath Holding Corp. | 1,148,372 |
| 18. Westinghouse Electric Corp. | 1,147,210 |
| 19. TRW Inc. | 1,012,521 |
| 20. International Business Machines Corp. | 931,776 |
| 21. Unisys Corp. | 834,011 |
| 22. ITT Corp. | 797,273 |
| 23. Foundation Health Corp. | 761,262 |
| 24. Texas Instruments Inc. | 730,601 |
| 25. GTE Corp. | 724,489 |
| 26. Science Applications International Corp. | 685,606 |
| 27. Alliant Techsystems Inc. | 609,676 |
| 28. Tenneco Inc. | 584,822 |
| 29. Olin Corp. | 573,331 |
| 30. E-Systems Inc. | 500,880 |
| 31. Computer Sciences Corp. | 495,419 |
| 32. Renco Group Inc. | 462,143 |
| 33. Allied Signal Inc. | 458,869 |
| 34. Boeing Co. & Sikorsky Aircraft, Joint Venture | 458,619 |
| 35. CFM International Inc. | 447,648 |
| 36. FMC Corp. | 447,616 |
| 37. Dyncorp | 446,517 |
| 38. Mitre Corp. | 434,253 |
| 39. Johns Hopkins University | 406,267 |
| 40. Teledyne Inc. | 401,602 |
| 41. Massachusetts Institute of Technology | 389,144 |
| 42. Johnson Controls Inc. | 373,738 |
| 43. Oshkosh Truck Corp. | 372,228 |
| 44. Hercules Inc. | 364,165 |
| 45. Motorola Inc. | 353,384 |
| 46. Royal Dutch Shell Group of Companies | 344,473 |
| 47. Gencorp Inc. | 339,078 |
| 48. Harris Corp. | 307,604 |
| 49. Coastal Corp. | 306,543 |
| 50. Exxon Corp. | 306,116 |

| NAME | $ IN THOUSANDS |
|---|---|
| 51. Penn Central Corp. | 297,826 |
| 52. Honeywell Inc. | 296,372 |
| 53. Stewart & Stevenson Services Inc. | 270,414 |
| 54. Harsco Corp. | 264,731 |
| 55. Black & Decker Corp. | 259,951 |
| 56. Atlantic Richfield Company | 258,479 |
| 57. Fed Ex/Pan Am/Northwest/et al | 256,349 |
| 58. Aerospace Corp. | 253,455 |
| 59. Thiokol Corp. | 245,998 |
| 60. MIP Instandsetzungsbetric | 231,506 |
| 61. EG&G Inc. | 229,430 |
| 62. General Electric Co. PLC | 223,504 |
| 63. BDM Holdings Inc. | 209,348 |
| 64. NV Philips Gloeilampenfabreikn | 199,224 |
| 65. National Steel & Shipbuilding Co. | 197,300 |
| 66. Montecatini Edison Spa In Abbr | 197,270 |
| 67. Logicon Inc. | 197,157 |
| 68. CAE Industries Ltd. | 196,060 |
| 69. Ceridian Corporation | 195,749 |
| 70. Astronautics Corp. of America | 192,035 |
| 71. ESCO Electronics Corp. | 186,818 |
| 72. Halliburton Co. | 185,876 |
| 73. Avondale Industries Inc. | 173,080 |
| 74. World/Rosen/Key/Amer/et al, Joint Venture | 169,054 |
| 75. Tracor Inc. | 167,004 |
| 76. Martin Marietta/Westinghouse, Joint Venture | 163,985 |
| 77. Eastman Kodak Company | 161,972 |
| 78. Southwest Marine Inc. | 161,607 |
| 79. Chrysler Corp. | 156,721 |
| 80. Amoco Corp. | 154,737 |
| 81. CSX Corp. | 143,854 |
| 82. National Program Office | 142,804 |
| 83. Booz Allen & Hamilton Inc. | 141,446 |
| 84. Sequa Corp. | 140,330 |
| 85. International Shipholding Corp. | 136,113 |
| 86. Digital Equipment Corporation | 134,175 |
| 87. Mobil Corp. | 131,554 |
| 88. Forstmann Little & Co. | 130,836 |
| 89. Chevron Corp. | 126,700 |
| 90. Israel Aircraft Industries Ltd. | 126,543 |
| 91. Eaton Corp. | 125,777 |
| 92. Blackstone Group LP | 124,677 |
| 93. Xerox Corp. | 123,714 |
| 94. Duchossois Enterprises Inc. | 123,444 |
| 95. Enserch Corporation | 121,509 |
| 96. Trinity Industries Inc. | 121,360 |
| 97. United Industrial Corp. | 118,687 |
| 98. Arvin Industries Inc. | 117,605 |
| 99. Vinnell Corp. | 116,446 |
| 100. Infotec Development Inc. | 116,392 |

# Where Military Dollars Are Spent

*(FY 1992 Estimated)*
*($ in thousands)*

| State | PERSONNEL COMPENSATION | | | | | PRIME CONTRACT AWARDS | | |
|---|---|---|---|---|---|---|---|---|
| | Civilian Pay | Military Active Duty Pay | Reserve & National Guard Pay | Retired Military Pay | Total Compen-sation | Civil Functions Contracts | Military Functions Contracts | Total Contracts |
| Alabama | 810,761 | 570,886 | 168,881 | 588,477 | 2,139,005 | 208,324 | 1,740,877 | 1,949,201 |
| Alaska | 214,025 | 878,985 | 18,584 | 77,764 | 1,189,358 | 1,257 | 384,050 | 385,307 |
| Arizona | 403,474 | 568,925 | 55,787 | 629,688 | 1,657,874 | 24,664 | 1,921,275 | 1,945,939 |
| Arkansas | 150,507 | 196,104 | 56,879 | 299,576 | 703,066 | 38,995 | 249,096 | 288,091 |
| California | 4,272,645 | 6,332,224 | 348,513 | 3,248,758 | 14,202,140 | 128,095 | 23,715,040 | 23,843,135 |
| Colorado | 442,663 | 967,356 | 143,844 | 636,296 | 2,190,159 | 29,321 | 2,441,992 | 2,471,313 |
| Connecticut | 182,387 | 267,445 | 26,425 | 143,274 | 619,531 | 4,226 | 3,095,218 | 3,099,444 |
| Delaware | 52,398 | 109,630 | 29,073 | 76,075 | 267,176 | 1,406 | 102,072 | 103,478 |
| D. of Columbia | 660,067 | 544,438 | 27,483 | 49,788 | 1,281,776 | 21,349 | 1,524,484 | 1,545,833 |
| Florida | 1,090,641 | 2,553,744 | 128,550 | 2,503,900 | 6,276,835 | 213,484 | 4,781,382 | 4,994,866 |
| Georgia | 1,156,602 | 1,939,017 | 265,751 | 872,894 | 4,234,264 | 30,123 | 3,765,562 | 3,795,685 |
| Hawaii | 682,803 | 1,418,789 | 37,983 | 202,152 | 2,341,727 | 6,029 | 616,699 | 622,728 |
| Idaho | 41,209 | 115,168 | 19,074 | 114,359 | 289,810 | 6,218 | 60,051 | 66,269 |
| Illinois | 587,926 | 705,631 | 116,759 | 364,594 | 1,774,910 | 93,268 | 1,260,282 | 1,353,550 |
| Indiana | 573,387 | 125,380 | 175,806 | 220,871 | 1,095,444 | 3,404 | 1,513,904 | 1,517,308 |
| Iowa | 46,308 | 14,181 | 45,636 | 95,947 | 202,072 | 18,846 | 423,134 | 441,980 |
| Kansas | 204,630 | 636,004 | 119,489 | 225,864 | 1,185,987 | 14,060 | 841,070 | 855,130 |
| Kentucky | 418,008 | 1,091,514 | 85,607 | 247,822 | 1,842,951 | 24,704 | 412,417 | 437,121 |
| Louisiana | 270,370 | 645,191 | 95,184 | 347,165 | 1,357,910 | 343,891 | 860,187 | 1,204,078 |
| Maine | 312,433 | 176,419 | 20,505 | 134,765 | 644,122 | 1,469 | 1,303,499 | 1,304,968 |
| Maryland | 1,565,665 | 920,718 | 116,648 | 619,455 | 3,222,486 | 56,516 | 3,993,768 | 4,050,284 |
| Massachusetts | 396,321 | 217,678 | 122,303 | 256,221 | 992,523 | 98,975 | 5,587,411 | 5,686,386 |
| Michigan | 394,995 | 175,845 | 83,219 | 249,902 | 903,961 | 30,353 | 1,537,764 | 1,568,117 |
| Minnesota | 95,094 | 33,108 | 77,854 | 152,329 | 358,385 | 38,407 | 1,457,181 | 1,495,588 |
| Mississippi | 362,271 | 375,760 | 66,853 | 274,066 | 1,078,950 | 105,713 | 2,461,256 | 2,566,969 |
| Missouri | 638,677 | 472,072 | 133,733 | 377,520 | 1,622,002 | 30,982 | 3,683,123 | 3,714,105 |
| Montana | 40,366 | 97,871 | 18,985 | 75,269 | 232,491 | 821 | 55,247 | 56,068 |
| Nebraska | 128,112 | 363,155 | 27,182 | 155,744 | 674,193 | 13,908 | 282,676 | 296,584 |
| Nevada | 64,386 | 249,097 | 13,162 | 276,015 | 602,660 | 3,878 | 239,430 | 243,308 |
| New Hampshire | 50,956 | 25,060 | 14,216 | 129,192 | 219,424 | 5,487 | 418,909 | 424,396 |
| New Jersey | 889,072 | 293,358 | 123,335 | 295,222 | 1,600,987 | 194,983 | 3,123,793 | 3,318,776 |
| New Mexico | 319,000 | 393,521 | 27,940 | 278,865 | 1,019,326 | 7,930 | 720,209 | 728,139 |
| New York | 571,959 | 690,226 | 172,913 | 374,545 | 1,809,643 | 33,734 | 5,396,069 | 5,429,803 |
| North Carolina | 501,389 | 2,628,905 | 99,947 | 810,475 | 4,040,716 | 14,343 | 1,525,495 | 1,539,838 |
| North Dakota | 55,974 | 220,123 | 18,855 | 32,802 | 327,754 | 13,309 | 132,961 | 146,270 |
| Ohio | 1,213,109 | 402,566 | 123,313 | 442,936 | 2,181,924 | 29,316 | 3,003,710 | 3,033,026 |
| Oklahoma | 742,331 | 801,711 | 99,803 | 391,487 | 2,035,332 | 17,994 | 740,579 | 758,573 |
| Oregon | 100,072 | 32,086 | 44,144 | 255,277 | 431,579 | 62,286 | 143,685 | 205,971 |
| Pennsylvania | 1,538,946 | 255,850 | 281,604 | 528,311 | 2,604,711 | 111,206 | 2,953,511 | 3,064,717 |
| Rhode Island | 163,243 | 171,628 | 19,913 | 82,347 | 437,131 | 281 | 454,290 | 454,571 |
| South Carolina | 588,430 | 1,366,237 | 119,981 | 624,656 | 2,699,304 | 40,898 | 715,220 | 756,118 |
| South Dakota | 39,778 | 143,994 | 17,782 | 52,073 | 253,627 | 8,221 | 74,550 | 82,771 |
| Tennessee | 200,371 | 208,406 | 95,530 | 479,487 | 983,794 | 51,565 | 1,210,545 | 1,262,110 |
| Texas | 1,764,020 | 2,619,316 | 233,009 | 2,399,766 | 7,016,111 | 158,175 | 8,513,618 | 8,671,793 |
| Utah | 675,204 | 159,323 | 80,329 | 134,844 | 1,049,700 | 1,966 | 613,934 | 615,900 |
| Vermont | 19,452 | 5,144 | 14,769 | 36,506 | 75,871 | 555 | 62,472 | 63,027 |
| Virginia | 4,300,128 | 4,854,875 | 114,949 | 1,887,087 | 11,157,039 | 39,853 | 6,530,940 | 6,570,793 |
| Washington | 1,030,936 | 1,270,798 | 118,455 | 884,668 | 3,304,857 | 59,735 | 2,157,397 | 2,217,132 |
| West Virginia | 55,177 | 15,675 | 31,641 | 102,309 | 204,802 | 26,374 | 56,908 | 83,282 |
| Wisconsin | 98,114 | 38,105 | 152,186 | 152,632 | 441,037 | 28,770 | 864,694 | 893,464 |
| Wyoming | 28,371 | 87,537 | 10,945 | 44,424 | 171,277 | 199 | 61,147 | 61,346 |
| **Total U.S.** | **31,205,163** | **39,446,779** | **4,661,311** | **23,936,461** | **99,249,714** | **2,499,866** | **109,784,783** | **112,284,649** |
| Guam | 132,743 | 252,018 | 2,172 | 18,890 | 405,823 | — | 156,298 | 156,298 |
| Puerto Rico | 81,101 | 78,512 | 48,715 | 65,467 | 273,795 | 16,764 | 311,103 | 327,867 |
| Other U.S. Possessions | 26,171 | 67,286 | 3,679 | 6,684 | 103,820 | 7,722 | 269,974 | 277,696 |
| **Sub Total** | **240,015** | **397,816** | **54,566** | **91,041** | **783,438** | **24,486** | **737,375** | **761,861** |
| **Grand Total** | **31,445,178** | **39,844,595** | **4,715,877** | **24,027,502** | **100,033,152** | **2,524,352** | **110,522,158** | **113,046,510** |

WHS

# People

## Active Duty
*(As of March 31, 1993)*

| | |
|---|---|
| Army | 590,324 |
| Navy | 521,947 |
| Marine Corps | 181,877 |
| Air Force | 450,292 |
| **Total DoD** | **1,744,440** |
| Coast Guard | 38,832* |

*Coast Guard figures as of August 1993.
WHS

## Guard & Reserve
*(As of March 31, 1993)*

| | |
|---|---|
| Army | 1,146,556 |
| Navy | 296,881 |
| Marine Corps | 109,615 |
| Air Force | 326,531 |
| **Total DoD** | **1,879,583** |
| Coast Guard | 10,080* |

*Coast Guard figures as of August 1993.
WHS

## Civilian Employees*
*(As of June 30, 1993)*

| | |
|---|---|
| Army | 340,285 |
| Navy | 296,085** |
| Air Force | 207,502 |
| Other | 156,341 |
| **Total DoD** | **1,000,213** |
| Coast Guard | 9,337*** |

*Figures are for direct and indirect hire.
**Includes Marine Corps civilian personnel.
***Coast Guard figures as of August 1993.
WHS

# Active Duty

## Officer, Enlisted Totals
*(As of March 31, 1993)*

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD | Coast Guard |
|---|---|---|---|---|---|---|
| Officers | 91,036 | 67,156 | 18,895 | 84,340 | 261,427 | 7,724 |
| Enlisted | 495,087 | 450,506 | 162,982 | 361,805 | 1,470,380 | 30,417 |
| Academy Cadets | 4,201 | 4,285* | — | 4,147 | 12,633 | 691 |
| **Total** | **590,324** | **521,947** | **181,877** | **450,292** | **1,744,440** | ****38,832** |

* Excludes other naval officer candidates.
**Coast Guard figures as of August 1993.
WHS

## Enlisted Skills and Specialties
*(As of June 30, 1993)*

*(Unofficial figures below are compiled for analytical purposes only.)*

| SKILL/SPECIALTY | NUMBER |
|---|---|
| Electrical/Mechanical Equipment Repair | 288,221 |
| Administration and Clerks | 224,453 |
| Combat | 232,626 |
| Communications and Intelligence | 134,248 |
| Supply and Service Handlers | 125,131 |
| Electronic Equipment Repair | 143,832 |
| Health Care Specialists | 93,847 |
| Craftsmen | 60,571 |
| Other Technical | 34,773 |
| Other | 108,127 |
| **Total** | **1,445,829** |

DMDC

# Active Duty People by Function

*(End Strength in Thousands)*

| | FY 1992 ACTUAL | FY1993 ESTIMATE | FY 1994 ESTIMATE |
|---|---|---|---|
| **STRATEGIC** | | | |
| Offensive Strategic Forces | 58.7 | 40.2 | 34.9 |
| Defensive Strategic Forces | 2.3 | 2.1 | 2.1 |
| Strategic Control and Surveillance Forces | 9.8 | 9.4 | 9.1 |
| Total | **70.8** | **51.7** | **46.2** |
| **TACTICAL/MOBILITY** | | | |
| Land Forces | 453.5 | 439.0 | 415.5 |
| Tactical Air Forces | 166.1 | 160.9 | 152.1 |
| Naval Forces | 196.5 | 190.7 | 177.0 |
| Mobility Forces | 34.8 | 37.1 | 33.2 |
| Total | **850.9** | **827.7** | **777.8** |
| **COMMUNICATIONS/INTELLIGENCE** | | | |
| Intelligence | 31.1 | 32.7 | 30.3 |
| Centrally Managed Communications | 25.7 | 23.7 | 23.0 |
| Total | **56.8** | **56.4** | **53.3** |
| **COMBAT INSTALLATIONS** | **145.8** | **115.9** | **107.4** |
| **FORCE SUPPORT TRAINING** | **46.4** | **41.0** | **38.0** |
| **MEDICAL SUPPORT** | **95.4** | **94.9** | **88.7** |
| **JOINT ACTIVITIES** | | | |
| International Military Organizations | 8.3 | 7.9 | 7.4 |
| Unified Commands | 5.7 | 3.5 | 5.7 |
| Federal Agency Support | 3.0 | 3.3 | 3.1 |
| Joint Chiefs of Staff | 1.0 | 1.0 | 1.0 |
| OSD/Defense Agencies/Activities | 33.6 | 59.1 | 59.1 |
| Total | **51.6** | **74.8** | **76.3** |
| **CENTRAL LOGISTICS** | **17.6** | **17.6** | **16.4** |
| **SERVICE MANAGEMENT HEADQUARTERS** | | | |
| Combat Commands | 11.3 | 8.8 | 8.3 |
| Support Commands | 12.3 | 11.5 | 10.7 |
| Total | **23.6** | **20.3** | **19.0** |
| **RESEARCH AND DEVELOPMENT** | | | |
| Research and Development | 16.4 | 17.0 | 15.9 |
| Geophysical Activities | 8.5 | 7.9 | 7.5 |
| Total | **24.9** | **24.9** | **23.4** |
| **TRAINING AND PERSONNEL** | | | |
| Personnel Support | 30.1 | 29.3 | 27.5 |
| Individual Training | 90.4 | 83.9 | 69.1 |
| Total | **120.5** | **113.2** | **96.6** |
| **SUPPORT ACTIVITIES** | | | |
| Support Installations | 65.5 | 58.6 | 61.8 |
| Centralized Support Activity | 31.1 | 29.6 | 28.3 |
| Total | **96.6** | **88.2** | **90.1** |
| **PROGRAMED MANNING** | **1,600.9** | **1,526.6** | **1,433.2** |
| **UNDISTRIBUTED** | **-12.8** | **-15.4** | **-2.8** |
| **INDIVIDUALS** | | | |
| Transients | 47.2 | 47.1 | 41.9 |
| Prisoners, Patients and Holdees | 11.6 | 9.2 | 8.9 |
| Trainees and Students | 148.2 | 147.9 | 127.2 |
| Cadets and Midshipmen | 13.0 | 12.9 | 12.4 |
| Total | **220.0** | **217.1** | **190.4** |
| **END STRENGTH** | **1,808.1** | **1,728.3** | **1,620.8** |

OASD (P&R)

# Where They Serve

*(As of March 31, 1993)*

***Countries with less than 100 assigned U.S. military members are listed as Other.***

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| **United States, U.S. Territories, Special Locations** | | | | | |
| Continental United States | 401,595 | 250,723 | 134,122 | 338,108 | 1,124,548 |
| Alaska | 9,664 | 1,892 | 50 | 10,862 | 22,468 |
| Hawaii | 18,098 | 11,328 | 8,916 | 4,746 | 43,088 |
| Guam | 42 | 4,897 | 57 | 2,547 | 7,543 |
| Johnston Atoll | 241 | 1 | — | 12 | 254 |
| Marshall Islands | 347 | — | — | — | 347 |
| Puerto Rico | 310 | 3,344 | 127 | 40 | 3,821 |
| Transients | 8,700 | 11,384 | 6,029 | 11,651 | 37,764 |
| Afloat | — | 162,494 | 2,404 | — | 164,898 |
| Other | 71 | 17 | 33 | — | 21 |
| **Total** | **439,014** | **446,096** | **151,705** | **367,987** | **1,404,802** |
| **Europe** | | | | | |
| Belgium | 1,400 | 116 | 32 | 567 | 2,115 |
| Germany | 99,964 | 319 | 115 | 23,183 | 123,581 |
| Greece | 22 | 214 | 64 | 404 | 704 |
| Greenland | — | — | — | 130 | 130 |
| Iceland | 1 | 1,786 | 84 | 1,063 | 2,934 |
| Italy | 3,347 | 5,699 | 148 | 3,323 | 12,517 |
| Netherlands | 635 | 20 | 9 | 1,633 | 2,297 |
| Norway | 35 | 37 | 22 | 118 | 212 |
| Portugal | 35 | 274 | 10 | 1,123 | 1,442 |
| Spain | 16 | 3,250 | 139 | 500 | 3,905 |
| Turkey | 385 | 26 | 18 | 4,021 | 4,450 |
| United Kingdom | 258 | 1,966 | 244 | 12,246 | 14,714 |
| Afloat | — | 14,472 | 98 | — | 14,570 |
| Other | 58 | 40 | 187 | 64 | 349 |
| **Total Europe** | **106,156** | **28,219** | **1,170** | **48,375** | **183,920** |
| **East Asia and Pacific** | | | | | |
| Australia | 8 | 112 | 7 | 266 | 393 |
| Japan | 1,889 | 7,895 | 21,872 | 15,292 | 46,948 |
| Philippines | 15 | 64 | 12 | 23 | 114 |
| Republic of Korea | 26,232 | 325 | 67 | 9,322 | 35,946 |
| Singapore | 4 | 107 | 8 | 37 | 156 |
| Thailand | 49 | 11 | 21 | 34 | 115 |
| Afloat | — | 21,040 | 26 | — | 21,066 |
| Other | 49 | 83 | 57 | 36 | 225 |
| **Total** | **28,246** | **29,637** | **22,070** | **25,010** | **104,963** |
| **North Africa, Near East and South Asia** | | | | | |
| Bahrain | 46 | 313 | 12 | 8 | 379 |
| Diego Garcia | 5 | 1,143 | 85 | 24 | 1,257 |
| Egypt | 1,009 | 33 | 39 | 42 | 1,123 |
| Kuwait | 449 | 9 | 12 | 4 | 474 |
| Saudi Arabia | 728 | 51 | 52 | 189 | 1,020 |
| Afloat | — | 10,940 | 1,972 | — | 12,912 |
| Other | 91 | 22 | 142 | 64 | 319 |
| **Total** | **2,328** | **12,511** | **2,314** | **331** | **17,484** |
| **Sub-Saharan Africa** | | | | | |
| Somalia | 5,907 | — | 3,441 | — | 9,348 |
| Other | 40 | 9 | 241 | 16 | 306 |
| **Total** | **5,947** | **9** | **3,682** | **16** | **9,654** |

continued

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| **Western Hemisphere** | | | | | |
| Bermuda | 1 | 668 | 2 | — | 671 |
| Canada | 14 | 414 | 11 | 104 | 543 |
| Cuba (Guantanamo) | 127 | 1,636 | 454 | 2 | 2,219 |
| Honduras* | 618 | 3 | 13 | 46 | 680 |
| Panama | 7,680 | 515 | 182 | 2,346 | 10,723 |
| Afloat | — | 1,948 | — | — | 1,948 |
| Other | 131 | 151 | 228 | 66 | 576 |
| Total | **8,571** | **5,335** | **890** | **2,564** | **17,360** |
| **Undistributed** | | | | | |
| Ashore | 50 | 82 | 8 | 6,004 | 6,144 |
| Total | **50** | **82** | **8** | **6,004** | **6,144** |
| **Foreign Countries** | | | | | |
| Ashore* | 151,310 | 27,451 | 28,076 | 82,305 | 289,142 |
| Afloat | — | 48,400 | 2,096 | — | 50,496 |
| Other | 12 | — | — | — | — |
| Total | **151,310** | **75,851** | **30,172** | **82,305** | **339,638** |
| **Worldwide** | | | | | |
| Ashore* | 590,324 | 311,053 | 177,377 | 450,292 | 1,529,046 |
| Afloat | — | 210,894 | 4,500 | — | 215,394 |
| Total | **590,324** | **521,947** | **181,877** | **450,292** | **1,744,440** |

*Includes military personnel on TDY to plan and conduct exercises.

* Includes temporarily shore-based.
WHS

## Re-enlistment Rates
*(in Percentages)*

| | FY 82 | FY 83 | FY 84 | FY 85 | FY 86 | FY 87 | FY 88 | FY 89 | FY 90 | FY 91 | FY 92 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FIRST TERM** | | | | | | | | | | | |
| Army | 59 | 45 | 43 | 43 | 41 | 42 | 48 | 49 | 50 | 47 | 34 |
| Navy | 50 | 56 | 58 | 55 | 57 | 55 | 54 | 59 | 58 | 60 | 56 |
| Marine Corps | 34 | 33 | 40 | 35 | 46 | 35 | 26 | 26 | 28 | 19 | 19 |
| Air Force | 57 | 66 | 62 | 54 | 58 | 65 | 55 | 68 | 51 | 59 | 59 |
| DoD Overall | 53 | 52 | 51 | 48 | 49 | 49 | 49 | 53 | 51 | 51 | 46 |
| **CAREER** | | | | | | | | | | | |
| Army | 86 | 86 | 88 | 85 | 85 | 92 | 94 | 92 | 90 | 93 | 75 |
| Navy | 79 | 82 | 80 | 79 | 79 | 77 | 76 | 79 | 79 | 81 | 82 |
| Marine Corps | 76 | 76 | 84 | 83 | 84 | 80 | 76 | 77 | 78 | 72 | 72 |
| Air Force | 90 | 92 | 90 | 89 | 88 | 89 | 88 | 93 | 82 | 87 | 88 |
| DoD Overall | 85 | 86 | 86 | 84 | 84 | 85 | 86 | 87 | 84 | 86 | 83 |

OASD(P&R)

## Where We Get Our Officers
*(FY 1992)*

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| Service Academies | 964 | 894 | 154 | 1,087 | 3,099 |
| ROTC | 2,936 | 1,303 | 283 | 1,942 | 6,464 |
| Officer Candidate School/ Officer Training School | 261 | 696 | 898 | 374 | 2,229 |
| Direct Appointment | 873 | 2,160 | 6 | 1,497 | 4,536 |
| Aviation Training Program | 2 | 404 | — | 2 | 408 |
| Other | 1,196 | — | 317 | 8 | 1,521 |
| Total | **6,232** | **5,457** | **1,658** | **4,910** | **18,257** |

DMDC

## How They Rank: Officers

*(As of March 31, 1993)*

| RANK/GRADE | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| General, Admiral | 11 | 11 | 3 | 11 | 36 |
| Lt. General, Vice Admiral | 41 | 28 | 9 | 32 | 110 |
| Major General, Rear Admiral (Upper Half) | 128 | 82 | 21 | 107 | 338 |
| Brig. General, Rear Admiral (Lower Half) | 176 | 119 | 33 | 153 | 481 |
| Colonel, Captain | 4,296 | 3,699 | 639 | 4,490 | 13,124 |
| Lt. Colonel, Commander | 9,485 | 7,804 | 1,569 | 11,473 | 30,331 |
| Major, Lt. Commander | 15,694 | 13,111 | 3,056 | 16,708 | 48,570 |
| Captain, Lieutenant | 28,520 | 22,780 | 5,844 | 36,205 | 93,349 |
| 1st Lieutenant, Lieutenant Jr. Grade | 10,728 | 9,057 | 3,181 | 8,187 | 31,153 |
| 2nd Lieutenant, Ensign | 8,208 | 7,603 | 2,593 | 6,973 | 25,377 |
| Chief Warrant Officer, W-5 | 47 | — | 9 | — | 56 |
| Chief Warrant Officer, W-4 | 1,893 | 504 | 282 | — | 2,679 |
| Chief Warrant Officer, W-3 | 3,826 | 908 | 501 | — | 5,235 |
| Chief Warrant Officer, W-2 | 5,968 | 1,385 | 835 | — | 8,188 |
| Warrant Officer, W-1 | 2,015 | 65 | 320 | — | 2,400 |
| **Total** | **91,036** | **67,156** | **18,895** | **84,340** | **261,427** |

WHS

## How They Rank: Enlisted

*(As of March 31, 1993)*

| RANK/GRADE | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| E-9 | 3,335 | 4,812 | 1,417 | 3,867 | 13,431 |
| E-8 | 10,911 | 10,038 | 3,469 | 7,765 | 32,183 |
| E-7 | 46,195 | 33,739 | 9,311 | 37,204 | 126,449 |
| E-6 | 75,377 | 78,823 | 14,815 | 53,572 | 222,587 |
| E-5 | 99,516 | 97,635 | 22,759 | 80,806 | 300,716 |
| E-4 | 141,153 | 97,378 | 29,975 | 99,394 | 367,900 |
| E-3 | 57,313 | 64,774 | 50,822 | 45,885 | 218,794 |
| E-2 | 38,661 | 33,708 | 19,462 | 21,696 | 113,527 |
| E-1 | 22,626 | 29,599 | 10,952 | 11,616 | 74,793 |
| **Total** | **495,087** | **450,506** | **162,982** | **361,805** | **1,470,380** |

WHS

## How Old They Are

*(As of June 30, 1993)*

| | ARMY | | NAVY | | MARINE CORPS | | AIR FORCE | | TOTAL DoD | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Off. | Enl. | Off. | Enl. | Off. | Enl. | Off. | Enl. | Off. | Enl. |
| 20 and younger | 12 | 74,692 | 2 | 71,783 | — | 42,495 | — | 38,814 | 14 | 227,784 |
| 21-25 | 11,562 | 171,327 | 9,935 | 153,071 | 3,024 | 67,157 | 9,261 | 100,170 | 33,782 | 491,725 |
| 26-30 | 21,547 | 97,997 | 16,299 | 87,184 | 5,184 | 22,796 | 19,456 | 81,919 | 62,486 | 289,896 |
| 31-35 | 20,520 | 70,671 | 13,293 | 68,192 | 4,059 | 15,306 | 18,203 | 70,769 | 56,075 | 224,938 |
| 36-40 | 18,010 | 49,942 | 12,992 | 42,119 | 3,516 | 9,148 | 17,789 | 49,875 | 52,307 | 151,084 |
| 41-45 | 12,928 | 16,213 | 9,232 | 14,990 | 2,282 | 2,754 | 13,634 | 15,863 | 38,076 | 49,820 |
| 46-50 | 5,645 | 3,723 | 4,321 | 3,233 | 873 | 578 | 5,445 | 2,195 | 16,284 | 9,729 |
| Over 50 | 1,818 | 454 | 1,340 | 356 | 137 | 64 | 1,150 | 98 | 4,445 | 972 |
| Unreported | 213 | 1,043 | 76 | 5 | — | 82 | 27 | 1 | 316 | 1,131 |
| **Total** | **92,255** | **486,062** | **67,490** | **440,933** | **19,075** | **160,380** | **84,965** | **359,704** | **263,785** | **1,447,079** |

DMDC

## High School Diploma

***(Percent Total Active Duty Non-Prior-Service Accessions)***

| | FY 90 | FY 91 | FY 92 | FY 93* |
|---|---|---|---|---|
| Army | 95 | 98 | 100 | 93 |
| Navy | 92 | 96 | 98 | 94 |
| Marines | 95 | 98 | 99 | 97 |
| Air Force | 99 | 99 | 99 | 99 |
| **Total** | **95** | **97** | **99** | **95** |

*Through July 31, 1993.
OASD (P&R)

## DoD Recruiting

***(Percent of Non-Prior-Service Objective Obtained)***

| | FY 90 | FY 91 | FY 92 | FY 93* |
|---|---|---|---|---|
| Army | 102 | 102 | 103 | 100 |
| Navy | 101 | 101 | 100 | 100 |
| Marines | 101 | 101 | 100 | 101 |
| Air Force | 100 | 100 | 100 | 100 |
| **Total** | **101** | **101** | **101** | **100** |

*Through July 31, 1993.
OASD (P&R)

## Non-Prior Service Enlisted Accessions

***(In Thousands)***

| | ARMY | NAVY | MARINES | AIR FORCE | DoD |
|---|---|---|---|---|---|
| FY 81 | 117.9 | 92.0 | 40.9 | 76.9 | 327.8 |
| FY 82 | 120.4 | 79.8 | 38.1 | 67.5 | 305.7 |
| FY 83 | 132.7 | 75.0 | 36.9 | 60.5 | 305.0 |
| FY 84 | 131.7 | 77.9 | 40.2 | 60.0 | 309.8 |
| FY 85 | 119.1 | 82.8 | 34.5 | 65.0 | 301.4 |
| FY 86 | 127.1 | 88.5 | 35.2 | 64.4 | 315.3 |
| FY 87 | 120.5 | 87.8 | 34.0 | 55.0 | 297.3 |
| FY 88 | 105.6 | 90.2 | 35.6 | 41.2 | 272.6 |
| FY 89 | 111.7 | 89.4 | 33.0 | 43.5 | 277.5 |
| FY 90 | 84.4 | 70.5 | 33.2 | 36.0 | 224.1 |
| FY 91 | 74.2 | 67.2 | 29.3 | 30.0 | 200.7 |
| FY 92 | 75.9 | 58.0 | 31.8 | 35.1 | 200.8 |
| FY 93* | 54.1 | 49.5 | 27.9 | 25.8 | 157.3 |

*Through July 31, 1993.
OASD (P&R)

## DoD Active Duty Military Personnel Strength Levels

***(In Thousands)***

| | ARMY | NAVY | MARINES | AIR FORCE | DoD |
|---|---|---|---|---|---|
| FY 81 | 781.4 | 541.4 | 190.6 | 570.3 | 2,083.7 |
| FY 82 | 780.4 | 554.5 | 192.4 | 582.8 | 2,110.1 |
| FY 83 | 779.6 | 558.6 | 194.1 | 592.0 | 2,124.4 |
| FY 84 | 780.2 | 566.1 | 196.2 | 597.1 | 2,139.6 |
| FY 85 | 780.8 | 570.7 | 198.0 | 601.5 | 2,151.0 |
| FY 86 | 781.0 | 581.1 | 198.8 | 608.2 | 2,169.1 |
| FY 87 | 780.8 | 586.8 | 199.5 | 607.0 | 2,174.2 |
| FY 88 | 771.8 | 592.6 | 197.4 | 576.4 | 2,138.2 |
| FY 89 | 769.7 | 592.6 | 197.0 | 570.8 | 2,130.2 |
| FY 90 | 732.4 | 579.4 | 196.7 | 535.2 | 2,043.7 |
| FY 91 | 710.0 | 573.1 | 195.7 | 514.0 | 1,992.8 |
| FY 92 | 606.1 | 536.8 | 184.4 | 166.1 | 1,793.4 |
| FY 93* | 578.2 | 508.4 | 179.4 | 444.7 | 1,710.7 |

* Through June 30, 1993.
OASD (P&R)

## Minorities in Uniform

*(As of June 30, 1993)*

| OFFICERS | BLACK AMERICANS | | HISPANIC AMERICANS | | OTHER* | | TOTAL | |
|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Army | 10,286 | 11.1 | 2,216 | 2.4 | 3,484 | 3.8 | 15,986 | 17.3 |
| Navy | 3,143 | 4.7 | 1,829 | 2.7 | 2,288 | 3.4 | 7,260 | 10.8 |
| Marine Corps | 994 | 5.2 | 571 | 3.0 | 426 | 2.2 | 1,991 | 10.4 |
| Air Force | 4,736 | 5.6 | 1,689 | 2.0 | 2,832 | 3.3 | 9,257 | 10.9 |
| **Total DoD** | **19,159** | **7.3** | **6,305** | **2.4** | **9,030** | **3.4** | **34,494** | **13.1** |

| ENLISTED | BLACK AMERICANS | | HISPANIC AMERICANS | | * | | TOTAL | |
|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Army | 150,258 | 30.9 | 24,110 | 5.0 | 26,258 | 5.4 | 200,626 | 41.3 |
| Navy | 78,451 | 17.8 | 31,535 | 7.2 | 26,225 | 5.9 | 136,211 | 30.9 |
| Marine Corps | 29,173 | 18.2 | 13,392 | 8.4 | 5,637 | 3.5 | 48,202 | 30.1 |
| Air Force | 60,575 | 16.8 | 15,645 | 3.8 | 11,960 | 3.3 | 86,180 | 24.0 |
| **Total DoD** | **318,457** | **22.0** | **82,682** | **5.7** | **70,080** | **4.8** | **471,219** | **32.6** |

*Includes Native Americans, Alaskan Natives and Pacific Islanders.
DMDC

## Education

*(As of June 30, 1993)*

| Officers | |
|---|---|
| Below baccalaureate | 13,131 |
| Baccalaureate only degree | 137,781 |
| Advanced degree | 97,265 |
| Unknown | 15,163 |
| Total | **263,340** |

| Enlisted | |
|---|---|
| No high school diploma or GED | 15,458 |
| High school graduate or GED | 1,302,848 |
| Alternate education credential | 9,365 |
| 1-4 years college (no degree) | 73,614 |
| Baccalaureate degree | 38,321 |
| Advanced degree | 3,406 |
| Unknown | 4,033 |
| Total | **1,447,045** |

DMDC

## Women in Uniform

*(As of June 30, 1993)*

| | Officers | | Enlisted | |
|---|---|---|---|---|
| | No. | Pct. | No. | Pct. |
| Army | 11,305 | 12.3 | 59,785 | 12.3 |
| Navy | 8,308 | 12.3 | 45,383 | 10.3 |
| Marine Corps | 615 | 3.2 | 7,368 | 4.6 |
| Air Force | 12,140 | 14.3 | 54,119 | 15.0 |
| **Total DoD** | **32,368** | **10.5** | **166,655** | **10.6** |

DMDC

## Families...

*(As of March 31, 1993)*

| | MILITARY PERSONNEL | SPOUSES | CHILDREN | PARENTS/ OTHERS | TOTAL DEPENDENTS |
|---|---|---|---|---|---|
| **ARMY** | | | | | |
| **Officers** | 91,036 | 74,114 | 117,486 | 1,300 | 192,900 |
| **Enlisted** | 495,087 | 298,317 | 461,105 | 2,630 | 762,052 |
| **Total** | **586,123** | **372,431** | **578,591** | **3,930** | **954,952** |
| **NAVY** | | | | | |
| **Officers** | 67,156 | 49,357 | 69,469 | 258 | 119,084 |
| **Enlisted** | 450,506 | 245,740 | 347,921 | 3,324 | 596,985 |
| **Total** | **517,662** | **295,097** | **417,390** | **3,582** | **716,069** |
| **MARINES** | | | | | |
| **Officers** | 18,895 | 13,721 | 21,458 | 52 | 35,231 |
| **Enlisted** | 162,982 | 71,859 | 97,391 | 439 | 169,689 |
| **Total** | **181,877** | **85,580** | **118,849** | **491** | **204,920** |
| **AIR FORCE** | | | | | |
| **Officers** | 84,340 | 62,694 | 91,337 | 543 | 154,574 |
| **Enlisted** | 361,805 | 240,205 | 316,631 | 2,501 | 559,337 |
| **Total** | **446,145** | **302,899** | **407,968** | **3,044** | **713,911** |
| **Total DOD** | | | | | |
| **Officers** | 261,427 | 199,886 | 299,750 | 2,153 | 501,789 |
| **Enlisted** | 1,470,380 | 856,121 | 1,223,048 | 8,894 | 2,088,063 |
| **Total** | **1,731,807** | **1,056,007** | **1,522,798** | **11,047** | **2,589,852** |

WHS

## ...And Where They Live

*(Total Dependents as of March 31, 1993)*

| LOCATION | ARMY | NAVY | MARINE CORPS | AIR FORCE | Total DoD |
|---|---|---|---|---|---|
| **Continental U.S.** | 793,974 | 657,210 | 180,456 | 591,324 | 2,222,964 |
| **Alaska** | 9,176 | 1,656 | 43 | 15,021 | 25,896 |
| **Hawaii** | 13,234 | 18,774 | 7,597 | 7,261 | 46,866 |
| **U.S. Territories** | 736 | 8,786 | 171 | 3,157 | 12,850 |
| **Foreign Countries** | 137,832 | 29,643 | 16,653 | 97,148 | 281,276 |
| **Total Worldwide** | **954,952** | **716,069** | **204,920** | **713,911** | **2,589,852** |

WHS

# Guard & Reserve

## Ready Reserve
*(As of May 31, 1993)*

The Ready Reserve is the major source of manpower augmentation for the active force. It includes Selected Reserve units, pretrained individual reservists and a training pipeline. Selected Reserve units are organized, equipped and trained to perform a wartime mission. Members of Selected Reserve units train throughout the year and participate annually in active duty training. Pretrained individual reservists include individual mobilization augmentees, members of the Inactive National Guard and individual ready reservists. The Individual Ready Reserve generally consists of people who have served recently in the active forces or Selected Reserve and have some period of obligated service remaining on their contract. The majority of the members in the Individual Ready Reserve do not participate in organized training.

| | ARMY NATL GUARD | ARMY RESERVE | NAVAL RESERVE | MARINE CORPS RESERVE | AIR NATL GUARD | AIR FORCE RESERVE | TOTAL DoD | COAST GUARD RESERVE |
|---|---|---|---|---|---|---|---|---|
| **Selected Reserve** | | | | | | | | |
| **Officer** | 46,429 | 56,597 | 27,294 | 3,614 | 14,343 | 15,708 | 163,985 | 1,381 |
| **Enlisted** | 361,717 | 224,480 | 105,142 | 37,743 | 103,030 | 62,606 | 894,718 | 8,747 |
| **Total** | **408,146** | **281,077** | **132,436** | **41,357** | **117,373** | **78,314** | **1,058,703** | **10,128** |
| **Individual Ready Reserve/ Inactive National Guard** | | | | | | | | |
| **Officer** | 615 | 67,267 | 20,283 | 5,132 | — | 20,888 | 114,185 | 525 |
| **Enlisted** | 6,841 | 371,697 | 130,645 | 62,613 | — | 96,652 | 668,448 | 7,238 |
| **Total** | **7,456** | **438,964** | **150,928** | **67,745** | **—** | **117,540** | **782,633** | **7,763** |
| **Total Ready Reserve** | | | | | | | | |
| **Officer** | 47,044 | 123,864 | 47,577 | 8,746 | 14,343 | 36,596 | 278,170 | 1,906 |
| **Enlisted** | 368,558 | 596,177 | 235,787 | 100,356 | 103,030 | 159,258 | 1,563,166 | 15,985 |
| **Total** | **415,602** | **720,041** | **283,364** | **109,102** | **117,373** | **195,854** | **1,841,336** | **17,891** |

DMDC

## Standby Reserve
*(As of May 31, 1993)*

The Standby Reserve consists of personnel who have been designated key civilian employees or have a temporary hardship or disability and wish to maintain their military affiliation without being in the Ready Reserve. These individuals have also served in the active component or Selective Reserve and can be mobilized in time of national emergency if necessary.

| | ARMY RESERVE | NAVAL RESERVE | MARINE CORPS RESERVE | AIR FORCE RESERVE | TOTAL DoD | COAST GUARD RESERVE |
|---|---|---|---|---|---|---|
| **Officer** | 402 | 6,347 | 269 | 11,195 | **18,213** | 528 |
| **Enlisted** | 552 | 8,409 | 87 | 978 | **10,026** | 168 |
| **Total** | **954** | **14,756** | **356** | **12,173** | **28,239** | **696** |

Includes active and inactive Standby Reserve.
DMDC

# Selected Reserve People by Function

*(End Strength in Thousands)*

| | FY 1992 ACTUAL | FY 1993 ESTIMATE | FY 1994 ESTIMATE |
|---|---|---|---|
| **STRATEGIC** | | | |
| Offensive Strategic Forces | 15.8 | 16.7 | 19.2 |
| Defensive Strategic Forces | 9.4 | 8.7 | 7.2 |
| Strategic Control and Surveillance | 0.5 | 0.5 | 0.5 |
| Total | 25.7 | 25.9 | 26.9 |
| **TACTICAL/MOBILITY** | | | |
| Land Forces | 623.4 | 617.1 | 576.4 |
| Tactical Air Forces | 77.5 | 76.3 | 73.5 |
| Naval Forces | 67.4 | 65.2 | 52.1 |
| Mobility Forces | 61.8 | 61.5 | 61.0 |
| Total | 830.1 | 820.1 | 763.0 |
| **COMMUNICATIONS/INTELLIGENCE** | | | |
| Intelligence | 4.5 | 4.4 | 3.2 |
| Centrally Managed Communications | 13.1 | 16.1 | 15.4 |
| Total | 17.6 | 20.5 | 18.6 |
| **COMBAT INSTALLATIONS** | 24.0 | 17.8 | 17.5 |
| **FORCE SUPPORT TRAINING** | 1.0 | 0.5 | 0.4 |
| **MEDICAL SUPPORT** | 31.5 | 32.5 | 28.1 |
| **JOINT ACTIVITIES** | | | |
| International Military Organizations | 0.2 | 0.2 | 0.2 |
| Unified Commands | 0.7 | 0.7 | 0.6 |
| Federal Agency Support | 0.0 | 0.1 | 0.1 |
| Joint Staff | 0.0 | 0.0 | 0.0 |
| OSD/Defense Agencies/Activities | 14.2 | 18.1 | 13.8 |
| Total | 15.1 | 19.9 | 14.7 |
| **CENTRAL LOGISTICS** | 7.9 | 7.7 | 7.1 |
| **SERVICE MANAGEMENT HEADQUARTERS** | | | |
| Combat Commands | 2.1 | 1.9 | 1.8 |
| Support Commands | 2.2 | 2.0 | 1.9 |
| Total | 4.3 | 4.0 | 3.7 |
| **RESEARCH AND DEVELOPMENT** | | | |
| Research and Development | 0.6 | 0.6 | 0.6 |
| Geophysical Activities | 1.3 | 1.4 | 1.2 |
| Total | 1.9 | 2.0 | 1.8 |
| **TRAINING AND PERSONNEL** | | | |
| Personnel Support | 5.3 | 4.2 | 3.9 |
| Individual Training | 75.7 | 59.6 | 60.4 |
| Total | 81.0 | 63.8 | 64.3 |
| **SUPPORT ACTIVITIES** | | | |
| Support Installations | 30.4 | 37.6 | 42.3 |
| Centralized Support Activity | 19.9 | 14.2 | 10.3 |
| Total | 50.3 | 51.8 | 52.6 |
| **Programmed Manning** | 1,090.4 | 1,066.5 | 998.7 |
| **Undistributed** | 15.6 | 14.1 | 1.8 |
| **Individuals** | 7.6 | 10.1 | 9.2 |
| **Total End Strength** | 1,113.6 | 1,090.7 | 1,009.7 |

OASD(P&R)

# Selected Reserve: Continuation Rates

The following charts show the percentages of officers and enlisted personnel who continue service in the Selected Reserve from one fiscal year to the next. Thus, continuation rates are not the same as re-enlistment rates, and the two should not be directly compared.

## First Term

*(less than six years' total service)*

| | FY 87 | FY 88 | FY 89 | FY 90 | FY 91 | FY 92 |
|---|---|---|---|---|---|---|
| Army National Guard | 78.8 | 80.3 | 79.1 | 77.2 | 84.7 | 78.5 |
| Army Reserve | 70.4 | 69.5 | 71.1 | 69.2 | 77.3 | 72.0 |
| Naval Reserve | 73.2 | 73.4 | 76.0 | 77.6 | 82.7 | 77.9 |
| Marine Corps Reserve | 75.0 | 77.9 | 77.8 | 79.1 | 83.7 | 81.6 |
| Air National Guard | 87.0 | 88.3 | 88.8 | 89.4 | 90.8 | 88.4 |
| Air Force Reserve | 77.3 | 78.8 | 79.0 | 80.7 | 87.0 | 81.1 |
| **Total DoD** | **76.2** | **76.9** | **77.2** | **76.2** | **82.9** | **77.8** |
| Coast Guard | 75.6 | 71.3 | 82.5 | 83.4 | 82.8 | 77.7 |

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## Career

*(six or more years' total service)*

| | FY 87 | FY 88 | FY 89 | FY 90 | FY 91 | FY 92 |
|---|---|---|---|---|---|---|
| Army National Guard | 88.1 | 89.1 | 88.2 | 87.0 | 89.0 | 84.8 |
| Army Reserve | 84.4 | 84.2 | 86.2 | 84.9 | 87.2 | 83.1 |
| Naval Reserve | 84.8 | 83.2 | 84.1 | 81.6 | 83.3 | 80.5 |
| Marine Corps Reserve | 76.5 | 76.6 | 76.3 | 77.3 | 78.0 | 71.2 |
| Air National Guard | 92.1 | 92.4 | 92.1 | 91.8 | 91.5 | 91.6 |
| Air Force Reserve | 88.5 | 89.4 | 90.1 | 89.4 | 90.9 | 88.3 |
| **Total DoD** | **87.2** | **87.4** | **87.7** | **86.5** | **88.2** | **84.9** |
| Coast Guard | 86.6 | 80.4 | 88.2 | 89.4 | 86.1 | 86.2 |

DMDC

# How Old They Are

*(As of June 30, 1993)*

| | BELOW 21 | 21-25 | 26-30 | 31-35 | 36-40 | 41-45 | 46-50 | Over 50 | Totals |
|---|---|---|---|---|---|---|---|---|---|
| **ArmyNG** | | | | | | | | | |
| Off | 17 | 3,957 | 10,140 | 8,380 | 6,324 | 8,012 | 6,153 | 3,430 | 46,413 |
| Enl | 42,737 | 98,191 | 64,831 | 47,376 | 34,550 | 34,570 | 23,187 | 14,825 | 360,267 |
| **USAR** | | | | | | | | | |
| Off | 530 | 2,073 | 7,504 | 7,978 | 9,638 | 12,881 | 11,206 | 4,664 | 56,474 |
| Enl | 36,917 | 59,106 | 38,756 | 27,145 | 20,158 | 19,700 | 13,058 | 7,466 | 222,306 |
| **USNR** | | | | | | | | | |
| Off | 11 | 123 | 2,601 | 6,835 | 8,012 | 5,670 | 3,002 | 1,102 | 27,356 |
| Enl | 4,205 | 27,487 | 22,378 | 17,636 | 14,284 | 10,945 | 5,682 | 3,275 | 105,892 |
| **USMCR** | | | | | | | | | |
| Off | 0 | 6 | 427 | 1,051 | 1,056 | 605 | 366 | 127 | 3,638 |
| Enl | 7,791 | 20,008 | 5,385 | 2,175 | 971 | 685 | 389 | 108 | 37,512 |
| **AirNG** | | | | | | | | | |
| Off | 1 | 298 | 1,791 | 2,984 | 2,967 | 3,029 | 2,238 | 1,012 | 14,320 |
| Enl | 3,754 | 16,756 | 20,228 | 17,055 | 12,961 | 14,058 | 10,678 | 7,297 | 102,787 |
| **USAFR** | | | | | | | | | |
| Off | 0 | 76 | 1,088 | 3,015 | 3,603 | 3,794 | 3,091 | 1,044 | 15,711 |
| Enl | 998 | 8,691 | 13,347 | 12,200 | 9,318 | 8,481 | 6,011 | 3,827 | 62,873 |
| **USCGR** | | | | | | | | | |
| Off | 0 | 0 | 44 | 196 | 325 | 355 | 289 | 161 | 1,370 |
| Enl | 214 | 1,428 | 1,220 | 1,363 | 1,269 | 1,329 | 1,092 | 737 | 8,652 |
| **TOTAL DoD** | | | | | | | | | |
| Off | **559** | **6,533** | **23,595** | **30,439** | **31,925** | **34,346** | **26,345** | **11,540** | **165,282** |
| Enl | **96,616** | **231,667** | **166,145** | **124,950** | **93,511** | **89,768** | **60,097** | **37,535** | **900,289** |

DMDC

# Civilian Personnel

*(As of June 30, 1993)*

Most civilian employees of the Department of Defense are hired directly by the military departments, the defense agencies or the Office of the Secretary of Defense and the Organization of the Joint Chiefs of Staff and are designated as "direct hire" civilians. In general, salaried personnel are described as "white collar" and wage board personnel are described as "blue collar."

In a few foreign countries, substantial numbers of foreign nationals, who are technically employees of the host country (or an agency of that government), are assigned to work with U.S. forces under contracts or agreements with the host government. These foreign nationals are designated "indirect hire" civilians.

| | ARMY | NAVY/ MARINE CORPS | AIR FORCE | OTHER | TOTAL DoD |
|---|---|---|---|---|---|
| **DIRECT HIRE** | | | | | |
| **Salaried** | 236,944 | 196,486 | 133,189 | 124,290 | 690,909 |
| **Wage Board** | 71,222 | 89,402 | 65,867 | 29,273 | 255,764 |
| **Total** | **308,166** | **285,888** | **199,056** | **153,563** | 946,673 |
| **INDIRECT HIRE** | 32,119 | 10,197 | 8,446 | 2,778 | 53,540 |
| **TOTAL** | **340,285** | **296,085** | **207,502** | **156,341** | **1,000,213** |

WHS

## General Schedule/Merit Pay System (Full-time Employees)

*(As of June 30, 1993)*

| GRADE | ARMY | NAVY | MARINES | AIR FORCE | OTHER DoD | TOTAL DoD |
|---|---|---|---|---|---|---|
| 1 | 71 | 164 | 0 | 182 | 33 | 450 |
| 2 | 715 | 385 | 12 | 329 | 285 | 1,726 |
| 3 | 5,644 | 2,513 | 212 | 2,080 | 3,295 | 13,744 |
| 4 | 21,373 | 10,906 | 928 | 8,232 | 8,003 | 49,442 |
| 5 | 30,678 | 18,702 | 1,781 | 16,961 | 13,403 | 81,525 |
| 6 | 15,689 | 11,388 | 898 | 9,312 | 8,314 | 45,601 |
| 7 | 21,686 | 13,353 | 1,026 | 12,506 | 8,482 | 57,053 |
| 8 | 4,062 | 2,453 | 181 | 1,895 | 1,848 | 10,439 |
| 9 | 23,686 | 16,126 | 1,137 | 17,526 | 8,394 | 66,869 |
| 10 | 2,624 | 2,160 | 136 | 1,259 | 306 | 6,485 |
| 11 | 30,888 | 28,232 | 1,257 | 18,716 | 18,091 | 97,184 |
| 12 | 35,969 | 39,752 | 1,101 | 21,147 | 17,766 | 115,735 |
| 13 | 19,030 | 14,830 | 439 | 10,326 | 7,708 | 52,333 |
| 14 | 8,757 | 6,991 | 219 | 3,983 | 3,781 | 23,731 |
| 15 | 3,247 | 3,090 | 76 | 1,409 | 2,442 | 10,264 |
| **TOTAL** | **224,119** | **171,045** | **9,403** | **125,863** | **102,151** | **632,581** |

All DoD GS/GM 16, 17 and 18 grades have been converted to positions in the Senior Executive Service under provisions of the Civil Service Reform Act of 1978.
DMDC

## Senior Executive Service
*(As of June 30, 1993)*

| | |
|---|---|
| Department of Army | 337 |
| Department of Navy | 411 |
| Department of Air Force | 170 |
| Office of the Secretary of Defense | 508 |
| **Total** | **1,426** |

DMDC

## Wage Supervisor
*(As of June 30, 1993)*

| GRADE | ARMY | NAVY | MARINES | AIR FORCE | OTHER | TOTAL DOD |
|---|---|---|---|---|---|---|
| 1 | 48 | 26 | 3 | 23 | 5 | 105 |
| 2 | 42 | 27 | 2 | 36 | 61 | 168 |
| 3 | 68 | 17 | 4 | 44 | 140 | 273 |
| 4 | 238 | 52 | 14 | 97 | 287 | 688 |
| 5 | 238 | 137 | 20 | 248 | 412 | 1,055 |
| 6 | 252 | 194 | 17 | 315 | 452 | 1,230 |
| 7 | 343 | 199 | 38 | 771 | 367 | 1,718 |
| 8 | 1,158 | 238 | 49 | 844 | 95 | 2,384 |
| 9 | 861 | 476 | 60 | 1,657 | 87 | 3,141 |
| 10 | 1,093 | 3,494 | 143 | 2,063 | 129 | 6,922 |
| 11 | 485 | 639 | 40 | 683 | 101 | 1,948 |
| 12 | 178 | 252 | 19 | 471 | 37 | 957 |
| 13 | 118 | 182 | 5 | 311 | 17 | 633 |
| 14 | 140 | 938 | 17 | 402 | 11 | 1,508 |
| 15 | 129 | 342 | 26 | 192 | 13 | 702 |
| 16 | 75 | 209 | 2 | 119 | 4 | 409 |
| 17 | 34 | 49 | 3 | 58 | — | 144 |
| 18 | 16 | 19 | — | 8 | — | 43 |
| **TOTAL** | **5,516** | **7,490** | **462** | **8,342** | **2,218** | **24,028** |

DMDC

## Wage Leader
*(As of June 30, 1993)*

| GRADE | ARMY | NAVY | MARINES | AIR FORCE | OTHER | TOTAL DOD |
|---|---|---|---|---|---|---|
| 1 | 97 | 3 | — | 1 | — | 101 |
| 2 | 84 | 71 | 5 | 14 | 22 | 196 |
| 3 | 44 | 15 | 1 | 1 | 3 | 64 |
| 4 | 52 | 31 | — | 2 | 182 | 267 |
| 5 | 194 | 121 | 15 | 39 | 509 | 878 |
| 6 | 150 | 136 | 19 | 40 | 143 | 488 |
| 7 | 134 | 167 | 13 | 53 | 242 | 609 |
| 8 | 352 | 223 | 19 | 120 | 30 | 744 |
| 9 | 443 | 282 | 32 | 285 | 17 | 1,059 |
| 10 | 779 | 2,172 | 102 | 833 | 74 | 3,960 |
| 11 | 248 | 372 | 8 | 136 | 29 | 793 |
| 12 | 59 | 46 | 6 | 37 | 3 | 151 |
| 13 | 19 | 119 | — | — | — | 138 |
| 14 | 3 | 43 | — | — | — | 46 |
| 15 | — | 3 | — | — | — | 3 |
| **TOTAL** | **2,658** | **3,804** | **220** | **1,561** | **1,254** | **9,497** |

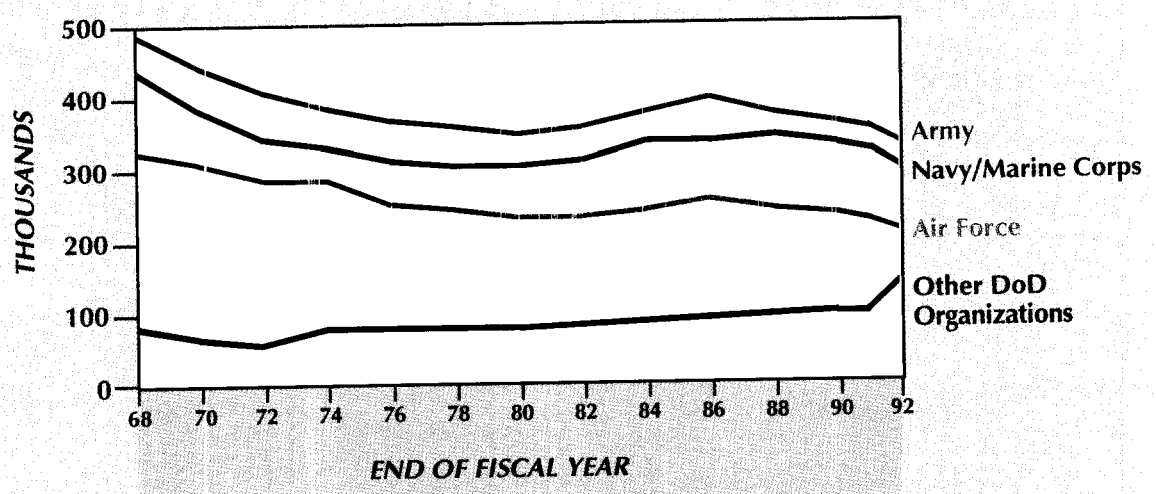
DMDC

## Wage Grade
*(As of June 30, 1993)*

| GRADE | ARMY | NAVY | MARINES | AIR FORCE | OTHER | TOTAL DOD |
|---|---|---|---|---|---|---|
| 1 | 1,465 | 229 | 5 | 197 | 132 | 2,028 |
| 2 | 1,778 | 1,223 | 97 | 963 | 1,158 | 5,219 |
| 3 | 1,096 | 599 | 83 | 513 | 312 | 2,603 |
| 4 | 1,556 | 513 | 27 | 345 | 4,183 | 6,624 |
| 5 | 6,879 | 4257 | 554 | 2,510 | 8,007 | 22,207 |
| 6 | 4,367 | 2,570 | 285 | 2,512 | 4,361 | 14,095 |
| 7 | 3,648 | 3,300 | 597 | 3,069 | 3,776 | 14,390 |
| 8 | 8,694 | 8,813 | 916 | 6,152 | 899 | 25,474 |
| 9 | 8,288 | 4,788 | 638 | 5,491 | 424 | 19,629 |
| 10 | 12,246 | 27,794 | 1,560 | 23,205 | 995 | 65,800 |
| 11 | 5,760 | 5,589 | 344 | 5,639 | 335 | 17,667 |
| 12 | 1,142 | 1,152 | 91 | 5,160 | 65 | 7,610 |
| 13 | 391 | 1,174 | 18 | 530 | 7 | 2,120 |
| 14 | 87 | 374 | — | 130 | — | 591 |
| 15 | 8 | 195 | — | 2 | — | 205 |
| **TOTAL** | **57,405** | **62,570** | **5,215** | **56,418** | **24,654** | **206,262** |

DMDC

## Civilian Personnel Strength Levels




WHS

# Military Retirees

## Their Numbers

*(As of Sept. 30, 1992)*

The following table reflects only those retirees receiving retirement pay from the services.

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| **For longevity** (20 or more years) | 455,872 | 351,750 | 65,394 | 524,986 | 1,398,002 |
| **For disability** | | | | | |
| Temporary | 3,178 | 3,377 | 1,259 | 1,673 | 9,487 |
| Permanent | 51,562 | 25,258 | 10,299 | 33,229 | 120,348 |
| **Total** | **510,612** | **380,385** | **76,952** | **559,888** | **1,527,837** |

DMDC

## Annuitant Trends

Includes retirees (non-disability) and number of families receiving survivor benefits.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| June 1969 | 713,956 | June 1975 | 1,073,017 | Sept 1981 | 1,363,164 | Sept 1987 | 1,535,068 |
| June 1970 | 772,789 | June 1976 | 1,131,835 | Sept 1982 | 1,390,779 | Sept 1988 | 1,566,899 |
| June 1971 | 831,330 | June 1977 | 1,199,501 | Sept 1983 | 1,418,881 | Sept 1989 | 1,601,703 |
| June 1972 | 890,242 | June 1978 | 1,242,764 | Sept 1984 | 1,449,092 | Sept 1990 | 1,633,561 |
| June 1973 | 948,244 | June 1979 | 1,286,315 | Sept 1985 | 1,479,940 | Sept 1991 | 1,667,983 |
| June 1974 | 1,011,524 | Sept 1980 | 1,330,150 | Sept 1986 | 1,506,377 | Sept 1992 | 1,710,596 |

WHS

## Where Military Retirees Live

*(As of Sept. 30, 1992)*

| MAILING ADDRESS | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| Alabama | 20,442 | 5,902 | 1,374 | 14,080 | 41,798 |
| Alaska | 2,131 | 525 | 112 | 3,442 | 6,210 |
| Arizona | 11,837 | 6,304 | 2,362 | 20,210 | 40,713 |
| Arkansas | 7,261 | 4,367 | 892 | 9,665 | 22,185 |
| California | 39,353 | 84,987 | 18,755 | 67,469 | 210,564 |
| Colorado | 14,634 | 4,320 | 1,085 | 19,303 | 39,342 |
| Connecticut | 3,065 | 5,021 | 583 | 2,211 | 10,880 |
| Delaware | 1,305 | 759 | 177 | 3,311 | 5,552 |
| District of Columbia | 2,364 | 652 | 159 | 1,429 | 4,604 |
| Florida | 39,650 | 50,235 | 6,894 | 61,108 | 157,887 |
| Georgia | 32,208 | 8,894 | 2,855 | 17,648 | 61,605 |
| Guam | 418 | 602 | 50 | 360 | 1,430 |
| Hawaii | 5,225 | 3,507 | 876 | 3,178 | 12,786 |
| Idaho | 1,964 | 2,034 | 416 | 3,859 | 8,273 |
| Illinois | 10,099 | 7,064 | 1,644 | 10,639 | 29,446 |
| Indiana | 7,991 | 3,757 | 1,152 | 5,765 | 18,665 |
| Iowa | 3,228 | 2,198 | 507 | 2,618 | 8,551 |
| Kansas | 7,450 | 2,602 | 632 | 5,909 | 16,593 |
| Kentucky | 12,867 | 2,835 | 783 | 4,360 | 20,845 |
| Louisiana | 8,762 | 4,584 | 1,179 | 11,101 | 25,626 |
| Maine | 2,662 | 3,529 | 505 | 3,511 | 10,207 |
| Maryland | 15,020 | 11,215 | 1,779 | 10,953 | 38,967 |
| Massachusetts | 7,455 | 6,245 | 1,283 | 6,598 | 21,581 |
| Michigan | 8,515 | 5,016 | 1,400 | 7,538 | 22,469 |
| Minnesota | 4,734 | 3,412 | 750 | 4,211 | 13,107 |
| Mississippi | 5,995 | 4,822 | 815 | 9,266 | 20,898 |
| Missouri | 11,537 | 5,960 | 1,933 | 9,933 | 29,363 |
| Montana | 1,549 | 1,201 | 301 | 2,705 | 5,756 |
| Nebraska | 2,007 | 1,488 | 290 | 6,667 | 10,452 |
| Nevada | 3,697 | 4,203 | 1,072 | 10,001 | 18,973 |
| New Hampshire | 2,637 | 1,926 | 415 | 3,802 | 8,780 |
| New Jersey | 11,027 | 5,670 | 1,295 | 5,405 | 23,397 |
| New Mexico | 5,008 | 2,551 | 614 | 9,608 | 17,781 |
| New York | 13,964 | 8,111 | 2,270 | 10,560 | 34,905 |
| North Carolina | 24,493 | 9,410 | 7,969 | 14,740 | 56,612 |
| North Dakota | 720 | 360 | 62 | 1,639 | 2,781 |
| Ohio | 11,228 | 6,603 | 2,114 | 15,903 | 35,848 |
| Oklahoma | 12,378 | 3,943 | 1,052 | 12,289 | 29,662 |
| Oregon | 5,347 | 6,289 | 1,302 | 6,239 | 19,177 |
| Pennsylvania | 17,277 | 10,814 | 2,941 | 11,277 | 42,309 |
| Puerto Rico | 6,604 | 302 | 140 | 667 | 7,713 |
| Rhode Island | 1,343 | 3,373 | 251 | 903 | 5,870 |
| South Carolina | 14,924 | 10,806 | 2,447 | 14,385 | 42,562 |
| South Dakota | 1,183 | 572 | 106 | 2,250 | 4,111 |
| Tennessee | 14,783 | 8,405 | 1,977 | 10,652 | 35,817 |
| Texas | 57,076 | 19,771 | 5,175 | 72,763 | 154,785 |
| Utah | 2,774 | 1,539 | 359 | 4,688 | 9,360 |
| Vermont | 1,217 | 584 | 122 | 876 | 2,799 |
| Virginia | 33,105 | 38,811 | 6,355 | 21,322 | 99,593 |
| Virgin Islands | 153 | 50 | 8 | 38 | 249 |
| Washington | 20,377 | 18,499 | 2,037 | 18,947 | 59,860 |
| West Virginia | 3,568 | 2,038 | 616 | 2,677 | 8,899 |
| Wisconsin | 5,636 | 3,230 | 855 | 4,250 | 13,971 |
| Wyoming | 818 | 567 | 111 | 1,892 | 3,388 |
| Other | 10,386 | 7,458 | 741 | 8,905 | 27,490 |
| **TOTAL** | **573,451** | **419,922** | **93,949** | **595,725** | **1,683,047** |

DMDC

# Military Training
## *(FY 1993)*
## Training Loads

"Training loads" are the average number of students and trainees participating in formal individual training and education courses during the fiscal year. For a full fiscal year, training loads are the equivalent of student/trainee man-years for their participants, including both those in temporary duty and permanent change-of-station status.

| WHO TRAINS | |
|---|---|
| **Active Forces** | |
| Army | 54,667 |
| Navy | 48,900 |
| Marine Corps | 18,831 |
| Air Force | 26,112 |
| **Total Active** | **148,510** |
| **Reserve Components** | 32,883 |
| ***Total*** | **181,393** |
| **IN WHAT SKILLS** | |
| Recruit | 36,468 |
| Officer Acquisition | 18,669 |
| Specialized Skill | 100,817 |
| Flight | 3,830 |
| Professional Development | 12,551 |
| One-Station Unit Training | 9,058 |
| **Total** | **181,393** |

OASD(P&R)

## Joint Service Schools

| | |
|---|---|
| **National Defense University**<br>The National War College<br>Industrial College of the Armed Forces<br>DoD Computer Institute<br>Armed Forces Staff College | Washington, D.C.<br><br><br><br>Norfolk, Va. |
| **Uniformed Services University of the Health Sciences** | Bethesda, Md. |
| **Defense Institute of Security Assistance Management** | Wright-Patterson AFB, Ohio |
| **Defense Intelligence College** | Washington, D.C. |
| **Defense Mapping School** | Fort Belvoir, Va. |
| **Defense Equal Opportunity Management Institute** | Patrick AFB, Fla. |
| **Defense Systems Management College** | Fort Belvoir, Va. |
| **Defense *Information School*** | Fort Benjamin Harrison, Ind. |
| **Defense Foreign Language Institute** | Presidio of Monterey, Calif. |
| **Defense Language Institute, English Language Course** | Lackland AFB, Tex. |
| **Defense Resources Management Education Center** | Monterey, Calif. |
| **Joint Military Packaging Training Center** | Aberdeen Proving Ground, Md. |

OASD(P&R)

## Where They Train
### *(Major Locations)*

**Recruit Training**

| ARMY | NAVY |
|---|---|
| **Fort Benning, Ga.** | **Great Lakes, Ill.** |
| **Fort Jackson, S.C.** | **Orlando, Fla.** |
| **Fort Knox, Ky.** | **San Diego, Calif.** |
| **Fort Leonard Wood, Mo.** | |
| **Fort Sill, Okla.** | |
| **MARINE CORPS** | **AIR FORCE** |
| **Parris Island, S.C.** | **Lackland AFB, Texas** |
| **San Diego, Calif.** | |

**Officer Acquisition Training**

| ARMY | NAVY |
|---|---|
| **Fort Benning, Ga.** | **Annapolis, Md.** |
| **Fort Monmouth, N.J.** | **(Naval Academy)** |
| **West Point, N.Y.** | **Newport, R.I.** |
| **(Military Academy)** | **San Diego, Calif.** |
| **MARINE CORPS** | ***AIR FORCE*** |
| **Quantico, Va.** | **Colorado Springs, Colo.** |
| | **(Air Force Academy)** |
| | **Lackland AFB, Texas** |

OASD(P&R)

## Service War Colleges and Intermediate Officers Schools

| | |
|---|---|
| **Army War College** | Carlisle Barracks, Pa. |
| **Naval War College** | Newport, R.I. |
| **Air War College** | Maxwell AFB, Ala. |
| **Army Command and General Staff College** | Fort Leavenworth, Kan. |
| **College of Naval Command and Staff** | Newport, R.I. |
| **Marine Corps Command and Staff College** | Quantico, Va. |
| **Air Command and Staff College** | Maxwell AFB, Ala. |

## ROTC Units
### *(1992-93 School Year)*

| | |
|---|---|
| **Army** | 287 |
| **Navy** | 60 |
| **Air Force** | 147 |
| **Total** | **494** |

OASD(P&R)

# U.S. Military Strength
## Anti Combat Forces
*(Highlights)*

| Strategic | FY 1990 | FY 1991 | FY 1992 | FY 1993 ESTIMATE | FY 1994 ESTIMATE |
|---|---|---|---|---|---|
| **STRATEGIC OFFENSE** | | | | | |
| **Land-Based ICBMs*** | | | | | |
| Minuteman | 950 | 850 | 880 | 802 | 617 |
| Peacekeeper | 50 | 50 | 50 | 50 | 50 |
| **Strategic Bombers**** | | | | | |
| B-52G/H | 154 | 138 | 125 | 84 | 84 |
| B-1B | 90 | 90 | 84 | 84 | 84 |
| B-2 | | | | 1 | 4 |
| **Fleet Ballistic Launchers (SLBMs)*** | | | | | |
| Poseidon (C-3 and C-4) | 368 | 352 | 176 | 96 | 48 |
| Trident (C-4 and D-5) | 216 | 264 | 288 | 312 | 336 |
| **STRATEGIC DEFENSE INTERCEPTORS** | | | | | |
| **(Primary Aircraft Authorized**/Squadrons)** | | | | | |
| Active | 18/1 | 18/1 | — | — | — |
| Air National Guard | 216/12 | 216/12 | 216/12 | 216/12 | 180/10 |

* Number on-line
** Does not include conventionally roled heavy bombers.

| General Purpose | FY 1990 | FY 1991 | FY 1992 | FY 1993 ESTIMATE | FY 1994 ESTIMATE |
|---|---|---|---|---|---|
| **LAND FORCES** | | | | | |
| **Army Divisions:** | | | | | |
| Active | 18 | 16 | 14 | 14 | 14 |
| Reserve | 10 | 10 | 10 | 8 | 8 |
| **Marine Corps Divisions:** | | | | | |
| Active | 3 | 3 | 3 | *3 | 3 |
| Reserve | 1 | 1 | 1 | 1 | 1 |
| **Army Separate Brigades:**** | | | | | |
| Active | 8 | 8 | 7 | 7 | 7 |
| Reserve | 20 | 19 | 18 | 15 | 10 |
| **Army Special Forces Groups:** | | | | | |
| Active | 5 | 5 | 5 | 5 | 5 |
| Reserve | 4 | 4 | 4 | 4 | 2 |
| **Army Ranger Regiment** | 1 | 1 | 1 | 1 | 1 |

* Includes two cadre divisions.
** Indicates official inactivations, activations and conversions as of Jan. 1, 1993. Does not include roundout brigades; does include the Eskimo Scout Group and the armored cavalry regiments.

| | | | | | |
|---|---|---|---|---|---|
| **TACTICAL AIR FORCES (Primary Aircraft Authorized/Squadrons)** | | | | | |
| **Air Force Attack/Fighter:** | | | | | |
| Active | 1,722/76 | 1,560/71 | 1,212/57 | 1,158/56 | 1,098/53 |
| Reserve | 873/43 | 861/43 | 873/43 | 831/41 | 822/41 |
| **Conventional Bombers** | | | | | |
| B-52G | 33 | 33 | 33 | 33 | 19 |
| **Navy Attack/Fighter:** | | | | | |
| Active | 622/57 | 654/59 | 678/61 | 610/56 | 622/56 |
| Reserve | 97/9 | 116/10 | 116/10 | 116/10 | 120/10 |
| **Marine Corps Attack/Fighter:** | | | | | |
| Active | 368/24 | 368/26 | 326/23 | 328/23 | 328/23 |
| Reserve | 84/8 | 84/8 | 84/8 | 72/6 | 72/6 |
| **NAVAL FORCES** | | | | | |
| **Strategic Forces Ships** | 39 | 40 | 34 | 24 | 18 |
| **Battle Forces Ships** (incl. trng. carrier) | 412 | 393 | 355 | 356 | 353 |
| **Support Forces Ships** | 65 | 62 | 57 | 50 | 48 |
| **Reserve Forces Ships** | 31 | 32 | 19 | 18 | 16 |
| **Total Ship Battle Forces** | **547** | **527** | **465** | **448** | **435** |
| **Surface Combatants/Mine Warfare Ships** | 19 | 16 | 16 | 14 | 11 |
| **Support Ships** | — | — | — | 5 | 13 |
| **Total Other Forces*** | **19** | **16** | **16** | **19** | **24** |

* Excludes auxiliaries and sealift forces.

| Airlift and Sealift | FY 1988 | FY 1990 | FY 1992* | ESTIMATE | ESTIMATE |
|---|---|---|---|---|---|
| **INTERTHEATER AIRLIFT**** | | | | | |
| C-5 | 98 | 109 | 109 | 109 | 109 |
| C-141 | 234 | 234 | 234 | 214 | 214 |
| KC-10 | 57 | 57 | 57 | 57 | 57 |
| C-17 | — | — | — | 6 | 12 |
| **INTRATHEATER AIRLIFT**** | | | | | |
| Air Force C-130 | 521 | 460 | 433 | 416 | 406 |
| **SEALIFT SHIPS***** | | | | | |
| **Active** | | | | | |
| Tankers | 20 | 28 | 20 | 20 | 20 |
| Cargo | 41 | 40 | 40 | 40 | 40 |
| **Reserve** | | | | | |
| RRF**** | 91 | 96 | 97 | 103 | 110 |
| NDRF***** | 129 | 121 | 122 | 122 | 122 |

* Differences from previous year's defense report are due to operational changes (damaged aircraft and actual long-term ship charters) and congressional direction/funding (retention of C-130s in the reserve components and underfunding of the Ready Reserve Force acquisitions).
** Primary Aircraft Authorized.
*** Includes fast sealift ships, afloat pre-positioned force ships and common user (charter) ships.
**** Ready Reserve Force (assigned to 4-, 5-, 10- or 20-day reactivation readiness groups).
***** National Defense Reserve Fleet (beginning in fiscal 1988, specific NDRF ships were designated militarily useful ships).
SecDef Annual Report to Congress

# FORCE LOCATIONS

*(As of July 31, 1993)*

**ATLANTIC FLEET**
10 Strike/Fighter Squadrons
10 Fighter Squadrons
5 Attack Squadrons
6 Early Warning Squadrons
5 Anti-Submarine Warfare Squadrons
5 Anti-Sub Warfare Helicopter Squadrons
10 Patrol Squadrons
3 Fleet Air Reconnaissance Squadrons
1 Fleet Logistics Support Squadron
7 Light Anti-Sub Warfare Helicopter Squadrons

**PACIFIC FLEET**
12 Strike/Fighter Squadrons
11 Fighter Squadrons
6 Attack Squadrons
6 Early Warning Squadrons
6 Anti-Submarine Warfare Squadrons
6 Anti-Submarine Warfare Helicopter Squadrons
9 Patrol Squadrons
3 Fleet Air Reconnaissance Squadrons
2 Fleet Logistics Support Squadrons
7 Light Anti-Submarine Warfare Helicopter Squadrons

**AIR FORCE/ALASKA**
2 Wings
4 Fighter Squadrons
1 Airlift Squadron

**AIR FORCE/ICELAND**
1 Fighter Squadron
1 Wing

**AIR FORCE/CONTIGUOUS U.S.**
6 Missile Wings
10 Bomber Wings
9 Fighter Wings
30 Fighter Squadrons
1 Reconnaissance Squadron
3 Air Support Squadrons
32 Airlift Squadrons
27 Air Refueling Squadrons
1 Aeromedical Squadron
6 Special Operations Squadrons
15 Bomber Squadrons
10 Wings
1 Special Operations Wing
17 Missile Squadrons
5 Rescue Squadrons

**AIR FORCE/PACIFIC**
2 Fighter Wings
8 Fighter Squadrons
1 Air Support Squadron
1 Air Refueling Squadron
2 Wings
1 Reconnaissance Squadron
3 Rescue Squadrons
3 Airlift Squadrons
1 Aeromedical Squadron
3 Special Operations Squadrons

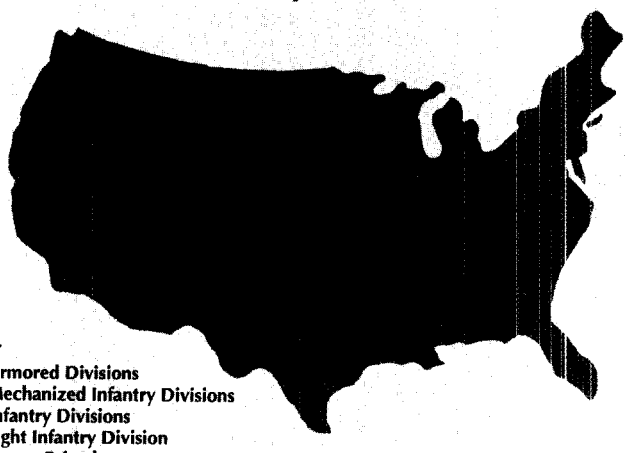
**PANAMA**
1 Wing
1 Airlift Squadron

**AIR FORCE/EUROPE**
5 Fighter Wings
14 Fighter Squadrons
2 Reconnaissance Squadrons
1 Airlift Squadron
1 Aeromedical Squadron
3 Special Operations Squadrons
1 Wing
1 Air Refueling Squadron
1 Air Support Squadron
1 Fighter Group

**MARINES/PACIFIC**
4 Light Attack Helicopter Squadrons
15 Lift Helicopter Squadrons
4 Attack Squadrons
8 Fighter/Attack Squadrons
2 Tactical Refueling Squadrons

**MARINES/ATLANTIC**
2 Light Attack Helicopter Squadrons
9 Lift Helicopter Squadrons
4 Attack Squadrons
4 Electronic Warfare Squadrons
8 Fighter/Attack Squadrons

*(As of July 31, 1993)*



**ALASKA**
1 Air Refueling Squadron
1 Air Rescue Squadron

**NAVY**
5 Minesweepers
8 Training Frigates
16 Guided Missile Frigates
2 Tank Landing Ships
2 Salvage Ships
4 Fighter Squadrons
2 Attack Squadrons
4 Strike/Fighter Squadrons
13 Logistics/Support Squadrons
2 Electronic Warfare Squadrons
9 Helicopter Squadrons
13 Patrol Squadrons
2 Early Warning Squadrons
2 Composite Fighter Squadrons

**MARINES**
1 Division
1 Aircraft Wing

**HAWAII**
1 Fighter Squadron

**ARMY**
2 Armored Divisions
2 Mechanized Infantry Divisions
3 Infantry Divisions
1 Light Infantry Division
3 Armor Brigades
2 Mechanized Brigades
4 Infantry Brigades
3 Theater Defense Brigades
1 Armored Cavalry Regiment
3 Generic Divisional Brigades
4 Roundout Brigades
3 Roundup Brigades

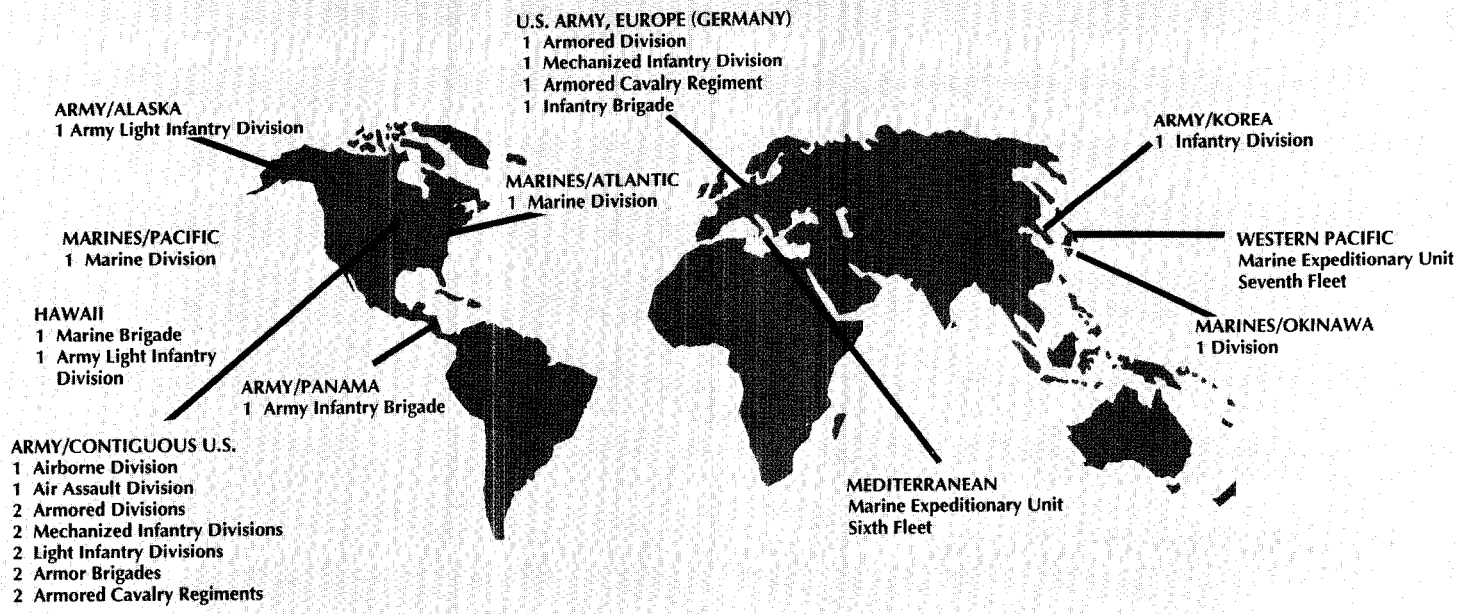
**PUERTO RICO**
1 Fighter Squadron

**AIR FORCE**
16 Fighter Wings
39 Fighter Groups
61 Fighter Squadrons
38 Airlift Squadrons
18 Associate Squadrons
4 Reconnaissance Squadrons
2 Air Support Squadrons
22 Air Refueling Squadrons
3 Associate Squadrons
4 Air Rescue Squadrons
3 Special Operations Squadrons
13 Air Refueling Groups
2 Associate Groups
23 Airlift Groups
1 Aeromedical Group
1 Aeromedical Squadron
1 Associate Squadron
8 Air Refueling Wings
13 Airlift Wings
6 Associate Wings

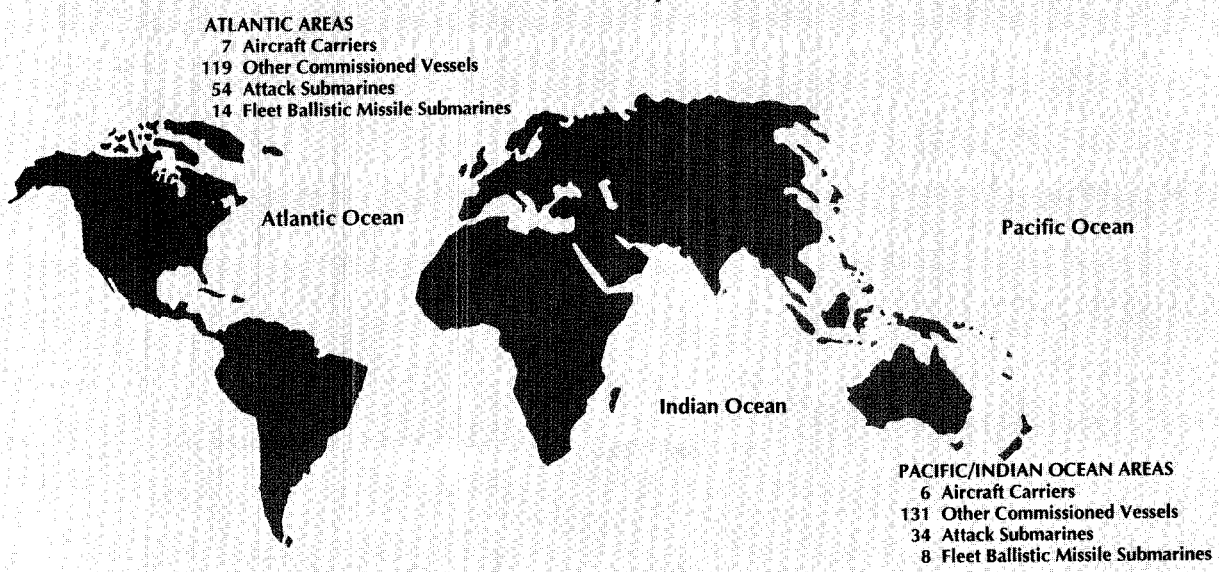
* Air Force figures (active and reserves) exclude training and testing. Figures for Air reserve components in Alaska, Hawaii and Puerto Rico included in ARC totals.

OASD(PA)

*(As of July 31, 1993)*




*(As of July 31, 1993)*



# International Security Relationships

The security of our friends and allies contributes directly to the security of the United States. For more than 30 years, the United States has made available materials, services and training to friendly countries to enable them to improve their own defense capabilities.

The Department of Defense administers several elements of the Security Assistance Program, three of which are Foreign Military Sales, the Military Assistance Program and the International Military Education and Training Program.

- Foreign Military Sales is a program through which DoD sells defense articles, defense services and training to foreign governments.
- Military Assistance Program is a program through which defense articles and defense services are provided to foreign countries as grant aid.
- International Military Education and Training provides training and training support to foreign personnel as grant assistance.

## Foreign Military Sales Agreements

*(FY 1992)*
*($ in thousands)*

| | |
|---|---|
| AFRICA | 19,276 |
| Botswana | 910 |
| Burundi | 65 |
| Cameroon | 629 |
| Cape Verde | 1,745 |
| Central African Republic | 311 |
| Chad | 2,584 |
| Congo | 12 |
| Djibouti | 1,152 |
| Gabon | 95 |
| Gambia, The | 381 |
| Guinea | 87 |
| Guinea-Bissau | 389 |
| Ivory Coast | 1,368 |
| Kenya | 736 |
| Lesotho | 200 |
| Malawi | 463 |
| Namibia | 115 |
| Niger | 2,309 |
| Rwanda | 303 |
| Sao Tome & Principe | 36 |
| Senegal | 4,360 |
| Sierra Leone | 816 |
| Togo | 110 |
| Zimbabwe | 100 |
| THE AMERICAS | 283,288 |
| Antigua-Barbuda | 356 |
| Argentina | 5,770 |
| Barbados | 1,111 |
| Belize | 587 |
| Bolivia* | 22,209 |
| Brazil | 69,673 |
| Chile | 5,482 |
| Colombia | 1,625 |
| Colombia* | 72,979 |
| Costa Rica | 290 |
| Dominica | 279 |
| Dominican Republic | 1,626 |
| Ecuador | 6,216 |
| Ecuador* | 1,660 |
| El Salvador | 36,238 |
| Grenada | 302 |
| Honduras | 19,578 |
| Jamaica | 1,696 |
| Mexico | 2,338 |
| Panama | 871 |
| Paraguay | 40 |
| Peru | 754 |
| Peru* | 5,080 |
| St. Kitts and Nevis | 86 |
| St. Lucia | 401 |
| St. Vincent and Grenadines | 234 |
| Trinidad & Tobago | 260 |
| Uruguay | 6,151 |
| Venezuela | 19,396 |
| EAST ASIA AND PACIFIC | 4,221,519 |
| Australia | 148,616 |
| Indonesia | 11,063 |
| Japan | 354,952 |
| Korea | 2,640,856 |
| Malaysia | 4,581 |
| New Zealand | 8,134 |
| Philippines | 47,537 |
| Singapore | 85,400 |
| Taiwan | 477,904 |
| Thailand | 442,476 |
| EUROPE AND CANADA | 6,403,501 |
| Austria | 5,020 |
| Belgium | 35,096 |
| Canada | 158,169 |
| Denmark | 70,884 |
| Finland | 2,427,129 |
| France | 28,069 |
| Germany | 189,436 |
| Greece | 624,966 |
| Italy | 206,355 |
| Luxembourg | 438 |
| Malta | 1 |
| Netherlands | 313,939 |
| Norway | 43,789 |
| Portugal | 27,031 |
| Spain | 99,169 |
| Sweden | 41,104 |
| Switzerland | 28,646 |
| Turkey | 1,852,231 |
| United Kingdom | 252,029 |
| NEAR EAST AND SOUTH ASIA | 3,141,064 |
| Bahrain | 14,027 |
| Egypt | 967,602 |
| Israel | 98,001 |
| Jordan | 7,928 |
| Kuwait | 496,417 |
| Morocco | 13,591 |
| Oman | 5,553 |
| Qatar | 1,458 |
| Saudi Arabia | 1,019,508 |
| Tunisia | 7,783 |
| United Arab Emirates | 509,196 |
| NON-REGIONAL TOTAL | 1,103,103 |
| WORLDWIDE | 15,171,747 |

* Counternarcotics-related DSAA

## Military Assistance Program
*(FY 1992)*
*($ in thousands)*

| | |
|---|---|
| AFRICA | 8,500 |
| Cameroon | 75 |
| Cape Verde | 225 |
| Chad | 500 |
| Gambia, The | 100 |
| Ghana | 200 |
| Guinea | 150 |
| Guinea-Bissau | 100 |
| Ivory Coast | 120 |
| Mali | 100 |
| Namibia | 100 |
| Niger | 600 |
| Organization of African Unity | 500 |
| Sao Tome & Principe | 100 |
| Senegal | 5,000 |
| Seychelles | 40 |
| Sierra Leone | 60 |
| Uganda | 30 |
| Zambia | 250 |
| Zimbabwe | 250 |
| THE AMERICAS | 110,416 |
| Antigua-Barbuda | 870 |
| Argentina | 1,000 |
| Barbados | 850 |
| Belize | 500 |
| Bolivia | 25,000 |
| Colombia | 47,000 |
| Dominica | 470 |
| Dominican Republic | 1,000 |
| Ecuador | 2,339 |
| El Salvador | 21,250 |
| Grenada | 477 |
| Honduras | 5,000 |
| Jamaica | 2,500 |
| Paraguay | 250 |
| St. Kitts and Nevis | 470 |
| St. Lucia | 470 |
| St. Vincent and Grenadines | 470 |
| Trinidad and Tobago | 500 |
| EAST ASIA AND PACIFIC | 25,000 |
| Philippines | 25,000 |
| EUROPE AND CANADA | 605,000 |
| Greece | 30,000 |
| Portugal | 100,000 |
| Turkey | 475,000 |
| NEAR EAST AND SOUTH ASIA | 3,153,500 |
| Bahrain | 1,000 |
| Egypt | 1,300,000 |
| Israel | 1,800,000 |
| Jordan | 20,000 |
| Morocco | 22,000 |
| Oman | 500 |
| Tunisia | 10,000 |
| NON-REGIONAL GENERAL COSTS | 27,855 |
| WORLDWIDE | 3,930,271 |

DSAA

## International Military Education & Training
*(FY 1992)*

| | DELIVERIES ($ IN THOUSANDS) | STUDENTS TRAINED |
|---|---|---|
| AFRICA | 8,430 | 473 |
| Benin | 105 | 5 |
| Botswana | 648 | 36 |
| Burundi | 215 | 8 |
| Cameroon | 307 | 16 |
| Cape Verde | 134 | 6 |
| Central African Republic | 265 | 11 |
| Chad | 380 | 17 |
| Comoros | 62 | 3 |
| Congo | 147 | 6 |
| Djibouti | 43 | 1 |
| Equatorial Guinea | 90 | 4 |
| Gabon | 111 | 3 |
| Gambia, The | 114 | 9 |
| Ghana | 269 | 16 |
| Guinea | 219 | 6 |
| Guinea-Bissau | 150 | 5 |
| Ivory Coast | 215 | 9 |
| Kenya | 884 | 70 |
| Lesotho | 118 | 11 |
| Madagascar | 150 | 6 |
| Malawi | 135 | 7 |
| Mali | 150 | 6 |
| Mauritius | 94 | 5 |
| Mozambique | 196 | 8 |
| Namibia | 210 | 17 |
| Niger | 429 | 15 |
| Nigeria | 401 | 35 |
| Rwanda | 70 | 3 |
| Sao Tome and Principe | 143 | 5 |
| Senegal | 732 | 26 |
| Seychelles | 90 | 4 |
| Sierra Leone | 105 | 8 |
| Swaziland | 180 | 15 |
| Tanzania | 160 | 13 |
| Uganda | 195 | 18 |
| Zambia | 134 | 9 |
| Zimbabwe | 380 | 31 |

continued

| | DELIVERIES ($ IN THOUSANDS) | STUDENTS TRAINED |
|---|---|---|
| THE AMERICAS | 13,445 | 2,321 |
| Antigua-Barbuda* | 7 | 1 |
| Argentina | 285 | 50 |
| Bahamas, The | 80 | 14 |
| Barbados* | 17 | 3 |
| Belize | 160 | 19 |
| Bolivia | 900 | 158 |
| Brazil | 147 | 7 |
| Chile | 351 | 166 |
| Colombia | 2,296 | 716 |
| Costa Rica | 239 | 46 |
| Dominica* | 15 | 2 |
| Dominican Republic | 1,043 | 130 |
| Ecuador | 788 | 150 |
| El Salvador | 1,384 | 144 |
| Grenada* | 123 | 16 |
| Guatemala | 210 | 10 |
| Guyana | 60 | 12 |
| Honduras | 1,375 | 219 |
| Jamaica | 670 | 104 |
| Mexico | 565 | 133 |
| Panama Canal Area Military Schools** | 828 | — |
| Paraguay | 279 | 23 |
| Peru | 113 | 13 |
| St. Kitts and Nevis* | 93 | 14 |
| St. Lucia* | 75 | 14 |
| St. Vincent and Grenadines* | 111 | 21 |
| Trinidad and Tobago | 39 | 5 |
| Uruguay | 503 | 33 |
| Venezuela | 689 | 98 |
| EAST ASIA AND PACIFIC | 5,990 | 623 |
| Indonesia | 2,275 | 118 |
| Korea | 800 | 159 |
| Mongolia | 62 | 2 |
| Papua New Guinea | 106 | 7 |
| Philippines | 2,664 | 328 |
| Singapore | 15 | 3 |
| Solomon Islands | 13 | 2 |
| Tonga | 55 | 4 |
| EUROPE AND CANADA | 9,934 | 522 |
| Albania | 127 | 5 |
| Bulgaria | 330 | 14 |
| Czech & Slovak Fed. Rep. | 675 | 28 |
| Estonia | 68 | 2 |
| Greece | 296 | 68 |
| Hungary | 675 | 31 |
| Latvia | 52 | 2 |
| Lithuania | 65 | 2 |
| Malta | 12 | 4 |
| Poland | 776 | 28 |
| Portugal | 2,180 | 57 |
| Russian Federation | 153 | 6 |
| Spain | 900 | 70 |
| Turkey | 3,550 | 202 |
| Ukraine | 75 | 3 |
| NEAR EAST AND SOUTH ASIA | 6,470 | 535 |
| Algeria | 150 | 12 |
| Bahrain | 72 | 21 |
| Bangladesh | 428 | 33 |
| Egypt | 1,829 | 170 |
| India | 352 | 16 |
| Jordan | 600 | 58 |
| Maldives, Republic of | 95 | 5 |
| Morocco | 1,180 | 70 |
| Nepal | 180 | 11 |
| Oman | 105 | 10 |
| Sri Lanka | 229 | 17 |
| Tunisia | 1,250 | 112 |
| GENERAL AND NON-REGIONAL COSTS | 304 | - |
| WORLDWIDE | 44,573 | 4,474 |

* These countries comprise the Eastern Caribbean.
** Numbers for students trained are counted within totals of their respective countries.
DSAA

## U.S. Collective Defense Treaties
*(As of July 31, 1993)*

**NORTH ATLANTIC TREATY**
Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Turkey, United Kingdom, United States (Signed April 4, 1949)

**ANZUS TREATY**
Australia, New Zealand, United States (Signed Sept. 1, 1951)*

**PHILIPPINE TREATY**
Philippines, United States (Signed Aug. 30, 1951)

**SOUTHEAST ASIA TREATY**
Australia, France, New Zealand, Philippines, Thailand, United Kingdom, United States (Signed Sept. 8, 1954)**

**JAPANESE TREATY**
Japan, United States (Signed Jan. 19, 1960)

**REPUBLIC OF KOREA TREATY**
Republic of Korea, United States (Signed Oct. 1, 1953)

**RIO TREATY**
Argentina, Bahamas, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, United States, Uruguay, Venezuela, (Signed Sept. 2, 1947)

* As of Sept. 17, 1986, the United States suspended obligations under the treaty between the United States and New Zealand.
** By decision of the SEATO Council of Sept. 24, 1975, the organization ceased to exist as of June 30, 1977. The collective defense treaty remains in force.
U.S. State Department

# Service and Casualties In Major Wars and Conflicts

*(As of Sept. 30, 1992)*

| | | NUMBER SERVING | BATTLE DEATHS | OTHER DEATHS | WOUNDS NOT MORTAL |
|---|---|---|---|---|---|
| Revolutionary War | Army* | — | 4,044 | — | 6,004 |
| 1775-1783 | Navy* | — | 342 | — | 114 |
| | Marines* | — | 49 | — | 70 |
| | Total | — | 4,435 | — | 6,188 |
| War of 1812 | Army | — | 1,950 | — | 4,000 |
| 1812-1815 | Navy | — | 265 | — | 429 |
| | Marines | — | 45 | — | 56 |
| | Total | 286,730 | 2,260 | — | 4,505 |
| Mexican War | Army | — | 1,721 | 11,550 | 4,102 |
| 1846-1848 | Navy | — | 1 | — | 3 |
| | Marines | — | 11 | — | 47 |
| | Total | 78,718 | 1,733 | 11,550 | 4,152 |
| Civil War (Union Forces Only)* | Army | 2,128,948 | 138,154 | 221,374 | 280,040 |
| | Navy | — | 2,112 | 2,411 | 1,710 |
| 1861-1865 | Marines | 84,415 | 148 | 312 | 131 |
| | Total | 2,213,363 | 140,414 | 224,097 | 281,881 |
| Spanish-American War | Army | 280,564 | 385 | 2,061 | 1,594 |
| | Navy | 22,875 | 10 | — | 17 |
| 1898 | Marines | 3,321 | 6 | — | 21 |
| | Total | 306,760 | 385 | 2,061 | 1,632 |
| World War I | Army** | 4,057,101 | 50,510 | 55,860 | 193,663 |
| Apr. 6, 1917- | Navy | 599,051 | 431 | 6,856 | 819 |
| Nov. 11, 1918 | Marines | 78,835 | 2,461 | 390 | 9,520 |
| | Total | 4,734,991 | 53,402 | 63,114 | 204,002 |
| World War II | Army** | 11,260,000 | 234,874 | 83,400 | 565,861 |
| Dec. 7, 1941- | Navy | 4,183,466 | 36,950 | 25,664 | 37,778 |
| Dec. 31, 1946*** | Marines | 669,100 | 19,733 | 4,778 | 88,277 |
| | Total | 16,112,566 | 291,557 | 113,842 | 671,846 |
| Korean Conflict**** | Army | 2,834,000 | 27,709 | NA | 77,596 |
| June 25, 1950- | Navy | 1,177,000 | 475 | 173 | 4,576 |
| July 27, 1953 | Marines | 424,000 | 4,270 | 339 | 23,744 |
| | Air Force | 1,285,000 | 1,198 | 298 | 368 |
| | Total | 5,720,000 | 33,652 | NA | 103,284 |
| Vietnam Conflict***** | Army | 4,368,000 | 30,914 | 7,273 | 96,802 |
| Aug. 4, 1964- | Navy | 1,842,000 | 1,631 | 335 | 4,178 |
| Jan. 27, 1973 | Marines | 794,000 | 13,092 | 1,754 | 51,392 |
| | Air Force | 1,740,000 | 1,739 | 844 | 941 |
| | Total | 8,744,000 | 47,356 | 10,201 | 153,293 |

*Authoritative statistics for the Confederate Army are not available. Estimates of the number who served range from 600,000 to 1,500,000. The 1890 census of veterans, conducted 25 years after the war, indicated 133,821 Confederate deaths (74,524 battle and 59,297 other causes) in incomplete returns. In addition, an estimated 26,000 to 31,000 deaths are presumed among 145,000 prisoners.
**All figures this row include Army air forces.
***Date hostilities officially terminated by presidential proclamation.
****Reexamination of individual files accounts for a difference in battle deaths and other deaths associated with the conflict as previously reported in Defense 92 Almanac. Therefore, the data reflect the information available as of Sept. 30, 1994, at which time 24 persons were still carried as missing in action.
*****Number serving covers the period Aug. 4, 1964, through Jan. 27, 1973 (date of cease fire). Wounds not mortal exclude 130,332 persons for returning hospital care. Known name of casualties is as of Sept. 30, 1992.
WHS

# The Defense Presence by State

(As of Sept. 30, 1992)

| | | ARMY* | NAVY/ MARINE CORPS** | AIR FORCE | OTHER DEFENSE ACTIVITIES | TOTAL DOD |
|---|---|---|---|---|---|---|
| Alabama | Military | 11,835 | 956 | 4,798 | — | 17,589 |
| | Civilian | 21,152 | 248 | 2,962 | 1,658 | 26,020 |
| | Total | 32,987 | 1,204 | 7,760 | 1,658 | 43,609 |
| Alaska | Military | 9,456 | 1,979 | 10,773 | — | 22,208 |
| | Civilian | 2,464 | 250 | 1,707 | 276 | 4,697 |
| | Total | 11,920 | 2,229 | 12,480 | 276 | 26,905 |
| Arizona | Military | 5,637 | 5,589 | 10,798 | — | 22,024 |
| | Civilian | 4,439 | 445 | 3,845 | 1,035 | 9,764 |
| | Total | 10,076 | 6,034 | 14,643 | 1,035 | 31,788 |
| Arkansas | Military | 1,336 | 249 | 5,000 | — | 6,585 |
| | Civilian | 3,297 | 17 | 1,037 | 147 | 4,498 |
| | Total | 4,633 | 266 | 6,037 | 147 | 11,083 |
| California | Military | 24,208 | 115,009 | 38,944 | — | 178,161 |
| | Civilian | 14,010 | 67,702 | 24,055 | 14,174 | 119,941 |
| | Total | 38,218 | 182,711 | 62,999 | 14,174 | 298,102 |
| Colorado | Military | 18,710 | 888 | 18,114 | — | 37,712 |
| | Civilian | 4,875 | 77 | 5,634 | 3,428 | 14,014 |
| | Total | 23,585 | 965 | 23,748 | 3,428 | 51,726 |
| Connecticut | Military | 28 | 6,337 | 101 | — | 6,466 |
| | Civilian | 571 | 2,846 | 268 | 1,149 | 4,834 |
| | Total | 599 | 9,183 | 369 | 1,149 | 11,300 |
| Delaware | Military | 27 | 32 | 4,347 | — | 4,406 |
| | Civilian | 218 | 5 | 1,447 | 103 | 1,773 |
| | Total | 245 | 37 | 5,794 | 103 | 6,179 |
| District of Columbia | Military | 5,447 | 4,862 | 3,822 | — | 14,131 |
| | Civilian | 6,356 | 8,638 | 1,215 | 559 | 16,768 |
| | Total | 11,803 | 13,500 | 5,037 | 559 | 30,899 |
| Florida | Military | 2,211 | 40,393 | 32,237 | — | 74,841 |
| | Civilian | 2,059 | 18,256 | 9,454 | 2,580 | 32,349 |
| | Total | 4,270 | 58,649 | 41,691 | 2,580 | 107,190 |
| Georgia | Military | 47,882 | 5,342 | 7,584 | — | 60,808 |
| | Civilian | 14,307 | 4,942 | 14,177 | 3,829 | 37,255 |
| | Total | 62,189 | 10,284 | 21,761 | 3,829 | 98,063 |
| Hawaii | Military | 18,666 | 21,266 | 4,932 | — | 44,864 |
| | Civilian | 4,933 | 10,886 | 1,431 | 643 | 17,893 |
| | Total | 23,599 | 32,152 | 6,363 | 643 | 62,757 |
| Idaho | Military | 23 | 1,156 | 3,565 | — | 4,744 |
| | Civilian | 626 | 67 | 768 | 64 | 1,525 |
| | Total | 649 | 1,223 | 4,333 | 64 | 6,269 |
| Illinois | Military | 1,213 | 17,448 | 11,132 | — | 29,793 |
| | Civilian | 10,712 | 2,161 | 4,820 | 1,571 | 19,264 |
| | Total | 11,925 | 19,609 | 15,952 | 1,571 | 49,057 |
| Indiana | Military | 2,513 | 589 | 2,220 | — | 5,322 |
| | Civilian | 3,411 | 7,370 | 1,280 | 3,604 | 15,665 |
| | Total | 5,924 | 7,959 | 3,500 | 3,604 | 20 987 |
| Iowa | Military | 199 | 70 | 148 | — | 417 |
| | Civilian | 871 | 5 | 533 | 133 | 1,542 |
| | Total | 1,070 | 75 | 681 | 133 | 1,959 |
| Kansas | Military | 17,622 | 305 | 3,399 | — | 21,326 |
| | Civilian | 4,876 | 198 | 1,153 | 525 | 6,752 |
| | Total | 22,498 | 503 | 4,552 | 525 | 28,078 |

| | | ARMY* | NAVY/ MARINE CORPS** | AIR FORCE | OTHER DEFENSE ACTIVITIES | TOTAL DOD |
|---|---|---|---|---|---|---|
| Kentucky | Military | 34,134 | 333 | 345 | — | 34,812 |
| | Civilian | 9,369 | 2,576 | 217 | 1,989 | 14,151 |
| | Total | 43,503 | 2,909 | 562 | 1,989 | 48,963 |
| Louisiana | Military | 13,463 | 1,727 | 6,452 | — | 21,642 |
| | Civilian | 4,493 | 2,001 | 2,003 | 507 | 9,004 |
| | Total | 17,956 | 3,728 | 8,455 | 507 | 30,646 |
| Maine | Military | 192 | 1,771 | 2,721 | — | 4,684 |
| | Civilian | 354 | 7,014 | 793 | 186 | 8,347 |
| | Total | 546 | 8,785 | 3,514 | 186 | 13,031 |
| Maryland | Military | 11,161 | 15,217 | 5,947 | — | 32,325 |
| | Civilian | 16,476 | 15,867 | 2,357 | 5,794 | 40,494 |
| | Total | 27,637 | 31,084 | 8,304 | 5,794 | 72,819 |
| Massachusetts | Military | 3,726 | 937 | 2,516 | — | 7,179 |
| | Civilian | 4,434 | 742 | 3,898 | 1,992 | 11,066 |
| | Total | 8,160 | 1,679 | 6,414 | 1,992 | 18,245 |
| Michigan | Military | 661 | 555 | 5,317 | — | 6,533 |
| | Civilian | 6,927 | 125 | 2,072 | 1,942 | 11,066 |
| | Total | 7,588 | 680 | 7,389 | 1,942 | 17,599 |
| Minnesota | Military | 293 | 358 | 248 | — | 899 |
| | Civilian | 1,553 | 34 | 824 | 500 | 2,911 |
| | Total | 1,846 | 392 | 1,072 | 500 | 3,810 |
| Mississippi | Military | 261 | 3,037 | 9,035 | — | 12,333 |
| | Civilian | 4,864 | 2,936 | 2,870 | 343 | 11,013 |
| | Total | 5,125 | 5,973 | 11,905 | 343 | 23,346 |
| Missouri | Military | 10,883 | 791 | 3,599 | — | 15,273 |
| | Civilian | 11,760 | 469 | 1,325 | 4,653 | 18,207 |
| | Total | 22,643 | 1,260 | 4,924 | 4,653 | 33,480 |
| Montana | Military | 28 | 20 | 4,399 | — | 4,447 |
| | Civilian | 408 | 1 | 771 | 67 | 1,247 |
| | Total | 436 | 21 | 5,170 | 67 | 5,694 |
| Nebraska | Military | 79 | 426 | 10,002 | — | 10,507 |
| | Civilian | 1,965 | 44 | 1,646 | 104 | 3,759 |
| | Total | 2,044 | 470 | 11,648 | 104 | 14,266 |
| Nevada | Military | 14 | 956 | 6,772 | — | 7,742 |
| | Civilian | 275 | 352 | 1,306 | 152 | 2,085 |
| | Total | 289 | 1,308 | 8,078 | 152 | 9,827 |
| New Hampshire | Military | 17 | 195 | 151 | — | 363 |
| | Civilian | 589 | 322 | 309 | 173 | 1,393 |
| | Total | 606 | 517 | 460 | 173 | 1,756 |
| New Jersey | Military | 3,875 | 1,308 | 4,407 | — | 9,590 |
| | Civilian | 15,067 | 6,204 | 1,961 | 1,454 | 24,686 |
| | Total | 18,942 | 7,512 | 6,368 | 1,454 | 34,276 |
| New Mexico | Military | 1,025 | 482 | 13,880 | — | 15,387 |
| | Civilian | 4,416 | 194 | 3,823 | 755 | 9,188 |
| | Total | 5,441 | 676 | 17,703 | 755 | 24,575 |
| New York | Military | 13,635 | 3,128 | 6,979 | — | 23,742 |
| | Civilian | 9,857 | 657 | 4,619 | 2,699 | 17,832 |
| | Total | 23,492 | 3,785 | 11,598 | 2,699 | 41,574 |
| North Carolina | Military | 42,902 | 42,404 | 9,646 | — | 94,952 |
| | Civilian | 6,771 | 6,938 | 1,218 | 2,219 | 17,146 |
| | Total | 49,673 | 49,342 | 10,864 | 2,219 | 112,098 |
| North Dakota | Military | 26 | 8 | 9,650 | — | 9,684 |
| | Civilian | 408 | 1 | 1,352 | 107 | 1,868 |
| | Total | 434 | 9 | 11,002 | 107 | 11,552 |

| | | ARMY* | NAVY/ MARINE CORPS** | AIR FORCE | OTHER DEFENSE ACTIVITIES | TOTAL DOD |
|---|---|---|---|---|---|---|
| Ohio | Military | 596 | 890 | 9,402 | — | 10,888 |
| | Civilian | 1,933 | 218 | 19,341 | 13,187 | 34,679 |
| | Total | 2,529 | 1,108 | 28,743 | 13,187 | 45,567 |
| Oklahoma | Military | 16,231 | 642 | 11,403 | — | 28,276 |
| | Civilian | 5,794 | 169 | 14,355 | 1,554 | 21,872 |
| | Total | 22,025 | 811 | 25,758 | 1,554 | 50,148 |
| Oregon | Military | 185 | 465 | 398 | — | 1,048 |
| | Civilian | 2,119 | 27 | 721 | 43 | 2,910 |
| | Total | 2,304 | 492 | 1,119 | 43 | 3,958 |
| Pennsylvania | Military | 1,740 | 2,871 | 595 | — | 5,206 |
| | Civilian | 12,619 | 21,209 | 1,647 | 13,035 | 48,510 |
| | Total | 14,359 | 24,080 | 2,242 | 13,035 | 53,716 |
| Rhode Island | Military | 46 | 3,517 | 151 | — | 3,714 |
| | Civilian | 332 | 3,510 | 253 | 146 | 4,241 |
| | Total | 378 | 7,027 | 404 | 146 | 7955 |
| South Carolina | Military | 11,879 | 16,263 | 10,979 | — | 39,121 |
| | Civilian | 3,028 | 11,326 | 2,092 | 1,196 | 17,642 |
| | Total | 14,907 | 27,589 | 13,071 | 1,196 | 56,763 |
| South Dakota | Military | 32 | 6 | 6,090 | — | 6,128 |
| | Civilian | 501 | — | 710 | 77 | 1,288 |
| | Total | 533 | 6 | 6,800 | 77 | 7,416 |
| Tennessee | Military | 357 | 7,513 | 499 | — | 8,369 |
| | Civilian | 2,756 | 1,102 | 1,032 | 2,674 | 7,564 |
| | Total | 3,113 | 8,615 | 1,531 | 2,674 | 15,933 |
| Texas | Military | 56,851 | 6,199 | 45,763 | — | 108,813 |
| | Civilian | 22,687 | 2,187 | 26,820 | 6,528 | 58,222 |
| | Total | 79,538 | 8,386 | 72,583 | 6,528 | 167,035 |
| Utah | Military | 547 | 114 | 4,972 | — | 5,633 |
| | Civilian | 4,543 | 92 | 11,679 | 3,605 | 19,919 |
| | Total | 5,090 | 206 | 16,651 | 3,605 | 25,552 |
| Vermont | Military | 21 | 15 | 105 | — | 141 |
| | Civilian | 311 | 1 | 277 | 53 | 642 |
| | Total | 332 | 16 | 382 | 53 | 783 |
| Virginia | Military | 27,181 | 50,055 | 15,014 | — | 92,250 |
| | Civilian | 27,438 | 53,921 | 4,287 | 20,665 | 106,311 |
| | Total | 54,619 | 103,976 | 19,301 | 20,665 | 198,561 |
| Washington | Military | 17,830 | 9,069 | 8,764 | — | 35,663 |
| | Civilian | 5,740 | 19,620 | 2,094 | 1,541 | 28,995 |
| | Total | 23,570 | 28,689 | 10,858 | 1,541 | 64,658 |
| West Virginia | Military | 178 | 220 | 142 | — | 540 |
| | Civilian | 1,232 | 50 | 379 | 29 | 1,690 |
| | Total | 1,410 | 270 | 521 | 29 | 2,230 |
| Wisconsin | Military | 333 | 246 | 285 | — | 864 |
| | Civilian | 2,366 | 74 | 801 | 196 | 3,437 |
| | Total | 2,699 | 320 | 1,086 | 196 | 4,301 |
| Wyoming | Military | 14 | 2 | 3,533 | — | 3,549 |
| | Civilian | 207 | — | 733 | 124 | 1,064 |
| | Total | 221 | 2 | 4,266 | 124 | 4,613 |
| Undistributed | Military | 15,524 | 18,530 | 1,532 | — | 35,586 |
| | Civilian | — | — | 290 | — | 290 |
| | Total | 15,524 | 18,530 | 1,822 | — | 35,876 |
| United States | Military | 452,933 | 412,740 | 383,607 | — | 1,249,280 |
| | Civilian | 292,769 | 284,096 | 196,661 | 125,767 | 899,293 |
| | Total | 745,702 | 696,836 | 580,268 | 125,767 | 2,148,573 |

*Army includes civil functions. ** Excludes Navy temporary shore based and afloat.

# Military Installations And Properties

*(As of July 31, 1993)*

***Does not include reserve centers and minor properties***

## United States

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL DoD |
|---|---|---|---|---|---|
| Alabama | 4 | 1 | | 5 | 10 |
| Alaska | 3 | 1 | | 7 | 11 |
| Arizona | 2 | | 1 | 6 | 9 |
| Arkansas | 2 | | | 3 | 5 |
| California | 10 | 34 | 7 | 16 | 67 |
| Colorado | 3 | | | 6 | 9 |
| Connecticut | | 1 | | 2 | 3 |
| Delaware | | | | 2 | 2 |
| District of Columbia | 2 | 4 | 1 | 1 | 8 |
| Florida | | 14 | | 10 | 24 |
| Georgia | 6 | 3 | 1 | 5 | 15 |
| Hawaii | 4 | 6 | 2 | 2 | 14 |
| Idaho | | | | 2 | 2 |
| Illinois | 4 | 2 | | 5 | 11 |
| Indiana | 3 | 2 | | 3 | 8 |
| Iowa | | | | 2 | 2 |
| Kansas | 2 | | | 2 | 4 |
| Kentucky | 3 | 1 | | 1 | 5 |
| Louisiana | 1 | 1 | | 3 | 5 |
| Maine | | 2 | | 3 | 5 |
| Maryland | 7 | 8 | | 2 | 17 |
| Massachusetts | 3 | 1 | | 7 | 11 |
| Michigan | 2 | 4 | | | 6 |
| Minnesota | | | | 2 | 2 |
| Mississippi | | 4 | | 5 | 9 |
| Missouri | 2 | | 1 | 6 | 9 |
| Montana | | | | 2 | 2 |
| Nebraska | | | | 2 | 2 |
| Nevada | | 1 | | 3 | 4 |
| New Hampshire | | 1 | | 2 | 3 |
| New Jersey | 4 | 3 | | 2 | 9 |
| New Mexico | 1 | | | 3 | 4 |
| New York | 6 | 1 | 1 | 8 | 16 |
| North Carolina | 2 | 2 | 3 | 4 | 11 |
| North Dakota | | | | 4 | 4 |
| Ohio | 1 | 1 | | 9 | 11 |
| Oklahoma | 2 | | | 5 | 7 |
| Oregon | | | | 2 | 2 |
| Pennsylvania | 7 | 7 | | 3 | 17 |
| Rhode Island | | 2 | | 3 | 5 |
| South Carolina | 1 | 4 | 2 | 4 | 11 |
| South Dakota | 2 | | | | 2 |
| Tennessee | 1 | 2 | | 4 | 7 |

## United States

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL |
|---|---|---|---|---|---|
| Texas | 6 | 5 | | 15 | 26 |
| Utah | 4 | | | 2 | 6 |
| Vermont | | | | 1 | 1 |
| Virginia | 12 | 12 | 3 | 2 | 29 |
| Washington | 1 | 6 | | 4 | 11 |
| West Virginia | | | | 2 | 2 |
| Wisconsin | 1 | | | 2 | 3 |
| Wyoming | | | | 2 | 2 |
| TOTAL UNITED STATES | 112 | 132 | 22 | 204 | 470 |

## U.S. Territories

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL |
|---|---|---|---|---|---|
| Guam | | 3 | | 1 | 4 |
| Puerto Rico | 1 | 2 | | 1 | 4 |
| TOTAL U.S. TERRITORIES | 1 | 5 | | 2 | 8 |

## Foreign Areas

| | ARMY | NAVY | MARINE CORPS | AIR FORCE | TOTAL |
|---|---|---|---|---|---|
| Azores | | 1 | | 1 | 2 |
| Belgium | 1 | | | | 1 |
| Bermuda | | 1 | | | 1 |
| Canada | | 1 | | | 1 |
| Cuba | | 1 | | | 1 |
| Diego Garcia | | 1 | | | 1 |
| Germany | 15 | | | 8 | 23 |
| Greece | | | | 1 | 1 |
| Greenland | | | | 1 | 1 |
| Iceland | | 1 | | | 1 |
| Italy | 2 | 2 | | 2 | 6 |
| Japan | 2 | 6 | 3 | 3 | 14 |
| Korea, Republic of | 4 | | | 2 | 6 |
| Netherlands | 1 | | | 1 | 2 |
| Panama | 1 | 2 | | 1 | 4 |
| Portugal | | | | 1 | 1 |
| Spain | | 1 | | | 1 |
| Turkey | 2 | | | 4 | 6 |
| United Kingdom | 1 | 3 | | 10 | 14 |
| TOTAL FOREIGN AREAS | 29 | 20 | 3 | 35 | 87 |

# Where to View Military History

Before visiting any military museum listed below, write ahead for hours of operation, any special admission requirements and other details.

## ARMY MUSEUMS

| Name | Location |
|---|---|
| **Don F. Pratt Museum** | Fort Campbell, KY 42223-5000 |
| **Fort Bliss Museums Division** | Fort Bliss, TX 79916-5300 |
| Fort Bliss Muesum | |
| 3rd Cavalry Museum | |
| U.S. Army Air Defense Artillery Museum | |
| **Fort George G. Meade Museum** | Fort Meade, MD 20755-5094 |
| **Fort Huachuca Museum** | Fort Huachuca, AZ 85613-6000 |
| **Fort Jackson Museum** | Fort Jackson, SC 29202-5325 |
| **Fort Lewis Military Museum** | Fort Lewis, WA 98433-5000 |
| **Fort Sam Houston Museum** | Fort Sam Houston, TX 78234-5000 |
| **Frontier Army Museum** | Fort Leavenworth, KS 66027-5072 |
| **Harbor Defense Museum of New York City** | Fort Hamilton, Brooklyn, NY 11252-5701 |
| **John F. Kennedy Special Warfare Museum** | Fort Bragg, NC 28307-5000 |
| **National Infantry Museum** | Fort Benning, GA 31905-5273 |
| **Old Guard Museum** | Fort Myer, VA 22211-5020 |
| **Patton Museum of Cavalry and Armor** | Fort Knox, KY 40121-0208 |
| **Rock Island Arsenal Museum** | Rock Island, IL 61299-5000 |
| **The Casemate Museum** | Fort Monroe, VA 23651-6065 |
| **Tropic Lightning Museum** | Schofield Barracks, HI 96858-5000 |
| **U.S. Army Aviation Museum** | Fort Rucker, AL 36362-5134 |
| **U.S. Army Chemical Museum** | Fort McClellan, AL 36205-5000 |
| **U.S. Army Engineer Museum** | Fort Leonard Wood, MO 65473 |
| **U.S. Army Field Artillery and Fort Sill Museum** | Fort Sill, OK 73503-5000 |
| **U.S. Army Finance Corps Museum** | Fort Benjamin Harrison, IN 46249-3040 |
| **U.S. Army Medical Department Museum** | Fort Sam Houston, TX 78234-6100 |
| **U.S. Army Military Police Corps Museum** | Fort McClellan, AL 36205-5000 |
| **U.S. Army Museum of Hawaii** | Honolulu, HI 96830-0064 |
| **U.S. Army Museum of the Non-Commissioned Officer** | Fort Bliss, TX 77918-1270 |
| **U.S. Army Ordnance Museum** | Aberdeen Proving Ground, MD 21005-5201 |
| **U.S. Army Quartermaster Museum** | Fort Lee, VA 23801-5120 |
| **U.S. Army Signal Corps and Fort Gordon Museum** | Fort Gordon, GA 30905-5293 |
| **U.S. Army Transportation Museum** | Fort Eustis, VA 23604-5260 |
| **U.S. Cavalry Museum** | Fort Riley, KS 66442-0160 |
| **Watervliet Arsenal Museum** | Watervliet, NY 12189-4050 |
| **West Point Museum** | West Point, NY 10996-5000 |
| **Women's Army Corps Museum** | Fort McClellan, AL 36205-5000 |
| **1st Cavalry Division Museum** | Fort Hood, TX 76545-5101 |
| **2nd Armored Division Museum** | Fort Hood, TX 76544-5917 |
| **24th Infantry Division and Fort Stewart Museum** | Fort Stewart, GA 31314-5028 |
| **82nd Airborne Division War Memorial Museum** | Fort Bragg, NC 28307-5100 |

## NAVY MUSEUMS

| Name | Location |
|---|---|
| **CEC/Seabee Museum** | Port Hueneme, CA 93043-5000 |
| **Hampton Roads Naval Museum** | Norfolk, VA 23511-6002 |
| **National Museum of Naval Aviation** | Pensacola, FL 32508-6800 |
| **Nautilus Memorial and Submarine Force Library and Museum** | Groton, CT 06349-5000 |
| **Naval Academy Museum** | Annapolis, MD 21402-5000 |
| **Naval Air and Test Evaluation Museum** | Patuxent River, MD 20670-5304 |
| **Naval Supply Corps Museum** | Athens, GA 30606-5000 |
| **Naval Undersea Museum** | Keyport, WA 98345-5018 |
| **Naval War College Museum** | Newport, RI 02841-5010 |
| **Navy/Marine Corps and Coast Guard Museum of the Pacific** | Treasure Island, CA 94130-5018 |
| **The Navy Museum** | Washington, DC 20374-0571 |

## MARINE CORPS MUSEUMS

| Name | Location |
|---|---|
| **U.S. Marine Corps Museum** | Washington, DC 20374 |
| **U.S. Marine Corps Air-Ground Museum** | Quantico, VA 22134 |
| **Navy/Marine Corps Museum** | Treasure Island, CA 94130 |
| **Ranch House Museum** | Camp Pendleton, CA 92055 |
| **U.S. Marine Corps Amphibian Vehicle Museum** | Camp Pendleton, CA 92055 |
| **Marine Corps Recruit Depot Museum** | San Diego, CA 92140 |
| **Marine Corps Air Station Museum** | El Toro, Santa Ana, CA 92709 |
| **Marine Corps Museum and Memorial, New Hall** | Philadelphia, PA 19106 |
| **Marine Corps Recruit Depot Museum** | Parris Island, SC 29905 |

## AIR FORCE MUSEUMS

| Name | Location |
|---|---|
| Castle Air Museum | Castle AFB, CA 95342 |
| Dyess AFB Museum | Dyess AFB, TX 70607-5000 |
| Edward F. Beale Museum | Beale AFB, CA 95903 |
| Edward H. White II Memorial Museum | Brooks AFB, TX 78235-5000 |
| Edward Peterson Space Museum | Peterson AFB, CO 80914-5000 |
| Edwards AFB Museum | Edwards AFB, CA 93523-5000 |
| Fairchild Heritage Museum | Fairchild AFB, WA 99011-5000 |
| Francis E. Warren AFB Museum | F.E. Warren AFB, WY 82005-5000 |
| Grand Forks AFB Museum | Grand Forks AFB, ND 58205 |
| Hill AFB Museum | Hill AFB, UT 84056-5990 |
| History and Traditions Museum | Lackland AFB, TX 78236-5000 |
| Kirtland AFB Rescue Museum | Kirtland AFB, NM 87117-5000 |
| Lowry Heritage Museum | Lowry AFB, CO 80230 |
| Malmstrom AFB Museum | Malmstrom AFB, MT 54902-5000 |
| March Field Museum | March AFB, CA 92518-5000 |
| McChord Air Museum | McChord AFB, WA 98438-5000 |
| McClellan Aviation Museum | McClellan AFB, CA 95652 |
| Minnesota Air National Guard Museum | Minneapolis-St. Paul IAP, MN 55111 |
| Plattsburgh Military Museum* | Plattsburgh AFB, NY 12903 |
| Robins AFB Museum of Aviation | Robins AFB, GA 31098-5609 |
| Selfridge Military Air Museum | Selfridge ANG Base, MI 48045 |
| South Dakota Air and Space Museum | Ellsworth AFB, SD 57706-5000 |
| Travis Air Force Museum | Travis AFB, CA 94535 |
| U.S. Air Force Museum | Wright-Patterson AFB, OH 45433-6518 |
| USAF Armament Museum | Eglin AFB, FL 32542-5000 |
| USAF Security Police Museum | Lackland AFB, TX 78236 |
| USAF Space Museum | Patrick AFB, FL 32925-5153 |
| 8th Air Force Museum | Barksdale AFB, LA 71110-5000 |

* Tentatively subject to base closure by the end of 1994.

## The Pentagon

The Pentagon, headquarters of the Department of Defense, is one of the world's largest office buildings. Virtually a city in itself, the building houses more than 23,000 people.

It was built in the remarkably short time of 16 months and was completed on Jan. 15, 1943, at an approximate cost of $83 million. It consolidated 17 buildings of the War Department.

| | |
|---|---|
| Total land area | 280 acres |
| Original land cost | $2,245,000 |
| Area covered by Pentagon building | 29 acres |
| Parking space | 67 acres |
| Capacity (vehicles) | 10,329 |
| Gross floor area | 6,546,360 square feet |

| | |
|---|---|
| Net space for offices, concessions and storage | 3,900,533 square feet |
| Length of each outer wall | 921 feet |
| Height of building | 71 feet 3.5 inches |
| Total length of corridors | 17.5 miles |

WHS(PR&PO)

# ISSUE 5

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***Defense 93*** is a publication of the Department of Defense to provide official and professional information to commanders and key personnel on matters related to Defense policies, programs and interests, and to create better understanding and teamwork within the Department of Defense. Published bimonthly by the American Forces Information Service, 601 N. Fairfax St., Room 311, Alexandria, VA 22314-2007. Telephone 1-703-274-4849; DSN 284-4849. Distributed to DoD activities through service channels. Personal subscriptions and subscriptions for non-DoD organizations are available through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238.

The Secretary of Defense has determined that the publication of this periodical is necessary for the transaction of the public business required by law of the Department of Defense.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. U.S. Government Printing Office Jacket No. 300-734 40002 ISSN 0737-1217.

# Document Separator

# A NATIONAL SECURITY STRATEGY OF ENGAGEMENT AND ENLARGEMENT

FEBRUARY 1995

# A NATIONAL SECURITY STRATEGY OF ENGAGEMENT AND ENLARGEMENT

THE WHITE HOUSE
FEBRUARY 1995

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# Preface

Protecting our nation's security — our people, our territory and our way of life — is my Administration's foremost mission and constitutional duty. The end of the Cold War fundamentally changed America's security imperatives. The central security challenge of the past half century — the threat of communist expansion — is gone. The dangers we face today are more diverse. Ethnic conflict is spreading and rogue states pose a serious danger to regional stability in many corners of the globe. The proliferation of weapons of mass destruction represents a major challenge to our security. Large scale environmental degradation, exacerbated by rapid population growth, threatens to undermine political stability in many countries and regions.

At the same time, we have unparalleled opportunities to make our nation safer and more prosperous. Our military might is unparalleled. We now have a truly global economy linked by an instantaneous communications network, which offers growing opportunity for American jobs and American investment. The community of democratic nations is growing, enhancing the prospects for political stability, peaceful conflict resolution and greater dignity and hope for the people of the world. The international community is beginning to act together to address pressing global environmental needs.

Never has American leadership been more essential — to navigate the shoals of the world's new dangers and to capitalize on its opportunities. American assets are unique: our military strength, our dynamic economy, our powerful ideals and, above all, our people. We can and must make the difference through our engagement; but our involvement must be carefully tailored to serve our interests and priorities.

This report, submitted in accordance with Section 603 of the Goldwater-Nichols Defense Department Reorganization Act of 1986, elaborates a national security strategy tailored for this new era. Focusing on new threats and new opportunities, its central goals are:

- To sustain our security with military forces that are ready to fight.
- To bolster America's economic revitalization.
- To promote democracy abroad.

Over the past two years, my Administration has worked diligently to pursue these goals. This national security strategy report presents the strategy that has guided this effort. It is premised on a belief that the line between our domestic and foreign policies is disappearing — that we must revitalize our economy if we are to sustain our military forces, foreign initiatives and global influence, and that we must engage actively abroad if we are to open foreign markets and create jobs for our people.

We believe that our goals of enhancing our security, bolstering our economic prosperity, and promoting democracy are mutually supportive. Secure nations are more likely to support free trade and maintain democratic structures. Nations with growing economies and strong trade ties are more likely to feel secure and to work toward freedom. And democratic states are less likely to threaten our interests and more likely to cooperate with the U.S. to meet security threats and promote free trade and sustainable development.

tions to help. But we must remain clear in our purpose and resolute in its execution. And while we must continue to reassess the costs and benefits of any operation as it unfolds, reflexive calls for withdrawal of our forces when casualties are incurred would simply encourage rogue actors to try to force our departure from areas where there are U.S. interests by attacking American troops.

During the past two years, diplomacy backed by American power has produced results:

- When Iraq moved forces towards Kuwait, we reacted swiftly and dispatched large-scale forces to the region under the authority of the United Nations — but were prepared to act alone, if necessary.

- In Haiti, it was only when the Haitian military learned that the 82nd Airborne Division was enroute that we achieved peacefully what we were prepared to do under fire.

- In Bosnia, we have been able to achieve limited but important objectives when diplomacy has been married to appropriate military power. For instance, the Sarajevo ultimatum largely succeeded because the threat of NATO air power was judged real; similarly, the threat of NATO airpower prevented the fall of Gorazde.

- In Rwanda and Somalia, only the American military could have done what it did in these humanitarian missions, saving hundreds of thousands of lives. However, over the longer run our interests were served by turning these operations over to multilateral peacekeeping forces once the immediate humanitarian crisis was addressed. No outside force can create a stable and legitimate domestic order for another society — that work can only be accomplished by the society itself.

Our national security strategy reflects both America's interests and our values. Our commitment to freedom, equality and human dignity continues to serve as a beacon of hope to peoples around the world. The vitality, creativity and diversity of American society are important sources of national strength in a global economy increasingly driven by information and ideas.

Our prospects in this new era are promising. The specter of nuclear annihilation has dramatically receded. The historic events of the past two years — including the handshake between Israel and the PLO, the peace treaty between Israel and Jordan, and the transformation of South Africa to a multiracial democracy headed by President Mandela — suggest this era's possibilities for achieving security, prosperity and democracy.

Our nation can only address this era's dangers and opportunities if we remain actively engaged in global affairs. We are the world's greatest power, and we have global interests as well as responsibilities. As our nation learned after World War I, we can find no security for America in isolationism nor prosperity in protectionism. For the American people to be safer and enjoy expanding opportunities, our nation must work to deter would-be aggressors, open foreign markets, promote the spread of democracy abroad, encourage sustainable development and pursue new opportunities for peace.

Our national security requires the patient application of American will and resources. We can only sustain that necessary investment with the broad, bipartisan support of the American people and their representatives in Congress. The full participation of Congress is essential to the success of our new engagement, and I will consult with members of Congress at every step in making and implementing American foreign policy. The Cold War may be over, but the need for American leadership abroad remains as strong as ever. I am committed to forging a new public consensus to sustain our active engagement abroad in pursuit of our cherished goal — a more secure world where democracy and free markets know no borders. This document details that commitment.

William J. Clinton

# I. Introduction

A new era is upon us. The Cold War is over. The dissolution of the Soviet empire has radically transformed the security environment facing the United States and our allies. The primary security imperative of the past half century — containing communist expansion while preventing nuclear war — is gone. We no longer face massive Soviet forces across an East-West divide nor Soviet missiles targeted on the United States. Yet there remains a complex array of new and old security challenges America must meet as we approach a new century.

This national security strategy assesses America's role in this new international context and describes the Administration's strategy to advance our interests at home and abroad.

This is a period of great promise but also great uncertainty. We stand as the world's preeminent power. America's core value of freedom, as embodied in democratic governance and market economics, has gained ground around the world. Hundreds of millions of people have thrown off communism, dictatorship or apartheid. Former adversaries now cooperate with us in diplomacy and global problem solving. Both the threat of a war among great powers and the specter of nuclear annihilation have receded dramatically. The dynamism of the global economy is transforming commerce, culture and global politics, promising greater prosperity for America and greater cooperation among nations.

At the same time, troubling uncertainties and clear threats remain. The new, independent states that replaced the Soviet Union are experiencing wrenching economic and political transitions, as are many new democracies of Central and Eastern Europe. While our relations with the other great powers are as constructive as at any point in this century, Russia's historic transformation will proceed along a difficult path, and China maintains a repressive regime even as that country assumes a more important economic and political role in global affairs. The spread of weapons of mass destruction poses serious threats. Violent extremists threaten fragile peace processes in many parts of the world. Worldwide, there is a resurgence of militant nationalism as well as ethnic and religious conflict. This has been demonstrated by upheavals in Bosnia, Rwanda and Somalia, where the United States has participated in peacekeeping and humanitarian missions.

Not all security risks are immediate or military in nature. Transnational phenomena such as terrorism, narcotics trafficking, environmental degradation, natural resource depletion, rapid population growth and refugee flows also have security implications for both present and long term American policy. In addition, an emerging class of transnational environmental issues are increasingly affecting international stability and consequently will present new challenges to U.S. strategy.

American leadership in the world has never been more important, for there is a simple truth about this new world: the same idea that was under attack three times in this Century — first by imperialism and then by fascism and communism — remains under attack today, but on many

strong defense capability and promoting cooperative security measures; our work to open foreign markets and spur global economic growth; and our promotion of democracy abroad. It also explains how we are pursuing the three elements of our strategy in specific regions by adapting and constructing institutions that will help to provide security and increase economic growth throughout the world.

During the first two years of this Administration, this strategy already has produced tangible results with respect to our security requirements:

- At the President's direction, the Pentagon completed the Bottom Up Review, a full-scale assessment of what defense forces and systems our nation needs for this new security era. The President has also set forth a defense budget for Fiscal Years 1996-2001 that funds the force structure recommended by the Review, and he repeatedly stressed that he will draw the line against further cuts that would undermine that force structure or erode U.S. military readiness. The swift and efficient deployment of our forces last October to the Persian Gulf, and to Haiti and Rwanda, clearly demonstrates their continued readiness to respond as needed. The President also requested Congress to enact supplemental appropriations of $1.7 billion for FY 1994 and $ 2.6 billion for FY 1995 to ensure training readiness is not impaired by the costs of such unanticipated contingencies. In addition, the President added $25 billion to the defense spending plan over the next six years to provide more funding for readiness and to improve the quality of life of our military personnel and families.

- At President Clinton's initiative, a NATO Summit in January 1994 approved the Partnership For Peace (PFP) and initiated a process that will lead to NATO's gradual expansion to ensure that NATO is prepared to meet the European and trans-Atlantic security challenges of this era, and to provide the security relationships that will provide the underpinnings for the democratic gains in Europe since 1989. Since the Summit, 25 countries, including Russia, agreed to join the Partnership for Peace.

- The United States, Russia, Ukraine, Belarus and Kazakhstan exchanged instruments of ratification for the START I Treaty at the December summit of the Conference on Security and Cooperation in Europe (CSCE), culminating two years of intensive U.S. diplomatic efforts to bring the Treaty into force and paving the way for ratification of the START II Treaty. START I requires the permanent elimination of bombers, ICBM silos and ballistic missile submarine launch tubes that carried over 9,000 of the 21,000 total warheads the United States and the former Soviet Union declared when the Treaty was signed — a reduction of 40 percent. START II, signed in 1993, will eliminate additional U.S. and Russian strategic launchers and will effectively remove an additional 5,000 warheads, leaving each side with no more than 3,500. These actions will reduce the strategic force arsenals of the United States and Russia by two-thirds. Presidents Clinton and Yeltsin have agreed that once START II is ratified, the United States and Russia will begin immediately to deactivate all strategic nuclear delivery systems to be reduced under the Treaty by removing their nuclear warheads or taking other steps to take them out of combat status, thus removing thousands of warheads from alert status years ahead of schedule. The two Presidents also directed an intensification of dialogue regarding the possibility of further reductions of, and limitations on, remaining nuclear forces.

- The President launched a comprehensive policy to combat the proliferation of weapons of mass destruction and the missiles that deliver them. The United States has secured landmark commitments to eliminate all nuclear weapons from Ukraine, Belarus and Kazakhstan and, in December, all three nations formally acceded to the Nuclear Non-proliferation Treaty as non-nuclear weapon states. The United States and over 30 other nations opened formal negotiations on a Comprehensive Test Ban Treaty in January 1994, producing a Joint Draft Treaty text that provides a baseline for resolving remaining issues. We also made significant progress during the past year in negotiations within the Anti-Ballistic Missile (ABM) Treaty's Standing Consultative Commission (SCC) to establish an agreed demarcation between strategic and theater ballistic missiles that will allow for the deployment of advanced theater missile defense and update the ABM treaty to reflect the break-up of the Soviet Union. The Administration also submitted the Chemical Weapons Convention to the Senate for ratification and supported the development of new measures to strengthen the Biological Weapons Convention.

2000, and we have developed a National Climate Plan to achieve that goal. The United States has also taken a leading role at the international level towards phasing out the production of most ozone-depleting substances. Under the Montreal Protocol for the protection of the ozone layer, the United States is contributing to developing countries' efforts to reduce their emissions of ozone-depleting chemicals. In June 1993, the U.S. signed the Biodiversity Treaty, and one year later, the Desertification Convention.

- The Administration has asserted world leadership on population issues. We played a key role during the Cairo Conference on Population and Development in developing a consensus Program of Action, including increased availability of voluntary family planning and reproductive health services, sustainable economic development, strengthening of family ties, the empowerment of women including enhanced educational opportunities, and a reduction in infant and child mortality through immunizations and other programs.

Finally, the President has demonstrated a firm commitment to expanding the global realm of democracy:

- The Administration substantially expanded U.S. support for democratic and market reform in Russia, Ukraine and the other newly independent states of the former Soviet Union, including a comprehensive assistance package for Ukraine.

- The United States launched a series of initiatives to bolster the new democracies of Central and Eastern Europe, including the White House Trade and Investment Conference for Central and Eastern Europe held in Cleveland in January. We affirmed our concern for their security and market economic transformation, recognizing that such assurances would play a key role in promoting democratic developments.

- Working with the international community under the auspices of the UN, we succeeded in reversing the coup in Haiti and restoring the democratically-elected president and government. We are now helping the Haitian people consolidate their hard-won democracy and rebuild their country as we complete the transition from the Multinational Force to the United Nations Mission in Haiti.

- U.S. engagement in Northern Ireland contributed to the establishment of a cease-fire, first by the IRA and subsequently by loyalist para-militaries. The President announced in November a package of initiatives aimed at consolidating the peace by promoting economic revitalization and increased private sector trade and investment in Northern Ireland.

- At the Summit of the Americas, the 34 democratic nations of the hemisphere agreed to a detailed plan of cooperative action in such diverse fields as health, education, counter-narcotics, environmental protection, information infrastructure, and the strengthening and safeguarding of democratic institutions, in addition to mutual prosperity and sustainable development. The Summit ushered in a new era of hemispheric cooperation that would not have been possible without U.S. leadership and commitment.

- The United States has increased support for South Africa as it conducted elections and became a multiracial democracy. During the state visit of Nelson Mandela in October, we announced formation of a bilateral commission to foster new cooperation between our nations, and an assistance package to support housing, health, education, trade and investment.

- The United States, working with the Organization of American States, helped reverse an anti-democratic coup in Guatemala.

- In Mozambique and Angola, the United States played a leading role in galvanizing the international community to help bring an end to two decades of civil war and to promote national reconciliation. For the first time, there is the prospect that all of southern Africa will enjoy the fruits of peace and prosperity.

- The Administration initiated policies aimed at crisis prevention, including a new peacekeeping policy.

This report has two major sections. The first part of the report explains our strategy of engagement and enlargement. The second part describes briefly how the Administration is applying this strategy to the world's major regions.

# II. Advancing our Interests Through Engagement and Enlargement

The dawn of the post-Cold War era presents the United States with many distinct dangers, but also with a generally improved security environment and a range of opportunities to improve it further. The unitary threat that dominated our engagement during the Cold War has been replaced by a complex set of challenges. Our nation's strategy for defining and addressing those challenges has several core principles which guide our policy. First and foremost, we must exercise global leadership. We are not the world's policeman, but as the world's premier economic and military power, and with the strength of our democratic values, the U.S. is indispensable to the forging of stable political relations and open trade.

Our leadership must stress preventive diplomacy — through such means as support for democracy, economic assistance, overseas military presence, military-to-military contacts and involvement in multilateral negotiations in the Middle East and elsewhere — in order to help resolve problems, reduce tensions and defuse conflicts before they become crises. These measures are a wise investment in our national security because they offer the prospect of resolving problems with the least human and material cost.

Our engagement must be selective, focusing on the challenges that are most relevant to our own interests and focusing our resources where we can make the most difference. We must also use the right tools — being willing to act unilaterally when our direct national interests are most at stake; in alliance and partnership when our interests are shared by others; and multilaterally when our interests are more general and the problems are best addressed by the international community. In all cases, the nature of our response must depend on what best serves our own long-term national interests. Those interests are ultimately defined by our security requirements. Such requirements start with our physical defense and economic well-being. They also include environmental security as well as the security of values achieved through expansion of the community of democratic nations.

Our national security strategy draws upon a range of political, military and economic instruments, and focuses on the primary objectives that President Clinton has stressed throughout his Administration:

- **Enhancing Our Security.** Taking account of the realities of the post-Cold War era and the new threats, a military capability appropriately sized and postured to meet the diverse needs of our strategy, including the ability, in concert with regional allies, to win two nearly simultaneous major regional conflicts. We will continue to pursue arms control agreements to reduce the danger of nuclear, chemical, biological, and conventional conflict and to promote stability.

- **Promoting Prosperity at Home.** A vigorous and integrated economic policy designed to stimulate global environmentally sound economic growth and free trade and to press for open and equal U.S. access to foreign markets.

- **Promoting Democracy.** A framework of democratic enlargement that increases our security by protecting, consolidating and enlarging the community of free market democracies. Our efforts focus on strengthening democratic processes in key emerging democratic states including Russia, Ukraine and other new states of the former Soviet Union.

- **Providing a Credible Overseas Presence**. U.S. forces must also be forward deployed or stationed in key overseas regions in peacetime to deter aggression and advance U.S. strategic interests. Such overseas presence demonstrates our commitment to allies and friends, underwrites regional stability, gains us familiarity with overseas operating environments, promotes combined training among the forces of friendly countries and provides timely initial response capabilities.

- **Countering Weapons of Mass Destruction**. We are devoting greater efforts to stemming the proliferation of weapons of mass destruction and their delivery means, but at the same time we must improve our capabilities to deter and prevent the use of such weapons and protect ourselves against their effects.

- **Contributing to Multilateral Peace Operations**. When our interests call for it, the United States must also be prepared to participate in multilateral efforts to resolve regional conflicts and bolster new democratic governments. Thus, our forces must be ready to participate in peacekeeping, peace enforcement and other operations in support of these objectives.

- **Supporting Counterterrorism Efforts and Other National Security Objectives**. A number of other tasks remain that U.S. forces have typically carried out with both general purpose and specialized units. These missions include: counterterrorism and punitive attacks, noncombatant evacuation, counter-narcotics operations, special forces assistance to nations and humanitarian and disaster relief operations.

To meet all of these requirements successfully, our forces must be capable of responding quickly and operating effectively. That is, they must be ready to fight and win. This imperative demands highly qualified and motivated people; modern, well-maintained equipment; realistic training; strategic mobility; sufficient support and sustainment capabilities, and proper investment in science and technology.

## Major Regional Contingencies

The focus of our planning for major theater conflict is on deterring and, if necessary, fighting and defeating aggression by potentially hostile regional powers, such as North Korea, Iran or Iraq. Such states are capable of fielding sizable military forces that can cause serious imbalances in military power within regions important to the United States, with allied or friendly states often finding it difficult to match the power of a potentially aggressive neighbor. To deter aggression, prevent coercion of allied or friendly governments and, ultimately, defeat aggression should it occur, we must prepare our forces to confront this scale of threat, preferably in concert with our allies and friends, but unilaterally if necessary. To do this, we must have forces that can deploy quickly and supplement U.S. forward based and forward deployed forces, along with regional allies, in halting an invasion and defeating the aggressor, just as we demonstrated by our rapid response in October 1994 when Iraq threatened aggression against Kuwait.

With programmed enhancements, the forces the Administration is fielding will be sufficient to help defeat aggression in two nearly simultaneous major regional conflicts. As a nation with global interests, it is important that the United States maintain forces with aggregate capabilities on this scale. Obviously, we seek to avoid a situation in which an aggressor in one region might be tempted to take advantage when U.S. forces are heavily committed elsewhere. More basically, maintaining a 'two war' force helps ensure that the United States will have sufficient military capabilities to deter or defeat aggression by a coalition of hostile powers or by a larger, more capable adversary than we foresee today.

We will never know with certainty how an enemy might fight or precisely what demands might be placed on our own forces in the future. The contributions of allies or coalition partners will vary from place to place and over time. Thus, balanced U.S. forces are needed in order to provide a wide range of complementary capabilities and to cope with the unpredictable and unexpected.

## Overseas Presence

The need to deploy U.S. military forces abroad in peacetime is also an important factor in determining our overall force structure. We will maintain robust overseas presence in several forms, such as permanently stationed forces and pre-positioned equipment, deployments and combined exercises, port calls and other force visits, as well as military-to-military contacts. These activities provide several benefits. Specifically they:

against former President Bush, President Clinton ordered a cruise missile attack against the headquarters of Iraq's intelligence service in order to send a firm response and deter further threats. Similarly, the United States obtained convictions against defendants in the bombing of the World Trade Center.

U.S. leadership and close coordination with other governments and international bodies will continue, as demonstrated by the UN Security Council sanctions against Libya for the Pan Am 103 and UTA 772 bombings, a new international convention dealing with detecting and controlling plastic explosives, and two important counterterrorism treaties — the Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Aviation and the Convention for the Suppression of Unlawful Attacks Against the Safety of Maritime Navigation.

**Fighting Drug Trafficking**

The Administration has undertaken a new approach to the global scourge of drug abuse and trafficking that will better integrate domestic and international activities to reduce both the demand and the supply of drugs. Ultimate success will depend on concerted efforts and partnerships by the public, all levels of government and the American private sector with other governments, private groups and international bodies.

The U.S. has shifted its strategy from the past emphasis on transit interdiction to a more evenly balanced effort with source countries to build institutions, destroy trafficking organizations and stop supplies. We will support and strengthen democratic institutions abroad, denying narcotics traffickers a fragile political infrastructure in which to operate. We will also cooperate with governments that demonstrate the political will to confront the narcotics threat.

Two new comprehensive strategies have been developed, one to deal with the problem of cocaine and another to address the growing threat from high-purity heroin entering this country. We will engage more aggressively with international organizations, financial institutions and nongovernmental organizations in counternarcotics cooperation.

At home and in the international arena, prevention, treatment and economic alternatives must work hand-in-hand with law enforcement and interdiction activities. Long-term efforts will be maintained to help nations develop healthy economies with fewer market incentives for producing narcotics. The United States has increased efforts abroad to foster public awareness and support for governmental cooperation on a broad range of activities to reduce the incidence of drug abuse. Public awareness of a demand problem in producing or trafficking countries can be converted into public support and increased governmental law enforcement to reduce trafficking and production. There has been a significant attitudinal change and awareness in Latin America and the Caribbean, particularly as producer and transit nations themselves become plagued with the ill effects of consumption.

**Other Missions**

The United States government is also responsible for protecting the lives and safety of Americans abroad. In order to carry out this responsibility, selected U.S. military forces are trained and equipped to evacuate Americans from such situations as the outbreak of civil or international conflict and natural or man-made disasters. For example, U.S. Marines evacuated Americans from Monrovia, Liberia in August of 1990, and from Mogadishu, Somalia, in December of that year. In 1991, U.S. forces evacuated nearly 20,000 Americans from the Philippines over a three-week period following the eruption of Mount Pinatubo. Last year, U.S. Marines coupled with U.S. airlift, deployed to Burundi to help ensure the safe evacuation of U.S. citizens from ethnic fighting in Rwanda.

U.S. forces also provide invaluable training and advice to friendly governments threatened by subversion, lawlessness or insurgency. At any given time, we have small teams of military experts deployed in roughly 25 countries helping host governments cope with such challenges.

U.S. military forces and assets are frequently called upon to provide assistance to victims of floods, storms, drought and other humanitarian disasters. Both at home and abroad, U.S. forces provide emergency food, shelter, medical care and security to those in need.

Finally, the U.S. will continue as a world leader in space through its technical expertise and innovation. Over the past 30 years, as more and more nations have ventured into space, the U.S. has steadfastly recognized space as an international region. Since all nations are immediately accessible from space, the maintenance of an international

tively on those areas that most affect our national interests — for instance, areas where we have a sizable economic stake or commitments to allies, and areas where there is a potential to generate substantial refugee flows into our nation or our allies.

Second, in all cases the costs and risks of U.S. military involvement must be judged to be commensurate with the stakes involved. We will be more inclined to act where there is reason to believe that our action will bring lasting improvement. On the other hand, our involvement will be more circumscribed when other regional or multilateral actors are better positioned to act than we are. Even in these cases, however, the United States will be actively engaged at the diplomatic level. In every case, however, we will consider several critical questions before committing military force: Have we considered non-military means that offer a reasonable chance of success? Is there a clearly defined, achievable mission? What is the environment of risk we are entering? What is needed to achieve our goals? What are the potential costs — both human and financial — of the engagement? Do we have reasonable assurance of support from the American people and their elected representatives? Do we have timelines and milestones that will reveal the extent of success or failure, and, in either case, do we have an exit strategy?

The decision on *how* we use force has a similar set of derived guidelines:

First, when we send American troops abroad, we will send them with a clear mission and, for those operations that are likely to involve combat, the means to achieve their objectives decisively, having answered the questions: What types of U.S. military capabilities should be brought to bear, and is the use of military force carefully matched to our political objectives?

Second, as much as possible, we will seek the help of our allies and friends or of relevant international institutions. If our most important national interests are at stake, we are prepared to act alone. But especially on those matters touching directly the interests of our allies, there should be a proportionate commitment from them. Working together increases the effectiveness of each nation's actions, and sharing the responsibilities lessens everyone's load.

These, then, are the calculations of interest and cost that have influenced our past uses of military power and will guide us in the future. Every time this Administration has used force, it has balanced interests against costs. And in each case, the use of our military has put power behind our diplomacy, allowing us to make progress we would not otherwise have achieved.

One final consideration regards the central role the American people rightfully play in how the United States wields its power abroad: the United States cannot long sustain a fight without the support of the public. This is true for humanitarian and other non-traditional interventions, as well as war. Modern media communications confront every American with images which both stir the impulse to intervene and raise the question of an operation's costs and risks. When it is judged in America's interest to intervene, we must use force with an unwavering commitment to our objective. While we must continue to reassess any operation's costs and benefits as it unfolds and the full range of our options, reflexive calls for early withdrawal of our forces as soon as casualties arise endangers our objectives as well as our troops. Doing so invites any rogue actor to attack our troops to try to force our departure from areas where our interests lie.

## Combating the Spread and Use of Weapons of Mass Destruction and Missiles

Weapons of mass destruction — nuclear, biological and chemical — along with their associated delivery systems, pose a major threat to our security and that of our allies and other friendly nations. Thus, a key part of our strategy is to seek to stem the proliferation of such weapons and to develop an effective capability to deal with these threats. We also need to maintain robust strategic nuclear forces and seek to implement existing strategic arms agreements.

### Nonproliferation and Counterproliferation

A critical priority for the United States is to stem the proliferation of nuclear weapons and other weapons of mass destruction and their missile delivery systems. Countries' weapons programs, and their levels of cooperation with our nonproliferation efforts, will be among our most important criteria in judging the nature of our bilateral relations.

Through programs such as the Nunn-Lugar Cooperative Threat Reduction effort and other denuclearization initia-

This will require improved defensive capabilities. To minimize the vulnerability of our forces abroad to weapons of mass destruction, we are placing a high priority on improving our ability to locate, identify and disable arsenals of weapons of mass destruction, production and storage facilities for such weapons, and their delivery systems.

### Nuclear Forces

In September, the President approved the recommendations of the Pentagon's Nuclear Posture Review (NPR). A key conclusion of this review is that the United States will retain a triad of strategic nuclear forces sufficient to deter any future hostile foreign leadership with access to strategic nuclear forces from acting against our vital interests and to convince it that seeking a nuclear advantage would be futile. Therefore, we will continue to maintain nuclear forces of sufficient size and capability to hold at risk a broad range of assets valued by such political and military leaders. The President approved the NPR's recommended strategic nuclear force posture as the U.S. START II force. The forces are: 450-500 Minuteman ICBMs, 14 Trident submarines all with D-5 missiles, 20 B-2 and 66 B-52 strategic bombers, and a non-nuclear role for the B-1s. This force posture allows us the flexibility to reconstitute or reduce further, as conditions warrant. The NPR also reaffirmed the current posture and deployment of non-strategic nuclear forces; the United States will eliminate carrier and surface ship nuclear weapons capability.

## Arms Control

Arms control is an integral part of our national security strategy. Arms control can help reduce incentives to initiate attack; enhance predictability regarding the size and structure of forces, thus reducing fear of aggressive intent; reduce the size of national defense industry establishments and thus permit the growth of more vital, nonmilitary industries; ensure confidence in compliance through effective monitoring and verification; and, ultimately, contribute to a more stable and calculable balance of power.

In the area of strategic arms control, prescribed reductions in strategic offensive arms and the steady shift toward less destabilizing systems remain indispensable. Ukraine's accession to the Nuclear Non-proliferation Treaty — joining Belarus' and Kazakhstan's decision to be non-nuclear nations — was followed immediately by the exchange of instruments of ratification and brought the START I treaty into force at the December CSCE summit, paving the way for ratification of the START II Treaty. Under START II, the United States and Russia will each be left with between 3,000 and 3,500 deployed strategic nuclear warheads, which is a two-thirds reduction from the Cold War peak. The two Presidents agreed that once START II is ratified, both nations will immediately begin to deactivate or otherwise remove from combat status, those systems whose elimination will be required by that treaty, rather than waiting for the treaty to run its course through the year 2003. START II ratification will also open the door to the next round of strategic arms control, in which we will consider what further reductions in, or limitations on, remaining U.S. and Russian nuclear forces should be carried out. We will also explore strategic confidence-building measures and mutual understandings that reduce the risk of accidental war.

The full and faithful implementation of other existing arms control agreements, including the Anti-Ballistic Missile (ABM) Treaty, Strategic Arms Reduction Talks I (START I), Biological Weapons Convention (BWC), Intermediate-range Nuclear Forces (INF) Treaty, Conventional Forces in Europe (CFE) Treaty, several nuclear testing agreements, the 1994 Vienna Document on Confidence and Security-Building Measures (CSBMs), Open Skies, the Environmental Modification Convention (EnMod), Incidents at Sea and many others will remain an important element of national security policy. The on-going negotiation initiated by the United States to clarify the ABM Treaty by establishing an agreed demarcation between strategic and theater ballistic missiles and update the Treaty to reflect the break-up of the Soviet Union reflects the Administration's commitment to maintaining the integrity and effectiveness of crucial arms control agreements.

Future arms control efforts may become more regional and multilateral. Regional arrangements can add predictability and openness to security relations, advance the rule of international law and promote cooperation among participants. They help maintain deterrence and a stable military balance at regional levels. The U.S. is prepared to promote, help negotiate, monitor and participate in regional arms control undertakings compatible with American national security interests. We will generally support such undertakings but will not seek to impose regional arms control accords against the wishes of affected states.

rigorous criteria, including the same principles that would guide any decision to employ U.S. forces. In addition, we will ensure that the risks to U.S. personnel and the command and control arrangements governing the participation of American and foreign forces are acceptable to the United States.

The question of command and control is particularly critical. There may be times when it is in our interest to place U.S. troops under the temporary operational control of a competent UN or allied commander. The United States has done so many times in the past — from the siege of Yorktown in the Revolutionary War to the battles of Desert Storm. However, under no circumstances will the President ever relinquish his command authority over U.S. forces.

Improving the ways the United States and the UN decide upon and conduct peace operations will not make the decision to engage any easier. The lesson we must take away from our first ventures in peace operations is not that we should forswear such operations but that we should employ this tool selectively and more effectively. In short, the United States views peace operations as a means to support our national security strategy, not as a strategy unto itself.

The President is firmly committed to securing the active support of the Congress for U.S. participation in peace operations. The Administration has set forth a detailed blueprint to guide consultations with Congress. With respect to particular operations, the Administration will undertake consultations on questions such as the nature of expected U.S. military participation, the mission parameters of the operation, the expected duration, and budgetary implications. In addition to such operation-specific consultations, the Administration has also conducted regular monthly briefings for congressional staff, and will deliver an Annual Comprehensive Report to Congress on Peace Operations. Congress is critical to the institutional development of a successful U.S. policy on peace operations, including the resolution of funding issues which have an impact on military readiness.

Two other points deserve emphasis. First, the primary mission of our Armed Forces is not peace operations; it is to deter and, if necessary, to fight and win conflicts in which our most important interests are threatened. Second, while the international community can create conditions for peace, the responsibility for peace ultimately rests with the people of the country in question.

## Strong Intelligence Capabilities

U.S. intelligence capabilities are critical instruments of our national power and remain an integral part of our national security strategy. Only a strong intelligence effort can provide adequate warning of threats to U.S. national security and identify opportunities for advancing our interests. Policy analysts, decisionmakers and military commanders at all levels will continue to rely on our intelligence community to collect information unavailable from other sources and to provide strategic and tactical analysis to help surmount potential challenges to our military, political and economic interests.

Because national security has taken on a much broader definition in this post-Cold War era, intelligence must address a much wider range of threats and dangers. We will continue to monitor military and technical threats, to guide long-term force development and weapons acquisition, and to directly support military operations. Intelligence will also be critical for directing new efforts against regional conflicts, proliferation of WMD, counterintelligence, terrorism and narcotics trafficking. In order to adequately forecast dangers to democracy and to U.S. economic well-being, the intelligence community must track political, economic, social and military developments in those parts of the world where U.S. interests are most heavily engaged and where overt collection of information from open sources is inadequate. Finally, to enhance the study and support of worldwide environmental, humanitarian and disaster relief activities, technical intelligence assets (principally imagery) must be directed to a greater degree towards collection of data on these subjects.

The collection and analysis of intelligence related to economic development will play an increasingly important role in helping policy makers understand economic trends. That collection and analysis can help level the economic playing field by identifying threats to U.S. companies from foreign intelligence services and unfair trading practices.

This strategy requires that we take steps to reinforce current intelligence capabilities and overt foreign service reporting, within the limits of our resources, and similar

As a priority initiative, the U.S. successfully led efforts at the September Cairo Conference to develop a consensus Program of Action to address the continuous climb in global population, including increased availability of family planning and reproductive health services, sustainable economic development, the empowerment of women to include enhanced educational opportunities and a reduction in infant and child mortality. Rapid population growth in the developing world and unsustainable consumption patterns in industrialized nations are the root of both present and potentially even greater forms of environmental degradation and resource depletion. A conservative estimate of the globe's population projects 8.5 billion people on the planet by the year 2025. Even when making the most generous allowances for advances in science and technology, one cannot help but conclude that population growth and environmental pressures will feed into immense social unrest and make the world substantially more vulnerable to serious international frictions.

# *Promoting Prosperity at Home*

A central goal of our national security strategy is to promote America's prosperity through efforts both at home and abroad. Our economic and security interests are increasingly inseparable. Our prosperity at home depends on engaging actively abroad. The strength of our diplomacy, our ability to maintain an unrivaled military, the attractiveness of our values abroad — all these depend in part on the strength of our economy.

## Enhancing American Competitiveness

Our primary economic goal is to strengthen the American economy. The first step toward that goal was reducing the federal deficit and the burden it imposes on the economy and future generations. The economic program passed in 1993 has restored investor confidence in the U.S. and strengthened our position in international economic negotiations. Under the Clinton economic plan, the deficit will be reduced over 700 billion dollars by Fiscal Year 1998. President Clinton has also lowered the deficit as a percentage of the Gross Domestic Product from 4.9 percent in Fiscal Year 1992 to 2.4 percent in Fiscal Year 1995 — the lowest since 1979.

And Fiscal Year 1995 will be the first time that the deficit has been reduced three years in a row since the Truman Administration. We are building on this deficit reduction effort with other steps to improve American competitiveness: investing in science and technology; assisting defense conversion; improving information networks and other vital infrastructure; and improving education and training programs for America's workforce. We are structuring our defense R&D effort to place greater emphasis on dual-use technologies that can enhance competitiveness and meet pressing military needs. We are also reforming the defense acquisition system so that we can develop and procure weapons and materiel more efficiently.

## Partnership with Business and Labor

Our economic strategy views the private sector as the engine of economic growth. It sees government's role as a partner to the private sector — acting as an advocate of U.S. business interests; leveling the playing field in international markets; helping to boost American exports; and finding ways to remove domestic and foreign barriers to the creativity, initiative and productivity of American business.

To this end, on September 29, 1993, the Administration published its report creating America's first national export strategy and making 65 specific recommendations for reforming the way government works with the private sector to expand exports. Among the recommendations were significant improvements in advocacy, export financing, market information systems and product standards education. The results of these reforms could enable U.S. exports to reach the trillion dollar mark by the turn of the century, which would help create at least six million new American jobs.

Another critical element in boosting U.S. exports is reforming the outdated export licensing system. That reform began with significant liberalization of export licensing controls for computers, supercomputers and telecommunications equipment. The Administration is also seeking comprehensive reform of the Export Administration Act, which governs the process of export licensing. The goal of this reform is to strengthen our ability to prevent proliferation and protect other national interests, while removing unnecessarily burdensome licensing requirements left over from the Cold War.

## Enhancing Access to Foreign Markets

The success of American business is more than ever dependent upon success in international markets. The

## Expanding the Realm of Free Trade

The conclusion of NAFTA, the Uruguay Round, the Bogor Declaration of the 1994 APEC leaders meeting, and the Summit of the Americas' action plan represents unprecedented progress toward more open markets both at the regional and global levels. The Administration intends to continue its efforts in further enhancing U.S. access to foreign markets. The World Trade Organization will provide a new institutional lever for securing such access. Emerging markets, particularly along the Pacific Rim, present vast opportunities for American enterprise, and APEC now provides a suitable vehicle for the exploration of such opportunities. Similarly, the United States convened the Summit of the Americas to seize the opportunities created by the movement toward open markets throughout the hemisphere. All such steps in the direction of expanded trading relationships will be undertaken in a way consistent with protection of the international environment and to the goal of sustainable development here and abroad.

## Strengthening Macroeconomic Coordination

As national economies become more integrated internationally, the U.S. cannot thrive in isolation from developments abroad. International economic expansion is benefiting from G-7 macroeconomic policy coordination. To improve global macroeconomic performance, we will continue to work through the G-7 process to promote growth-oriented policies to complement our own efforts.

## Providing for Energy Security

The United States depends on oil for more than 40% of its primary energy needs. Roughly 45% of our oil needs are met with imports, and a large share of these imports come from the Persian Gulf area. The experiences of the two oil shocks and the Gulf War show that an interruption of oil supplies can have a significant impact on the economies of the United States and its allies. Appropriate economic responses can substantially mitigate the balance of payments and inflationary impacts of an oil shock; appropriate foreign policy responses to events such as Iraq's invasion of Kuwait can limit the magnitude of the crisis.

Over the longer term, the United States' dependence on access to foreign oil sources will be increasingly important as our resources are depleted. The U.S. economy has grown roughly 75% since the first oil shock; yet during that time our oil consumption has remained virtually stable and oil production has declined. High oil prices did not generate enough new oil exploration and discovery to sustain production levels from our depleted resource base. These facts show the need for continued and extended reliance on energy efficiency and conservation and development of alternative energy sources. Conservation measures notwithstanding, the U.S. has a vital interest in unrestricted access to this critical resource.

## Promoting Sustainable Development Abroad

Broad-based economic development not only improves the prospects for democratic development in developing countries, but also expands the demands for U.S. exports. Economic growth abroad can alleviate pressure on the global environment, reduce the attraction of illegal narcotics trade and improve the health and economic productivity of global populations.

The environmental aspects of ill-designed economic growth are clear. Environmental damage will ultimately block economic growth. Rapid urbanization is outstripping the ability of nations to provide jobs, education and other services to new citizens. The continuing poverty of a quarter of the world's people leads to hunger, malnutrition, economic migration and political unrest. Widespread illiteracy and lack of technical skills hinder employment opportunities and drive entire populations to support themselves on increasingly fragile and damaged resource bases. New diseases such as AIDS and epidemics, often spread through environmental degradation, threaten to overwhelm the health facilities of developing countries, disrupt societies and stop economic growth. These realities must be addressed by sustainable development programs which offer viable alternatives. U.S. leadership is of the essence. If such alternatives are not developed, the consequences for the planet's future will be grave indeed.

Domestically, the U.S. must work hard to halt local and cross-border environmental degradation. In addition, the U.S. should foster environmental technology targeting pollution prevention, control, and cleanup. Companies that invest in energy efficiency, clean manufacturing, and environmental services today will create the high-quality, high-wage jobs of tomorrow. By providing access to these types of technologies, our exports can also provide the

- More than 30 nations in Central and Eastern Europe, the former Soviet Union, Latin America, Africa and East Asia have, over the past 10 years, adopted the structures of a constitutional democracy and held free elections;

- The nations of the Western Hemisphere have proclaimed their commitment to democratic regimes and to the collective responsibility of the nations of the OAS to respond to threats to democracy.

- In the Western Hemisphere, only Cuba is not a democratic state.

- Nations as diverse as South Africa, Cambodia and El Salvador have resolved bitter internal disputes with agreement on the creation of constitutional democracies.

The first element of our democracy strategy is to work with the other democracies of the world and to improve our cooperation with them on security and economic issues. We also seek their support in enlarging the realm of democratic nations.

The core of our strategy is to help democracy and markets expand and survive in other places where we have the strongest security concerns and where we can make the greatest difference. This is not a democratic crusade; it is a pragmatic commitment to see freedom take hold where that will help us most. Thus, we must target our effort to assist states that affect our strategic interests, such as those with large economies, critical locations, nuclear weapons or the potential to generate refugee flows into our own nation or into key friends and allies. We must focus our efforts where we have the most leverage. And our efforts must be demand-driven — they must focus on nations whose people are pushing for reform or have already secured it.

Russia is a key state in this regard. If we can support and help consolidate democratic and market reforms in Russia (and the other newly independent states), we can help turn a former threat into a region of valued diplomatic and economic partners. Our intensified interaction with Ukraine has helped move that country on to the path of economic reform, which is critical to its long-term stability. In addition, our efforts in Russia, Ukraine and the other states support and facilitate our efforts to achieve continued reductions in nuclear arms and compliance with international nonproliferation accords.

The new democracies in Central and Eastern Europe are another clear example, given their proximity to the great democratic powers of Western Europe, their importance to our security, and their potential markets.

Since our ties across the Pacific are no less important than those across the Atlantic, pursuing enlargement in the Asian Pacific is a third example. We will work to support the emerging democracies of the region and to encourage other states along the same path.

Continuing the great strides toward democracy and markets in our hemisphere is also a key concern and was behind the President's decision to host the Summit of the Americas in December 1994. As we continue such efforts, we should be on the lookout for states whose entry into the camp of market democracies may influence the future direction of an entire region; South Africa now holds that potential with regard to sub-Saharan Africa.

How should the United States help consolidate and enlarge democracy and markets in these states? The answers are as varied as the nations involved, but there are common elements. We must continue to help lead the effort to mobilize international resources, as we have with Russia, Ukraine and the other new independent states. We must be willing to take immediate public positions to help staunch democratic reversals, as we have in Haiti and Guatemala. We must give democratic nations the fullest benefits of integration into foreign markets, which is part of why NAFTA and the GATT ranked so high on our agenda. And we must help these nations strengthen the pillars of civil society, improve their market institutions, and fight corruption and political discontent through practices of good governance.

At the same time as we work to ensure the success of emerging democracies, we must also redouble our efforts to guarantee basic human rights on a global basis. At the 1993 United Nations Conference on Human Rights, the United States forcefully and successfully argued for a reaffirmation of the universality of such rights and improved international mechanisms for their promotion. In the wake of this gathering, the UN has named a High Commissioner for Human Rights, and the rights of women have been afforded a new international precedence. The United

# III. Integrated Regional Approaches

The United States is a genuinely global power. Our policy toward each of the world's regions reflects our overall strategy tailored to their unique challenges and opportunities. This section highlights the application of our strategy to each of the world's regions; our broad objectives and thrust, rather than an exhaustive list of all our policies and interests. It illustrates how we integrate our commitment to the promotion of democracy and the enhancement of American prosperity with our security requirements to produce a mutually reinforcing policy.

## *Europe and Eurasia*

Our strategy of enlargement and engagement is central to U.S. policy towards post-Cold War Europe. European stability is vital to our own security, a lesson we have learned twice at great cost this century. Vibrant European economies mean more jobs for Americans at home and investment opportunities abroad. With the collapse of the Soviet empire and the emergence of new democracies in its wake, the United States has an unparalleled opportunity to contribute toward a free and undivided Europe. Our goal is an integrated democratic Europe cooperating with the United States to keep the peace and promote prosperity.

The first and most important element of our strategy in Europe must be security through military strength and cooperation. The Cold War is over, but war itself is not over.

As we know, war continues in the former Yugoslavia. While that war does not pose a direct threat to our security or warrant unilateral U.S. involvement, U.S. policy is focused on five goals: achieving a political settlement in Bosnia that preserves the country's territorial integrity and provides a viable future for all its peoples; preventing the spread of the fighting into a broader Balkan war that could threaten both allies and the stability of new democratic states in Central and Eastern Europe; stemming the destabilizing flow of refugees from the conflict; halting the slaughter of innocents; and helping to support NATO's central role in post-Cold War Europe while maintaining our role in shaping Europe's security architecture.

Our leadership paved the way to NATO's February 1994 ultimatum that ended the heavy Serb bombardment of Sarajevo, Bosnia's capital. Our diplomatic leadership brought an end to the fighting between the Muslims and Croats in Bosnia and helped establish a bicommunal Bosnian-Croat Federation. Since April 1994, we have been working with the warring parties through the Contact Group (United States, Russia, United Kingdom, France and Germany) to help the parties reach a negotiated settlement. Our goal is to bring an end to the war in Bosnia consistent with the Contact Group plan which would preserve Bosnia as a single state within its existing borders while providing for an equitable division of territory between the Muslim-Croat Federation and the Bosnian-Serb entity. While we have not yet succeeded in achieving a political settlement, diplomatic efforts in the final months of 1994 helped produce a cease-fire and a cessation of hostilities agreement that took effect on January 1, 1995. On this basis, efforts are now underway with our Contact Group partners to renew negotiations on a political settlement based on the Contact Group plan.

Should these new diplomatic efforts falter, we remain prepared to move forward with our proposal at the UN to lift the arms embargo on Bosnia-Herzegovina, multilaterally. We remain strongly opposed to a unilateral lifting of

During 1995, we will come to agreement with our allies on the process and principles, and we will share our conclusions with the members of the Partnership for Peace (PFP). Once this effort is complete, NATO can turn to the question of candidates and timing. Each nation will be considered individually. No non-member of NATO will have a veto.

Expanding the Alliance will promote our interests by reducing the risk of instability or conflict in Europe's eastern half — the region where two world wars and the Cold War began. It will help assure that no part of Europe will revert to a zone of great power competition or a sphere of influence. It will build confidence, and give new democracies a powerful incentive to consolidate their reforms. And each potential member will be judged according to the strength of its democratic institutions and its capacity to contribute to the goals of the Alliance.

As the President has made clear, NATO expansion will not be aimed at replacing one division of Europe with a new one, but to enhance the security of all European states, members and non-members alike. In this regard, we have a major stake in ensuring that Russia is engaged as a vital participant in European security affairs. We are committed to a growing, healthy NATO-Russia relationship and want to see Russia closely involved in the Partnership for Peace. Recognizing that no single institution can meet every challenge to peace and stability in Europe, we have begun a process that will strengthen the Organization for Security and Cooperation in Europe (OSCE) and enhance its conflict prevention and peacekeeping capabilities.

The second element of the new strategy for Europe is economic. The United States seeks to build on vibrant and open market economies, the engines that have given us the greatest prosperity in human history over the last several decades in Europe and in the United States. To this end, we strongly support the process of European integration embodied in the European Union and seek to deepen our partnership with the EU in support of our economic goals, but also commit ourselves to the encouragement of bilateral trade and investment in countries not part of the EU.

The nations of the European Union face particularly significant economic challenges with nearly 20 million people unemployed and, in Germany's case, the extraordinarily high costs of unification. Among the Atlantic nations, economic stagnation has clearly eroded public support in finances for outward-looking foreign policies and for greater integration. We are working closely with our West European partners to expand employment and promote long-term growth, building on the results of the Detroit Jobs Conference and the Naples G-7 Summit. A White House-sponsored Trade and Investment Conference for Central and Eastern Europe took place in Cleveland in January.

In Northern Ireland, the Administration is implementing a package of initiatives to promote the peace process. The Secretary of Commerce led a Trade and Investment mission to Belfast in December 1994, and in April the President will host a White House Conference in Philadelphia on Trade and Investment in Northern Ireland.

As we work to strengthen our own economies, we must know that we serve our own prosperity and our security by helping the new market reforms in the new democracies in Europe's East that will help to deflate the region's demagogues. It will help ease ethnic tensions. It will help new democracies take root.

In Russia, Ukraine and the other new independent states of the former Soviet Union, the economic transformation undertaken will go down as one of the great historical events of this century. The Russian Government has made remarkable progress toward privatizing the economy (over 50 percent of the Russian Gross Domestic Product is now generated by the private sector) and reducing inflation, and Ukraine has taken bold steps of its own to institute much-needed economic reforms. But much remains to be done to build on the reform momentum to assure durable economic recovery and social protection. President Clinton has given strong and consistent support to this unprecedented reform effort, and has mobilized the international community to provide structural economic assistance, for example, securing agreement by the G-7 to make available four billion dollars in grants and loans as Ukraine implemented economic reform.

The short-term difficulties of taking Central and Eastern Europe into Western economic institutions will be more than rewarded if they succeed and if they are customers for America's and Western Europe's goods and services tomorrow. That is why this Administration has been committed to increase support substantially for market reforms in the new states of the former Soviet Union, and why we have continued our support for economic transi-

We are developing a broader engagement with the People's Republic of China that will encompass both our economic and strategic interests. That policy is best reflected in our decision to delink China's Most Favored Nation status from its record on human rights. We will also facilitate China's entry into international trade organizations, such as the General Agreement on Tariffs and Trade if it undertakes the necessary obligations. Given its growing economic potential and already sizable military force, it is essential that China not become a security threat to the region. To that end, we are strongly promoting China's participation in regional security mechanisms to reassure its neighbors and assuage its own security concerns. We have also broadened our bilateral security dialogue with the Chinese and we are seeking to gain further cooperation from China in controlling the proliferation of weapons of mass destruction. We are also in the early stages of a dialogue with China on environmental and health challenges.

The second pillar of our engagement in Asia is our commitment to continuing and enhancing the economic prosperity that has characterized the region. Opportunities for economic progress continue to abound in Asia, and underlie our strong commitment to multilateral economic cooperation, principally through APEC. Today, the 18 member states of APEC — comprising about one-third of the world's population — produce $14 trillion and export $1.7 trillion of goods annually, about one-half of the world's totals. U.S. exports to APEC economies reached $300 billion last year, supporting nearly 2.6 million American jobs. U.S. investments in the region totaled over $140 million — about one-third of total U.S. direct foreign investment. A prosperous and open Asia Pacific is key to the economic health of the United States. The first APEC leaders meeting, hosted by President Clinton, is vivid testimony to the possibilities of stimulating regional economic cooperation as we saw in the recent APEC leaders statement at the second leaders meeting that accepted the goal of free trade within the region by early in the 21st Century.

We are also working with our major bilateral trade partners to improve trade relations. The U.S. and Japan successfully completed a preliminary accord in September to bring about the implementation of the 1993 Framework Agreement, designed to open Japan's markets more to competitive U.S. goods and reduce the U.S. trade deficit. Since we delinked China's Most-Favored-Nation trade status from specific human rights considerations in May, U.S.-China trade has grown significantly. We continue to work closely with Beijing to resolve remaining bilateral and multilateral trade problems, such as intellectual property rights and market access. Unless the issue of intellectual property rights is resolved, economic sanctions will be imposed.

The third pillar of our policy in building a new Pacific community is to support democratic reform in the region. The new democratic states of Asia will have our strong support as they move forward to consolidate and expand democratic reforms.

Some have argued that democracy is somehow unsuited for Asia or at least for some Asian nations — that human rights are relative and that they simply mask Western cultural imperialism. These arguments are wrong. It is not Western imperialism, but the aspirations of Asian peoples themselves that explain the growing number of democracies and the growing strength of democracy movements everywhere in Asia. We support those aspirations and those movements.

Each nation must find its own form of democracy, and we respect the variety of democratic institutions that have grown in Asia. But there is no cultural justification for torture or tyranny. Nor do we accept repression cloaked in moral relativism. Democracy and human rights are universal yearnings and universal norms, just as powerful in Asia as elsewhere. We will continue to press for respect for human rights in countries as diverse as China and Burma.

## *The Western Hemisphere*

The Western hemisphere, too, is a fertile field for a strategy of engagement and enlargement. Sustained improvements in the security situation there, including the resolution of border tensions, control of insurgencies and containment of pressures for arms proliferation, will be an essential underpinning of political and economic progress in the hemisphere.

The unprecedented triumph of democracy and market economies throughout the region offers an unparalleled opportunity to secure the benefits of peace and stability, and to promote economic growth and trade. At the Summit of the Americas, which President Clinton hosted in

Our policy toward Iran is aimed at changing the behavior of the Iranian government in several key areas, including Iran's efforts to obtain weapons of mass destruction and missiles, its support for terrorism and groups that oppose the peace process, its attempts to undermine friendly governments in the region and its dismal human rights record. We remain willing to enter into an authoritative dialogue with Iran to discuss the differences between us.

A key objective of our policy in the Gulf is to reduce the chances that another aggressor will emerge who would threaten the independence of existing states. Therefore, we will continue to encourage members of the Gulf Cooperation Council to work closely on collective defense and security arrangements, help individual GCC states meet their appropriate defense requirements and maintain our bilateral defense agreements.

South Asia has experienced an important expansion of democracy and economic reform, and our strategy is designed to help the peoples of that region enjoy the fruits of democracy and greater stability through efforts aimed at resolving long-standing conflict and implementing confidence building measures. The United States has engaged India and Pakistan in seeking agreement on steps to cap, reduce, and ultimately eliminate their weapons of mass destruction and ballistic missile capabilities. Regional stability and improved bilateral ties are also important for America's economic interest in a region that contains a quarter of the world's population and one of its most important emerging markets.

In both the Middle East and South Asia, the pressure of expanding populations on natural resources is enormous. Growing desertification in the Middle East has strained relations over arable land. Pollution of the coastal areas in the Eastern Mediterranean, the Red Sea and the Gulf of Aqaba has degraded fish catches and hindered development. Water shortages stemming from overuse, contaminated water aquifers and riparian disputes threaten regional relations. In South Asia, high population densities and rampant pollution have exacted a tremendous toll on forests, biodiversity and the local environment.

## *Africa*

Africa poses one of our greatest challenges and opportunities to enlarge the community of market democracies. Throughout Africa, U.S. policy supports democracy, sustainable economic development and resolution of conflicts through negotiation, diplomacy and peacekeeping. New policies will strengthen civil societies and mechanisms for conflict resolution, particularly where ethnic, religious, and political tensions are acute. In particular, we will seek to identify and address the root causes of conflicts and disasters before they erupt.

The nexus of economic, political, social, ethnic and environmental challenges facing Africa can lead to a sense of 'Afro-pessimism.' However, if we can simultaneously address these challenges, we create a synergy that can stimulate development, resurrect societies and build hope. We encourage democratic reform in nations like Nigeria and Zaire to allow the people of these countries to enjoy responsive government. In Mozambique and Angola, we have played a leading role in bringing an end to two decades of civil war and promoting national reconciliation. For the first time, there is the prospect that all of southern Africa could enjoy the fruits of peace and prosperity. Throughout the continent — in Rwanda, Burundi, Liberia, Sudan and elsewhere — we work with the UN and regional organizations to encourage peaceful resolution of internal disputes.

Last year, South Africa held its first non-racial elections and created a Government of National Unity. We remain committed to addressing the socio-economic legacies of apartheid to ensure that democracy fully takes root in South Africa. During the state visit of Nelson Mandela, we announced formation of a bilateral commission to foster new cooperation between our nations. We must support the revolution of democracy sweeping the continent — on center stage in South Africa, and in quieter but no less dramatic ways in countries like Malawi, Benin, Niger, and Mali. We need to encourage the creation of cultures of tolerance, flowering of civil society and the protection of human rights and human dignity.

# IV. Conclusions

The clear and present dangers of the Cold War made the need for national security commitments and expenditures obvious to the American people. Today the task of mobilizing public support for national security priorities has become more complicated. The complex array of new dangers, opportunities and responsibilities outlined in this strategy come at a moment in our history when Americans are preoccupied with domestic concerns and when budgetary constraints are tighter than at any point in the last half century. Yet, in a more integrated and interdependent world, we simply cannot be successful in advancing our interests — political, military and economic — without active engagement in world affairs.

While Cold War threats have diminished, our nation can never again isolate itself from global developments. Domestic renewal will not succeed if we fail to engage abroad in open foreign markets, to promote democracy in key countries, and to counter and contain emerging threats.

We are committed to enhancing U.S. national security in the most efficient and effective ways possible. We recognize that maintaining peace and ensuring our national security in a volatile world are expensive. The cost of any other course of action, however, would be immeasurably higher.

Our engagement abroad requires the active, sustained bipartisan support of the American people and the U.S. Congress. Of all the elements contained in this strategy, none is more important than this: our Administration is committed to explaining our security interests and objectives to the nation; to seeking the broadest possible public and congressional support for our security programs and investments; and to exerting our leadership in the world in a manner that reflects our best national values and protects the security of this great and good nation.

# Document Separator

United States General Accounting Office

GAO

Report to the Congress and the Chairman, Defense Base Closure and Realignment Commission

April 1993

# MILITARY BASES

# Analysis of DOD's Recommendations and Selection Process for Closures and Realignments

GAO/NSIAD-93-173

GAO

United States
General Accounting Office
Washington, D.C. 20548

Comptroller General
of the United States

B-253062

April 15, 1993

To the President of the Senate and the
Speaker of the House of Representatives

The Honorable James A. Courter
Chairman, Defense Base Closure and
Realignment Commission

The Secretary of Defense transmitted his recommendations for base closures and realignments to the Defense Base Closure and Realignment Commission on March 12, 1993. This report responds to the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510), as amended, which requires that we provide the Congress and the Commission, by no later than April 15, 1993, a report on the recommendations and selection process. We have identified issues for consideration by the Commission and have made several recommendations to the Secretary of Defense.

We are sending copies of this report to the Chairmen, Senate and House Committees on Armed Services; the Chairmen, Subcommittees on Defense, Senate and House Committees on Appropriations; the Secretaries of Defense, the Army, the Navy, and the Air Force; and other interested parties. We will make copies available to others on request.

This report was prepared under the direction of Donna M. Heivilin, Director, Defense Management and NASA Issues, who may be reached on (202) 512-8412 if you or your staff have any questions. Other major contributors are listed in appendix V.

Frank C Conahan

for Charles A. Bowsher
Comptroller General
of the United States

## EXECUTIVE SUMMARY

### PURPOSE

The United States is closing and realigning military bases as part of its efforts to downsize and restructure its forces and reduce defense spending. To ensure that this process is fair, Congress enacted the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510). The act established an independent commission, the Defense Base Closure and Realignment Commission, and specified procedures the President, the Department of Defense (DOD), General Accounting Office (GAO), and the Commission must follow, through 1995, to close and realign bases.

Under these procedures, the Secretary of Defense on March 12, 1993, recommended 165 closures, realignments, and other actions affecting bases within the United States. The act, as amended by Public Law 102-484, requires that by April 15, 1993, GAO provide the Commission and Congress a detailed analysis of the Secretary of Defense's recommendations and selection process.

### BACKGROUND

The 1993 round of closures and realignments is the second of three rounds required by the act. In 1991, DOD recommended the closure of 43 bases and the realignment of 28 others. The Commission made several adjustments to DOD's list and proposed 34 closures and 48 realignments. The President and Congress accepted the Commission's recommendations. The final round is scheduled for 1995.

For the current round, Congress retained basically the same requirements and procedures as in 1991. As before, the Secretary's recommendations were to be based on selection criteria established by DOD and on a 6-year force structure plan. However, Congress added a new requirement that DOD certify the data it presented to ensure its accuracy.

The eight selection criteria, which remained unchanged from 1991, include four related to the military value of the installations and four that address the number of years needed to recover the costs of closure and realignment; the economic impact on communities; the ability of both the existing and potential receiving communities' infrastructure to support forces, missions, and personnel; and the environmental impact. DOD guidance to the military services and defense agencies directed that they give priority to the four military value criteria.

The force structure plan is the "base force" for fiscal years 1994 to 1999 developed under the Bush administration. Major elements of the plan include 12 active Army divisions, 12 Navy carriers, and 1,098 active Air Force fighter aircraft.

The Office of the Secretary of Defense (OSD) relied on the military services and defense agencies to select bases for possible closure or realignment and established guidance concerning their selection processes. The components submitted their proposed closures and realignments to OSD in February 1993, and the Secretary of Defense made some revisions to these before transmitting his recommendations to the Commission.

## RESULTS IN BRIEF

The Secretary of Defense's March 12, 1993, recommendations and selection process for base closures and realignments were generally sound. GAO believes DOD estimates of savings are overstated, but still substantial. However, the recommendations and selection process were not without problems and, in some cases raise questions about the reasonableness of specific recommendations. For example, GAO found that (1) because the Navy's process stressed the reduction of excess capacity there were cases where a base was recommended for closure, even though its military value was rated higher than bases that remained open; (2) the Army chose not to recommend a base for closure in part because of environmental cleanup costs--a reason excluded from cost of closure calculations; (3) the Air Force's documentation of the basis for some of its final recommendations makes it difficult to understand the justification for some decisions, although Air Force officials' oral explanations seemed to justify the recommendations; and (4) the Defense Logistics Agency (DLA) overstated estimated savings of its realignments. GAO provides these and other matters for the Commission's consideration.

Further, OSD did not exercise strong leadership in providing oversight of the military services and defense agencies during the process. As a consequence, some technical problems occurred, and the opportunity to consider consolidation of maintenance facilities on a DOD-wide basis was lost. In addition, GAO found the standards used for DOD's cumulative economic impact analysis were not supportable.

GAO also found that DOD's practice of ignoring governmentwide cost implications remained unchanged, even though GAO had recommended otherwise. DOD believes its responsibility is to determine whether its recommendations will result in savings to DOD, without consideration of the effects on other federal agencies. These costs could be substantial when they involve moving from General Services Administration facilities into newly constructed DOD facilities. In addition, hospital closures could also increase government Medicare costs.

## PRINCIPAL FINDINGS

### Improvements Needed in OSD's Oversight and Review Processes

OSD has overall responsibility for overseeing the processes the military services and defense agencies use to develop their closure and realignment recommendations. The office also reviews those recommendations and forwards them to the Defense Base Closure and Realignment Commission. GAO's evaluation of OSD's role in overseeing the process shows that while OSD provided guidance, it was not actively involved in monitoring the process. Had OSD been more involved, certain problems could have been avoided. For example, the military services, at OSD's direction, were to consider opportunities for reducing excess depot maintenance capacity. However, the process quickly broke down because, in large part, OSD did not provide the leadership needed to overcome service parochialism. In the end, an opportunity was missed to look at depot maintenance closures on a cross-service basis. In another case, OSD did not review the application of the cost model used by the various DOD components. DLA misapplied the model in a number of cases which caused the agency to significantly overstate its savings estimates.

GAO also assessed OSD's review of the components' recommendations and related issues and generally agreed with the actions that were taken. However, GAO found that the standards OSD used to assess cumulative economic impact were subjectively developed and not supportable. Consequently, the Secretary's removal of McClellan Air Force Base from the Air Force's recommended closure list based on the cumulative economic analysis is not supported.

### DOD Components' Processes and Recommendations Were Generally Sound, but Some Problems Exist

The Department of the Navy recommended by far the largest number of closures and realignments, affecting 28 major bases. The Navy's recommendations and selection process were generally sound and well documented. The data, with the exception of information gathered in the final phases of the selection process, was validated by the Naval Audit Service. GAO's review showed the selections were driven by an overarching goal of reducing excess capacity among categories of bases--shipyards and air stations, for example--while considering military value. This process also relied heavily on the acceptance of certain assumptions and military judgments. For example, in the case of the Navy shipyards, an analysis of the Navy's data showed that because of the Navy's assumptions about the need for a certain amount of capacity to handle an estimated nuclear work load, Charleston shipyard was recommended for closure, even though it was rated as having a higher military value than other bases that remained open.

Generally, the Navy developed a return on investment analysis only for configurations of bases that were selected for closure and realignment. Greater savings may have resulted from alternative scenarios, as was the case for the Naval Aviation Depot category where the Navy did consider an alternative scenario.

The Army proposed closure and realignment actions that will affect seven bases. GAO found the recommendations and selection process were well documented, and the data was audited by the Army Audit Agency. However, the decision not to recommend closing Fort Monroe was not adequately justified. In particular, the use of environmental cleanup cost as a justification should not be a prime consideration because environmental restoration cost is not to be included as a basis for closure. DOD is responsible for these costs whether a base closes or not. In addition, the recommended realignment of the Defense Language Institute at the Presidio of Monterey was removed from the closure list by the Secretary of Defense because of intelligence community concerns. GAO found that there are conflicting points of view within DOD on this issue and that certain elements of the cost and savings projections raise questions.

The Air Force recommended closures and realignments affecting seven bases. GAO's review shows the recommendations appear to be generally sound. However, the judgments that were made in the final stages of the selection process for certain categories of bases were not well documented. For example, in the case of K.I. Sawyer Air Force Base, Michigan, the Air Force documentation showed that the base's military value was rated medium; however, it was grouped with bases given the lowest rating and ultimately selected for closure. GAO could not validate the basis for placing the base in the lowest category until it had discussions with Air Force officials involved in the final stages of the selection process. Without additional information, the Commission will have difficulty understanding the basis for these and several other decisions.

DLA recommended closures and realignments affecting 14 installations. Cost, rather than military value was the primary determinant in these decisions. GAO found the selection process was well documented. However, some errors were made in applying the DOD cost and savings model. As a result, savings were overstated.

The Defense Information Systems Agency recommended actions to consolidate existing facilities into 15 centers. GAO found the process was well documented. However, data accuracy problems exist. DOD is working to correct these and believes they should not affect the validity of the recommendations.

## Savings Are Substantial but Do Not Include Governmentwide Costs

GAO found that DOD has made improvements to the model it uses to estimate the return on investment of its closure and realignment decisions. However, GAO found opportunities for improvements still exist. For example, DOD continues to restrict costs and savings solely to DOD, even though its actions have cost implications for other federal agencies. GAO has recommended in the past that DOD consider the governmentwide implications of its recommendations. In addition, DOD has not validated the accuracy of the basic formulas that are used in the model. GAO's revised estimate of the savings shows a reduction of about $940 million from DOD's $12.8 billion savings estimate for the major bases for the 20-year return-on-investment period. GAO's estimate does not include any governmentwide cost implications.

Lastly, although not a cost attributable to closure decisions, the services' initial estimates for environmental cleanup costs at the recommended bases are currently estimated at about $725 million.

## RECOMMENDATIONS

GAO makes a number of recommendations to the Secretary of Defense to improve the implementation of future DOD processes for selecting bases for closure and realignment. Included among them are actions to (1) improve OSD's oversight of the process, (2) establish procedures and milestones for considering the closure and realignments of similar military service activities, (3) develop a supportable standard for measuring cumulative economic impact, (4) improve data documentation and accuracy, and (5) include governmentwide cost implications of closure and realignment decisions.

GAO also recommends that the Defense Base Closure and Realignment Commission consider taking a number of actions, including (1) analyzing Navy recommendations where the base recommended for closure had a higher rated military value than ones remaining open and where alternative scenarios produced generally the same excess capacity reductions but cost and savings estimates were not developed, (2) requesting supporting information from the Air Force in those cases where data does not adequately explain base category ratings, (3) considering the Army actions on Fort Monroe and the Defense Language Institute, and (4) analyzing DLA cost and savings estimates.

## AGENCY COMMENTS

GAO did not request official comments from the Department of Defense. However, it informally discussed its findings, conclusions, and recommendations with DOD officials and included their comments where appropriate.

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## Abbreviations

| | |
|---|---|
| AAA | Army Audit Agency |
| COBRA | Cost of Base Realignment Action |
| BRAC | Base Realignment and Closure |
| DFAS | Defense Finance Accounting Service |
| DISA | Defense Information Systems Agency |
| DLA | Defense Logistics Agency |
| DMRD | Defense Management Review Decision |
| DOD | Department of Defense |
| MSA | Metropolitan Statistical Area |
| NPV | net present value |

| | |
|---|---|
| OSD | Office of the Secretary of Defense |
| ROI | return on investment |
| TABS | Total Army Basing Study |
| TRADOC | Training and Doctrine Command |

# CHAPTER 1

## INTRODUCTION

The United States is closing and realigning military bases as part of its efforts to downsize and restructure its forces and reduce defense spending. On March 12, 1993, the Department of Defense (DOD) recommended 165 closures, realignments, and other actions affecting bases within the United States. The recommendations were submitted to the Defense Base Closure and Realignment Commission, which will consider them as it develops its list of proposed closures and realignments for the President and Congress.

### PAST BASE CLOSURE AND REALIGNMENT EFFORTS

In 1988, DOD and Congress initiated major efforts to reduce defense spending by closing and realigning military bases. The Secretary of Defense chartered a commission in May 1988 to recommend bases that could be closed or realigned, and Congress established legislative requirements for the commission. In December of that year, the DOD commission recommended the closure of 86 bases, the partial closure of 5 bases, and the realignment of 54 bases.[1] The Secretary of Defense and Congress accepted all the commission's recommendations.

In January 1990, as a result of the shrinking defense budget, the Secretary of Defense unilaterally proposed the closure of 35 additional bases and the realignment or reduction of forces at more than 20 other bases. The Office of the Secretary of Defense (OSD), however, did not provide specific written guidance to the military services and defense agencies[2] on how to evaluate bases for possible closure or realignment. The services, consequently, used different processes, none of which was as comprehensive and well documented as the one followed by the DOD commission in 1988.

Concerned about the Secretary's January 1990 proposals, the Congress passed the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510) halting any closures based on the January list and requiring new procedures for closing or realigning bases. The act created the independent Defense Base Closure and Realignment Commission; established procedures for the President, DOD, General Accounting Office (GAO), and the Commission to follow; and required that all bases be compared equally against (1) selection criteria

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[1]See our report, Military Bases: An Analysis of the Commission's Realignment and Closure Recommendations (GAO/NSIAD-90-42, Nov. 29, 1989).

[2]In this report, military services and defense agencies are referred to as components.

to be developed by DOD and (2) a force structure plan for the following 6 fiscal years.

Under the new procedures, DOD in April 1991 recommended the closure of 43 bases and the realignment of 28.[3] The Commission made several adjustments to DOD's list and proposed 34 base closures and 48 realignments. The President and Congress accepted the Commission's recommendations.

DOD is in the process of carrying out the base closures and realignments approved in 1988 and 1991.

## CURRENT BASE CLOSURE AND REALIGNMENT EFFORTS

For the current round of base closures and realignments, Congress retained essentially the same requirements and procedures as in 1991. In December 1991, Congress amended the Defense Base Closure and Realignment Act to require that the Secretary of Defense submit his recommended closures and realignments to the Commission by March 15, 1993. As before, the Secretary's recommendations were to be based on DOD's selection criteria and a 6-year force structure plan. A key amendment to the Defense Base Closure and Realignment Act was a requirement that DOD certify the data it presented to ensure its accuracy.

### Selection Criteria

DOD used the same eight selection criteria as in 1991. These are shown in table 1.1.

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[3]See our report, Military Bases: Observations on the Analyses Supporting Proposed Closures and Realignments (GAO/NSIAD-91-224, May 15, 1991).

Table 1.1: DOD Criteria for Selecting Bases for Closure or Realignment

| Category | Criteria |
|---|---|
| Military value | 1. The current and future mission requirements and the impact on operational readiness of DOD's total force. |
| | 2. The availability and condition of land, facilities, and associated airspace at both the existing and potential receiving locations. |
| | 3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations. |
| | 4. The cost and manpower implications. |
| Return on investment | 5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs. |
| Impacts | 6. The economic impact on communities. |
| | 7. The ability of both the existing and potential receiving communities' infrastructure to support forces, missions, and personnel. |
| | 8. The environmental impact. |

Force Structure Plan

The 6-year force structure plan (fiscal years 1994 to 1999) used by DOD in evaluating bases for closure or realignment was the "base force" developed under the Bush administration. Major elements of the base force include 12 active Army divisions, 12 Navy carriers, and 1,098 active Air Force fighter aircraft.

In his March 15, 1993, report to the Commission, the Secretary stated,

> "I am not recommending any base for closure that would conceivably be kept open under a revised force structure plan .... Unless the force structure is increased above

the 'base force,' we will have all the bases we need. I am confident, therefore, that future changes will decrease [the] force structure, and will require more, not fewer, base closures than those I will recommend at this time."

Certification Requirement Added

A 1991 amendment to the Defense Base Closure and Realignment Act requires that persons who submit information to the Secretary of Defense or the Commission "shall certify that such information is accurate and complete to the best of that person's knowledge and belief." This requirement applies to service secretaries, the heads of the defense agencies, and other officials with substantial involvement in the base closure and realignment process. The Act requires the Secretary of Defense to prescribe regulations for ensuring compliance with this provision.

OSD Policy Guidance to the Services and Defense Agencies

OSD relied on the military services, the Defense Logistics Agency (DLA), and the Defense Information Systems Agency (DISA) to evaluate their bases for possible closure or realignment. In memoranda dated May 5, August 4, and December 4, 1992, OSD established requirements and guidelines concerning the processes the DOD components were to use in selecting candidates for base closure and realignment. These requirements superseded those that had been issued for the 1991 round of base closures.

In the May 5 memorandum, the Deputy Secretary of Defense provided general policy guidance, record-keeping requirements, internal control guidelines, and responsibilities. It delegated authority to issue implementation instructions to the Under Secretary of Defense (Acquisition). The Under Secretary, in turn, delegated this authority to the Assistant Secretary of Defense (Production and Logistics).

Among other instructions, the Assistant Secretary's August 4 and December 4 memoranda

-- required that installations with like missions, capabilities, or attributes be grouped together for evaluation;

-- stated that when a particular group of installations is found to have no excess capacity, the DOD component does not need to perform further analysis of that portion of the base structure;

-- required DOD components to develop measures and factors for applying the DOD selection criteria and to describe the relationship between each measure and factor used with the criteria;

-- encouraged DOD components to cooperate in looking for cross-cutting opportunities for base closures or realignments;

-- required the use of the Cost of Base Realignment Actions (COBRA) cost model to calculate costs, savings, and return on investment;

-- stipulated that DOD components establish procedures and criteria for certifying data;

-- required that any service- or agency-specific cost factors used in the COBRA model be justified in the DOD components' documentation;

-- provided instructions on calculating certain costs and savings for input into the COBRA model and clarified certain cost assumptions contained in the COBRA model;

-- provided guidance on calculating the economic impact on communities affected by base closures and realignments;

-- provided guidance on documenting the environmental impact of base closures and realignments;

-- required DOD components to consider the impact of closures or realignments on guard and reserve units; and

-- required DOD components to document the steps taken to give any communities special consideration in response to valid requests received under section 2924 of the Defense Base Closure and Realignment Act.[4]

OSD did not issue base realignment and closure (BRAC) definitions in time for the DOD components to use in their closure and realignment process. As a result, several of the closure recommendations were not consistent with OSD's definition of closure. Appendix I contains OSD's BRAC definitions along with a listing of major base "closures" which were not consistent with OSD's definition.

## DOD's Recommended Base Closures and Realignments

The DOD components submitted their recommendations to OSD by February 22, 1993. OSD reviewed these recommendations and made two substantive revisions to them. OSD deleted an Air Force

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[4]Section 2924 mandates that the Department give special consideration to community proposals related to base closure and realignment.

recommendation to close McClellan Air Force Base in California and deleted an Army recommendation to close the Presidio of Monterey, California, and relocate the Defense Language Institute to Arizona.

With these changes, the Secretary of Defense transmitted his recommendations to the Commission on March 12, 1993. The Secretary recommended closures of 31 major bases, realignments of 12 major bases, and other actions (closures, realignments, disestablishments, and relocations) affecting 122 smaller bases. The bases affected by the recommended actions are listed in appendix II.

DOD stated that the recommendations, if approved, will result in a total net savings of $4 billion between fiscal years 1994 and 1999 and recurring savings of $3.1 billion starting in the year 2000. According to DOD, the recommended base closures and realignments, combined with those approved in 1988 and 1991, will reduce the domestic base structure by about 15 percent, measured by the plant replacement value. DOD defines "plant replacement value" as what it would cost to replace all the buildings, pavements, and utilities at a base. The bases affected by the current recommendations represent about one-third of the 15-percent reduction.

## OBJECTIVES, SCOPE, AND METHODOLOGY

The Defense Base Closure and Realignment Act, as amended, requires that we provide to the Commission and to Congress a detailed analysis of the Secretary of Defense's recommendations and selection process. The act specifically requires us to submit our report by April 15, 1993.

From August 1992 to March 1993, we monitored the process as it was implemented by DOD components. Our analysis of the recommendations was conducted between March 15, 1993, and April 13, 1993.

We performed our work at OSD, the military services' and defense agencies' headquarters, and various military commands and installations. We interviewed and obtained pertinent documentation from officials at these locations.

At OSD, we obtained information about policy guidance provided to DOD components and OSD's oversight role in the base closure and realignment process. In our discussions with officials, we discussed cross-servicing opportunities, OSD's use of cumulative economic impact as a criterion for assessing potential closures and realignments, and OSD's review of the recommendations submitted by the DOD components.

We also reviewed the processes the DOD components used to evaluate their bases and select candidates for closure and realignment. Because each of the components developed its own selection process

our methodology differed somewhat for each. Generally, however, we reviewed documentation and interviewed officials to determine whether the processes complied with legislative requirements and OSD guidance, were adequately documented, and employed sound methodologies and techniques.

For selected recommendations, we conducted more detailed analyses of the decision-making process. For instance, we reviewed the minutes of Navy meetings to track that service's deliberations. We generally relied on the service audit agencies to validate the data used in the selection processes. However, in varying degrees, we independently validated selected data, observed DOD component audit agency personnel as they performed their work, and in some cases examined their workpapers.

We reviewed the COBRA cost model and the components' use of the model. We evaluated the changes made to the model since the 1991 round of base closures and realignments, the model's formulas for making calculations, and the cost factors and data used as inputs into the model. We also conducted selected sensitivity analyses to determine the impact of data inaccuracies on cost and savings estimates.

We performed our work in accordance with generally accepted government auditing standards.

# CHAPTER 2

## OSD'S OVERSIGHT AND REVIEW OF PROCESS CAN BE IMPROVED

The Office of the Secretary of Defense had responsibility for providing guidance and overseeing and reviewing the closure and realignment recommendations for the military services and defense agencies. We identified several areas where there are opportunities to improve the implementation of these responsibilities. Our review of the actions OSD took with regard to the components' recommendations shows that its cumulative economic impact analysis is not methodologically sound.

### OVERSIGHT RESPONSIBILITIES

In addition to providing selection criteria and policy guidance (see ch. 1), OSD's oversight efforts in the 1993 process included (1) seeking greater opportunities for cross-service consideration of recommendations related to maintenance depots, (2) determining the cumulative economic impact within defined geographic areas, and (3) reviewing the components' recommendations before the Secretary of Defense submitted DOD's final overall recommendations to the Defense Base Closure and Realignment Commission.

In its August 4, 1992, policy memorandum, OSD required DOD components to continually look for cross-servicing opportunities. In a December 3, 1992, memorandum, OSD directed the services to prepare integrated proposals, with cross-service inputs, to streamline DOD depot maintenance activities and increase efficiency. These were to be considered for submission to the 1993 Base Closure and Realignment Commission. Each service was to identify its excess maintenance capacity and each was assigned lead responsibility for a specific maintenance area.

In its December 4, 1992, policy memorandum, OSD provided guidance for calculating the economic impact on closing, realigning, and receiving communities. In memoranda dated December 24, 1992, and January 28, 1993, OSD instructed the services to include personnel data developed in the 1988 and 1991 rounds on their 1993 economic impact spreadsheet so that OSD could determine the cumulative economic impact on communities.

After receiving the components' proposed closure and realignment recommendations, OSD reviewed and analyzed the recommendations to ensure that they complied with law and DOD policies. The Secretary of Defense included the results of these reviews in his March 1993 report.

## OSD'S OVERSIGHT ROLE COULD BE STRENGTHENED

OSD established requirements and general guidelines concerning the processes that DOD components were to use in selecting candidates for base closure and realignment. However, it did not actively oversee the process. The lack of oversight and strong leadership resulted in several inconsistencies in the process. For example, the services used different estimating processes and some incorrect cost factors in their cost models.[1] Also, inconsistencies in the military services' measures of depot maintenance costs and management processes did not allow OSD the opportunity to consider elimination of duplication in DOD maintenance depots on other than a service-by-service basis. Further, OSD's cumulative economic impact standard was not adequately justified.

### Cross-service Opportunities Not Considered When Evaluating Maintenance Depots for Possible Closure

The services recommended 9 of DOD's 30 maintenance depots for closure or realignment. However, little consideration was given during the development of the recommendations to the potential for cross-servicing among the depots.[2] Achieving cross-service opportunities was hampered by (1) the lack of a common measure among the services' depots, (2) the lack of a strong leadership role by OSD, and (3) the short time period to implement cross-service proposals.

A Joint Chiefs of Staff Executive Working Group's study of DOD maintenance depots concluded that the depots have excess capacity[3] of between 25 and 50 percent and that unnecessary duplication

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[1]See chapter 4 for a discussion on inconsistencies relating to the cost models.

[2]Cross-servicing is intended to achieve cost savings by transferring work on comparable systems from one service to the depot of another service to take advantage of economies of scale and to avoid the cost of maintaining dual capabilities in a second service.

[3]Excess capacity was identified by subtracting the planned fiscal year 1995 work load from the fiscal year 1987 capacity. Fiscal year 1987 was used because the study group believed it was a peak year with larger overall employment and more accurately reflected what work a depot facility could absorb during work load consolidation.

exists throughout the service depots.[4] DOD's measure of depot capacity is the maximum number of work positions a depot can accommodate in a single 8-hour shift. In reality, when the workforce is reduced, many depots elect not to use equipment and/or change shop configuration, which results in reduced work positions and lower computed capacity levels.

In response to the Working Group's conclusions, the Secretary of Defense, in December 1992, tasked the services with developing proposals that would streamline defense depot maintenance activities through cross-servicing. Recommendations resulting from this effort were to be included for consideration during the 1993 base closure and realignment process. As part of the services' efforts, they identified excess maintenance capacity but did not address the issue of unnecessary duplication.

In early February 1993, the services attempted to include some cross-servicing as part of the 1993 base closure and realignment process, with the Army taking the lead on ground systems and equipment maintenance and the Navy the lead on rotary-wing maintenance. Fixed-wing aviation and aviation systems and ship, watercraft, and ship systems were not considered. However, no recommendations resulted from these efforts. According to several service officials, the services had difficulty overcoming their narrow views of their own depots; thus, a general consensus could not be reached, especially on issues pertaining to estimating cost. Also, the short time frame within which the services had to complete their work impeded this cross-servicing effort.

The services' attempt at considering cross-servicing opportunities for ground systems and equipment depot maintenance ended in disarray. Some of the problems brought to our attention included (1) the services' inability to agree on cost comparability measures for maintenance work that was similar but not identical and (2) the withdrawal of the Air Force's participation because of a possible compromise in the Air Force's competition with the Army for maintenance work resulting from the 1991 closure of the Army maintenance depot in Sacramento. Thus, the services made their decisions on ground systems and equipment depots independently based on each service's own excess capacity.

For rotary-wing aviation maintenance depots, Army and Navy officials said that neither service could agree on common measures to evaluate these depots. Also, these officials said that there was insufficient time to gather and certify standard data. Thus, the Army and the Navy did not consider cross-servicing or duplication when looking at their rotary-wing maintenance depots.

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[4]We are currently reviewing the Working Group's methodology and analysis and plan to report on its study later in 1993.

However, the Navy did use helicopter maintenance work-load data from all three services in concluding that the work load justified maintaining two of the three rotary-wing maintenance depots.[5]

Officials from the three services all stated that consideration of cross-servicing possibilities among the depots was impeded by the lack of strong leadership and direction. For example, an Air Force official said that the services will not make any significant progress dealing with cross-service options because of the uncertainty of the direction OSD will follow. Also, other officials said that until issues concerning the management structure of DOD maintenance depots are resolved, no progress will be made among the services covering cross-service and duplication.

## OSD's Economic Impact Standard Is Not Adequately Supported

Although OSD issued guidelines to DOD components for calculating the economic impact on communities of their recommended actions, it did not instruct the components on how these economic impacts were to be considered. Also, OSD's cumulative economic impact standard was not adequately justified.

### DOD Components' Analysis

During their analyses of installations for closure or realignment, the components calculated the economic impact of their proposed actions on affected communities. Such calculations reflected the change in direct and indirect employment in a community, county, or metropolitan statistical area[6] that would result from closing or realigning bases, as a percentage of the employment in the area. While each component calculated the economic impacts of its proposed actions according to OSD instructions, these impacts did not affect the components' closure and realignment recommendations.

The DOD components first determined changes in military, civilian, and contractor employment at each base (direct employment). They then entered this data into computerized spreadsheets developed by the Office of Economic Adjustment and the Logistics Management Institute. These spreadsheets contain multipliers to compute indirect loss of jobs off the base resulting from the lost spending

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[5]The Air Force has its helicopters maintained at the three existing rotary depots (Corpus Christi Army Depot and Cherry Point and Pensacola Navy Depots).

[6]Generally, the economic area is defined as the county where the installation is located. If the county is part of a metropolitan statistical area (MSA), as defined by the Bureau of the Census, then the economic area is the MSA. In a few cases, the economic area is defined as a multi-county, non-MSA area.

power of base jobs. They also contain data from the Bureau of Labor Statistics on the total number of jobs in the economic areas. Thus, the spreadsheets can be used to estimate the total job impact, both direct and indirect, as a percentage of the number of jobs in the economic area.

The indirect employment multipliers assigned to installations vary according to the economic size of the area and the function of the installations; multipliers are lower in rural areas because of fewer within-area purchases and are highest for installations such as repair facilities that require extensive purchases from the surrounding economic area. So that the impact of closures and realignments still pending from earlier base closure rounds would be reflected in the cumulative economic impact considerations, the services and defense agencies were also instructed to enter data on personnel moves remaining from the 1988 and 1991 rounds of base closures and realignments.

### OSD's Analysis

During prior base closures and realignments, the components calculated the cumulative economic impact a closure or realignment had on the local region; however, there was no standard specifying how the components or OSD were to consider those impacts. According to an OSD official, the cumulative economic impact on regions during the 1991 base closures was not considered significant because of the more limited number of closures and realignments up to that point in time. With the increased recommendations being proposed for the 1993 base closures, OSD again reviewed the cumulative impact of closures and realignments on specific regions.

During the 1993 process, however, OSD established a standard against which to evaluate cumulative impact. OSD compiled the information provided by the components into a master spreadsheet that calculated the cumulative effect on an economic area of 1988, 1991, and recommended 1993 actions, across services and agencies. In developing standards to determine if any area might be suffering a significant negative cumulative economic impact, OSD established three principles: (1) the standard had to be quantifiable, while still allowing room for judgment; (2) the standard had to recognize the difference in economic recovery potential, since, according to OSD, the complexities of labor markets in large metropolitan areas make economic recovery more difficult than in smaller areas; and (3) the standard had to allow for closure of bases.

According to OSD, it considered a job loss of 3 percent to constitute a "normal change" in an area employment population. OSD then subjectively determined that a job loss of 5 percent, which it termed "substantially more than 3 percent," would be a part of the standard for unacceptable economic impact. According to OSD, all areas impacted by the 1993 closure recommendations with a

cumulative economic area impact of 5 percent or greater fell into two groups: those with an employment population of at least 750,000 and those with an employment population of about 300,000 or less.

OSD subjectively chose a 500,000 employment population as the second part of its standard for unacceptable economic impact. Thus, OSD's cumulative economic impact standard was established--5 percent cumulative job loss in areas with an employment population of 500,000 or more.

When OSD applied this economic impact standard, only the Sacramento area (employment of over 750,000) met the criteria. On the basis of the components' proposed recommendations for 1993 closures in the Sacramento area, the cumulative economic impact on employment in the area would have been 5.6 percent. Therefore, the Secretary removed McClellan Air Force Base and the related DLA distribution depot from the 1993 closure recommendations.

### OSD's Analysis Is Not Adequately Supported

It appears that OSD's standard of over 500,000 and over 5 percent is arbitrary. In discussions with officials from OSD, the Logistics Management Institute, the Office of Economic Adjustment, and the Department of Commerce, we were unable to validate the standard. For example, OSD officials could not provide us adequate justification for 5 percent as the appropriate job impact threshold. In addition, we found no evidence to support OSD's assumption that economic recovery would be more difficult in a larger metropolitan area than in a smaller area. Furthermore, if the measures were valid ones, consideration should have been given to the impact in areas which were very near one standard and greatly exceeded another.

For example, OSD calculations of economic impact in Oakland, California, showed a cumulative economic impact of 4.9 percent and a workforce of over 1 million. OSD officials were unable to adequately explain to us why 5 percent was considered a significant economic impact but 4.9 percent was not. Also, the data showed that in addition to Sacramento, there were 23 communities with cumulative economic impacts over 5 percent. These impacts ranged from 6.3 percent to 72 percent[7] and workforce populations ranging from 10,957 to 309,406. For example, the job loss calculated for Charleston, South Carolina, with an employment population of 243,000, was 15.3 percent.

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[7]Fort Polk, Vernon Parish, Louisiana.

Further, the considering of cumulative economic impact is late in the process making it difficult to assess alternative closures and realignments scenarios.

## CHANGES TO 1993 PROPOSED CLOSURES AND REALIGNMENTS BY THE SECRETARY OF DEFENSE

After receiving the military services' and defense agencies' proposed closure and realignment recommendations on February 22, 1993, OSD reviewed the recommendations and the underlying analyses to ensure that the law and DOD policies were followed. OSD identified and resolved issues which warranted attention, including subsequently changing several recommendations before submitting them to the Defense Base Closure and Realignment Commission.

### Observations on Recommended Changes

The changes deleted from the recommended closure list include (1) the Air Force's maintenance depot and DLA's distribution depot at McClellan Air Force Base, California; (2) the Army's Presidio of Monterey, California; and (3) the Marine Corps' support activity in Kansas City, Missouri. The realignment of the O'Hare Air Reserve Station from O'Hare International Airport, Chicago, Illinois, was also added to the list.

According to OSD officials, the proposed closure of McClellan Air Force Base was not recommended to the Commission because such an action, when combined with prior closures and realignments for the region, exceeded the cumulative economic impact standard established by OSD. These officials said that the proposed Army closure of the Presidio of Monterey, which required the relocation of the Defense Language Institute and the need to contract for language training, was deleted as a recommendation for closure because of concerns raised within DOD about the negative impact such actions would have on defense intelligence.[8] The proposed closure of the Marines' support activity in Kansas City was deleted because its closure was part of the DOD Defense Finance and Accounting Service's (DFAS) consolidation recommendation. The Air Force Reserve Station at O'Hare International Airport was added as a recommended closure because the city of Chicago exercised its right under section 2924 of Public Law 101-510 to propose the O'Hare Airport reserve station relocation to a site acceptable to DOD and at no cost to the federal government. The law mandates that DOD give special consideration to such a proposal.

Other issues receiving attention by OSD included the following:

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[8]The Commission has added McClellan to the list for consideration. The Presidio of Monterey has also been added. Both recommendations are discussed in more detail in chapter 3.

-- Defense Finance and Accounting Service consolidation: DOD's ongoing finance center consolidation plan was affected by the 1991 Base Closure and Realignment Commission decision to close Fort Benjamin Harrison. The Commission directed DOD to submit its consolidation plan for DFAS in the 1993 round. However, because of concerns over the public policy implications of the "opportunity for economic growth" portion of the DFAS plan, the Secretary deleted the DFAS recommendation for 1993. Because the Secretary withdrew DFAS from the 1993 recommendations, we did not include our analysis of the DFAS consolidation plan in this report. (App. II provides a summary of the DFAS process.)

-- Army base structure: The Secretary reviewed the Army's recommendations to determine whether they were consistent with the approved force structure plan and the need to station the forces being brought home from overseas. The Secretary concluded that no additional closure recommendations are needed at this time. As discussed in chapter 3, we found no basis to question this decision.

-- Undoing previously approved recommendations: The Secretary established standards for when prior base closure recommendations approved by the Commission could be changed. OSD standards are (1) accept the change if it is required to implement a new base closure or realignment recommendation, (2) reject a change if it would reclaim ownership of any part of a base that was to be in excess due to prior closure actions, and (3) accept a change if DOD would significantly benefit either in cost savings or in military effectiveness. In our opinion, this position appears reasonable.

-- Revisiting previously rejected recommendations: OSD reviewed five current recommendations that were previously rejected by the 1991 Commission. OSD determined that the Commission's prior concerns were adequately addressed during the 1993 round and should be forwarded with revisions to the 1993 Commission. We reviewed these recommendations and believe there have been substantial revisions to the prior recommendations which merit reconsideration.

-- Below-threshold recommendations: OSD reviewed service and agency recommendations that were below the 300 personnel threshold and concluded that they should be submitted to the 1993 Commission. DOD is permitted to submit these recommendations under the Base Closure and Realignment Act.

-- Chemical defense training: OSD evaluated the concern by the Assistant Secretary of Defense for Atomic Energy that the Army's Chemical Defense Training Facility at Fort McClellan was vital to DOD's training, deterrence, and arms control mission. OSD agreed with the Army's recommendation to close Fort McClellan

except for this training facility. We found no basis for questioning this decision.

## CONCLUSIONS

OSD should exercise greater oversight and leadership over the base closure and realignment process to ensure consistency among the components' procedures for recommending closures and realignments. DOD was unable to consider the elimination of duplicative maintenance depot capacity across services because of the lack of common measures. In addition, OSD applied an arbitrary cumulative economic impact standard that is not well supported.

## RECOMMENDATIONS

We recommend that the Secretary of Defense

-- Provide specific direction and supervision over the base closure and realignment process to ensure consistent data collection and analysis among the DOD components. (Specific recommendations in this area are contained in chapters 3 and 4).

-- Provide detailed policies and procedures for future cross-service opportunities including setting common standards and measures; also, in order for these actions to be effective, they must be started soon and have established milestones that are compatible with the time frames for the 1995 base closure and realignment process.

-- Establish a supportable standard for assessing cumulative economic impact and review its process to make sure there is sufficient time to consider the results of these assessments.

We also recommend that the Defense Base Closure and Realignment Commission consider providing guidance to DOD on assessing cumulative economic impact.

# CHAPTER 3

## THE DOD COMPONENTS' PROCESSES AND RECOMMENDATIONS WERE GENERALLY SOUND, BUT SOME PROBLEMS AND QUESTIONS EXIST

The military services and defense agencies each used different processes that emphasized different factors for developing their base closure and realignment recommendations. Each was based on the eight DOD selection criteria and gave emphasis to military value. (App. III summarizes the selection processes used by the DOD components.) The processes the military services and defense agencies used appear to be basically sound. However, in varying degrees we found a lack of documentation, data accuracy problems, and inaccurate cost and savings estimates. In addition, there was a reliance on assumptions about future military needs and military judgments which could affect specific recommendations. We identified several specific recommendations that should be reconsidered, and in other cases we present questions for the Commission's consideration.

### NAVY PROCESS AND IMPLEMENTATION WERE GENERALLY SOUND, BUT SOME QUESTIONS EXIST

The Navy had 28 major closure or realignment recommendations. This was the largest number among the services and defense agencies. Based on our review of the process, we believe the Navy's 1993 base structure evaluation process complied with force structure and criteria requirements. In addition, the process was well documented; and using a statistical sample of Navy activities, the Naval Audit Service validated the accuracy of data submitted by the bases and checked the data submitted into the analytical process. Judgments and assumptions made by senior military and civilian officials were a substantial part of the process. Therefore, we identified several cases where reasonable questions can be raised about some of the final recommendations, and we present these for the Commission's consideration and to illustrate the difficulty and complexity of the process.

#### Key Features of the Process

The overriding goal of the Navy's process was the elimination of as much excess base capacity as possible throughout the Navy. Implicit in this goal was the assumption that the results would represent savings to the Navy while retaining the base structure necessary to meet force structure needs. The Navy's approach was

to review similar types of bases[1] by category--for example, shipyards--and minimize the excess capacity in that category.

The Navy's first step was to determine whether excess capacity existed in each category of bases. The capacity analysis compared the estimates of maximum existing capacity in each category to the anticipated requirement based on the January 19, 1993 force structure plan (Bush administration base force). Capacity was determined on a category-by-category basis but was generally an estimate based on current facilities and equipment. For example, the requirements for naval stations were determined using the number of ships projected to be in the force in 1999, the final year of the Bush base force structure plan. Determining the requirements for major support functions, such as shipyards and naval aviation depots, was more difficult and was based on anticipated work load.[2]

Military value assessments on a category-by-category basis were made and evaluated along with capacity considerations in developing recommendations. When a category of bases was determined to have excess capacity, all bases in that category were evaluated against the four military value criteria. The military value score for each base in a category was generally derived from answers to as many as 151 questions. The questions were assigned point values based on the four military value criteria: readiness, facilities, mobilization, and cost/manpower. An average military value was then computed for each category.

Critical to the Navy's process was a configuration analysis which was designed to eliminate as much excess capacity as possible in each category while retaining or improving the overall military value average. It is important to note, however, that in the Navy's configuration analysis the average military value for a category of bases was more important than individual military value scores for the bases in that category. This was due to the scope of the analysis, which was category-wide rather than on a base-versus-base level. In some cases, however, the individual military

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[1]The Navy operates a variety of activities and functions, such as naval stations, aviation depots, training centers, etc. Throughout the Navy segment of this report, all Navy activities will be referred to as bases.

[2]The amount of ship and aircraft maintenance work is dependent on several factors, including operational tempo, maintenance policies and procedures, and funding. The Navy used the programmed work-load requirements through 1997, which are the most accurate figures.

value of a base was used when circumstances dictated a narrow choice between two bases. Deliberations on configurations were conducted by the Navy for the various categories, using total capacity of the category and the capacity of each base in the category. The 1999 force structure requirements were analyzed and applied in a manner designed to minimize excess capacity by category. The solutions, however, were not based solely on quantitative analysis, because assumptions based on military judgments were an important part of the process and its results. For example, the naval station analysis assumed that the split between ships located on the East and West coasts would remain consistent with current practice.

When the Navy believed it had reached the best solution in terms of capacity reduction and resulting military value average in a category, a calculation of return-on-investment was run to confirm that the results of the configuration analysis would produce savings. In only a few cases was the return-on-investment analysis run on more than one scenario. This was done to test the feasibility of an alternative, not to determine which, of competing alternatives, produced the greatest savings.

Once a closure scenario for a category was identified, evaluations were done based on the three remaining criteria: economic impact on locations near a closing base, environmental impact of a closure, and community impact on an area where functions may be located. However, the three impact criteria were not generally assessed for multiple possible scenarios. More specifically, the economic, environmental, and community impact assessments were generally done only for the final recommendations.

Observations on the Methodology Implementation

Our review of the process and its implementation centered on several categories of bases. The recommendations in those categories require acceptance of the assumptions used. The recommendations based on the Navy process eliminate excess capacity and are projected to produce savings. However, because the Navy's objective was to reduce excess capacity to the greatest extent possible, it did not routinely seek alternative closure scenarios in order to assess relative cost savings. We identified one recommendation adopted by the Navy which was based on a second alternative that produced a greater savings. In this case, however, circumstances regarding military value rather than cost led the Navy to consider this particular alternative. This and our other observations are discussed below.

Naval Audit Service Validated Most Data and Reviewed Analysis

Based on our observations, the Naval Audit Service contributed substantially to the accuracy of the Navy base structure analysis

process. It must be noted, however, that due to time constraints the Naval Audit Service did not validate the certified data collected from bases impacted by a closure/realignment decision during the final stage of the analytical process. This data was used in the return-on-investment calculations for closure scenarios. The Naval Audit Service did verify that information taken from the data calls was accurately used in the return-on-investment calculations.

The Naval Audit Service was tasked to validate data used in the Navy's process and to review the accuracy of the analysis. On March 15, 1993, the Naval Audit Service issued its report on the implementation of the Navy's 1993 process. The report concluded that effective internal controls were established and that the data used in the process was reasonably accurate and complete. The report also stated that the Navy's process met statutory and DOD requirements. The Naval Audit Service conducted their review concurrently with the base closure and realignment process, and periodically reported findings to the Navy, which took immediate corrective action.

We reviewed audit guidelines and audit work in several stages of the Naval Audit Service review. During the data validation phase, we accompanied Naval Audit Service management on supervisory visits to six East Coast Navy and Marine Corps sites. At these sites, we discussed with both management and field auditors their methodology and findings to date. We observed actual data validation tests which, in the case of building size, were done by physical verification using measuring wheels. We also observed much of the Naval Audit Service work during the closure and realignment evaluation phase, which included verifying the accuracy of input to military value, configuration, and cost and savings analyses.

### Shipyards

The Navy first determined the maximum capacities of the various shipyards. This was based on the estimated maximum amount of work each shipyard could do through 1997 with existing facilities and equipment.[3] These figures were compared to requirements, as identified in future-year budget estimates through 1997; the difference was considered excess capacity. In identifying closure candidates, the goal was the maximum reduction of excess capacity with a constant or higher average military value. In doing this, the Navy paid particular attention to the shipyards' ability to do work on nuclear-powered ships and their components, since this represents a large and more specialized requirement. The Navy used the most accurate information available to them to determine

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[3]The measure of capacity was direct labor man-days based on single-shift, 8-hour days.

requirements (budget estimates through 1997); however, the accuracy of future requirements, both nuclear and non-nuclear, may be subject to question in light of possible future force reductions.

In assessing the military value of the shipyards, the Navy developed a matrix of 151 questions after consultation with their technical experts, and then assigned values to each. The large number of questions considered appears to provide a reasonable sample of shipyard attributes. The answers to the questions were taken from the certified data calls provided by the shipyards.

The configuration analysis was designed to reduce excess capacity to the maximum extent possible while meeting the Navy's nuclear and total shipyard work requirements. This analysis also sought to arrive at an average military value score which was at least as high as the original average for all bases in the category. The nuclear work-load requirements were the primary factor in developing shipyard closure recommendations. Minutes of Navy deliberations detail its decision to recommend the closure of Charleston and Mare Island Naval Shipyards.

Three other naval shipyards were rated as having a lower military value than Charleston--Pearl Harbor, Hawaii; Mare Island, California; and Portsmouth, New Hampshire. The Navy's shipyard recommendations were one case where, after excess capacity reductions were achieved, a base with a higher military value was closed in place of one with a lower military value.

### Operational Air Stations

The overall goal of reduction in excess capacity for this category involved two measures. The Navy determined that these would be: apron space (square yards) and hangar space (square feet) required for various types of aircraft based on established standards. Once again, the bases provided the information used to determine the maximum capacity at those facilities and to determine their relative military value scores. The 1999 force structure plan was used to derive future requirements. The variance between requirements and maximum capacities was identified as excess.

The 95 questions which comprised the air station military value matrix were generated by the Navy in consultation with technical experts. The average military value for the category was more important in the subsequent configuration analysis than were individual scores.

We reviewed the configuration analysis and traced decisions regarding the rules for air stations to minutes of Navy deliberations. One of these rules, for example, was that a 67-percent active and 100-percent reserve aircraft basing requirement was to be preserved. Subject to military judgment, these rules guided the configuration analysis. Several configurations were

assessed before a final decision was reached. The Navy recommended Naval Air Station Cecil Field, Naval Air Station Barbers Point, Marine Corps Air Station El Toro, and Naval Air Station Alameda for closure. This resulted in excess capacity being cut by at least 50 percent while arriving at an average military value for the category that was higher than the original average for all bases in the category.

Our review of the configuration analysis showed the importance the Navy placed on excess capacity reduction. It also illustrates that some bases recommended for closure had a higher individual military value score than air stations that were retained.

Naval Stations

The capacity analysis for this category involved two measures: berthing (in feet of space and depth of water) and intermediate ship maintenance (in direct labor man-days). Each naval station provided the above data as a basis for computing maximum berthing capacity and maximum intermediate maintenance capacity. A comparison of existing capacity to the requirements for the number and types of ships in the 1999 force structure was used to determine that excess capacity existed.

We reviewed the 117 questions used to derive military value scores for naval stations. The questions were developed by the Navy in consultation with technical experts. There were special cases where military value questions relevant to naval stations were also applied to bases in other categories. An example of this is Alameda and North Island Naval Air Stations. Since both of these bases are air stations, they were assigned military values based on their responses to questions in the air station category. However, both bases are capable of berthing ships--specifically, aircraft carriers. As air stations, both received points for this capability. However, the number of points awarded was less than those received for bases assessed as naval stations because of the assumption that it is not as important from a military value standpoint for an air station to be able to berth a carrier.

The naval station configuration analysis involved the use of "cruiser equivalencies" as a means of uniformly quantifying the berthing required by the 1999 force structure as a starting point for elimination of excess capacity. We reviewed the appropriateness of "cruiser equivalents" and found it to be reasonable. A set of rules guided the configuration analysis, and we traced these rules to records of Navy deliberations and determined that the rules were based on military judgment. Some examples of these rules were: that San Diego and Norfolk, because their capacity cannot be absorbed by the other naval stations of each coast, should be a part of any solution; and that there should be berths for 67 percent of all ships, except aircraft carriers. A 100-percent requirement was set for carriers. These rules became

important with respect to assigning a priority to carrier berthing, which drove the subsequent ship assignments to a large degree.

In achieving the goal of reducing excess capacity, the Navy recommended Newport (ship berthing only), New London (ship berthing only), Staten Island, Charleston, Mobile, and San Francisco for closure. There was a close decision between whether to recommend Mobile or Pascagoula Naval Stations for closure--both have the same berthing capacity. This decision illustrates a case where individual military value scores were used as decisional factors by the Navy. Since the "cruiser equivalencies" of only one of these places were required, the Navy determined that Pascagoula's higher military value score made its retention more desirable.

In the case of North Island and Alameda, their individual military value scores were less important to the ultimate decision. Their scores as air stations were used to compute the average military value for the naval station category. However, the Navy's configuration analysis captured all berthing space, regardless of whether it was located at an air station or a naval station. The Navy determined that because the West Coast was to berth five carriers, the three carrier berths at North Island, the one at Everett, and the one at Puget Sound were required to meet future needs. This solution did not require the carrier berths at Alameda. In addition, the Navy determined that since the air station configuration resulted in the recommendation to close Alameda Naval Air Station, the Naval station recommendations made all the more sense.

### Naval Aviation Depots

The measures the Navy used to determine the amount of capacity for naval aviation depots were maximum supportable direct labor man-hours in the following categories: airframes, engines, components, and other work. Each depot provided certified information concerning their capacities in the four areas with existing facilities. Comparison of the fiscal year 1997 requirements to existing capacity indicated that almost 50 percent excess capacity existed in this category.

We reviewed the 79 questions used to compute the relative military value scores for each depot. These questions were developed by the Navy with the assistance of technical experts. The questions focused on the work performed in each of the four primary areas of depot work, such as in airframe repair, and on related factors such as quality of life and the environment.

We examined the results of the Navy's configuration analysis. The Navy developed an initial scenario which would have closed the depots at Alameda, Pensacola, and Cherry Point. This configuration would retain the Norfolk depot. Subsequently, the Navy recognized that its configuration analysis of operational air stations

included a recommendation to close Cecil Field, which would create a large Navy/Marine Corps aviation concentration at Cherry Point in addition to Norfolk. The Navy decided that having a depot near an aviation fleet aircraft concentration was desirable. Both Norfolk and Cherry Point satisfy this requirement. Therefore, the Navy reran its configuration analysis to cost out the closure of the Norfolk depot in place of Cherry Point. This second configuration allowed slightly less capacity in one category of depot work than work-load projections require. The Navy judged this to be an acceptable risk. In addition, this configuration provided greater savings. The resulting recommendation was for the closure of Alameda, Pensacola, and Norfolk. This overall recommendation further reduced excess capacity and raised the average military value of the naval aviation depot category.

This case illustrates that, though the Navy clearly considered alternative configurations based on operational reasons in this case, the development of alternative scenarios could result in greater savings. The final NADEP recommendation resulted in substantially higher estimated savings. However, the scenario requires the Navy to accept some risk that it will not need the small amount of capacity indicated as lacking.

### Training Centers

The capacity analysis for naval training centers focused on the numbers of personnel that could be trained using training, messing, and berthing facilities as indicators. Each training center provided data on maximum capacity for the indicators, and after comparing it to 1999 requirements, the Navy determined that excess capacity existed. The Navy developed 72 questions to derive military value scores. The questions were developed by the Navy in consultation with technical experts.

We reviewed the Navy's configuration analysis which resulted in the recommendation to close the Naval Training Centers at San Diego; California; and Orlando, Florida, and retain the Naval Training Center at Great Lakes, Illinois. The Great Lakes facility had the most capacity of any training center, particularly for trainers. In addition, the Navy indicated that the unique training equipment and facilities located at Great Lakes would be most difficult and costly to relocate or replicate at another training center. When reviewing the cost and savings data supporting this decision, we noted that the per-capita overhead costs are much higher at Great Lakes than at the other two facilities. In this case the Navy did not run alternative cost scenarios involving Great Lakes.

### Inventory Control Points

In determining the amount of excess capacity in its inventory control points, the Navy used several measures. These measures include: requisition volume, staff days spent on weapons system

support, staff days spent on security assistance, and budgeted work years. Based on the certified data provided by the two inventory control points, the Navy determined that their capacity exceeded the projected 1999 requirement by 42 percent.

The Navy determined the relative military value of its two inventory control points by analyzing their responses to 64 questions. The questions, which were developed with the assistance of Navy experts, focused on the support services provided to customers, their equipment and facilities, and quality of life issues.

We examined the configuration analysis the Navy used to determine how to best reduce its excess capacity. Based on this configuration analysis, neither inventory control point had enough capacity to meet the requirement. However, since there was excess capacity in this category, the Navy decided to consolidate its two inventory control points at one location. The Navy chose to close the Aviation Supply Office in Philadelphia and relocate the necessary personnel, equipment, and support to the Ships Parts Control Center, Mechanicsburg, Pennsylvania. This realignment was considered as part of a larger group of moves, including relocating the Naval Supply Systems Command, the Defense Printing Systems Management Office, and Food Systems Office also to Mechanicsburg. One of the Navy's goals in consolidating its operations was the reduction of overhead cost. In this case, we noted that the Navy expects to eliminate 255 jobs by closing the Aviation Supply Office. These jobs are a combination of base operations and general or administrative positions. In using its cost and savings model to determine if this closure was economically feasible, the Navy considered all of the above moves as a group and did not cost them separately.

While we did not have sufficient time to fully analyze this proposed realignment, we believe that because of its relationship to several DLA and other Navy moves, the cost and savings of this realignment should be carefully considered.

## ARMY PROCESS AND IMPLEMENTATION WERE GENERALLY SOUND, BUT SOME QUESTIONS EXIST

The Army has proposed closure and realignment actions that will affect seven installations. We found that the Army's decision process for evaluating and recommending installations for closure or realignment complied with legislation, was well documented, was supported by generally accurate data, and appears reasonable. With one exception we have no reason to question the Army's recommendations. The exception is the decision by the Acting Secretary of the Army not to recommend Fort Monroe for closure. We believe the Acting Secretary's rationale was not well supported.

## Process Methodology Key Features

The Army's two-phase process included an evaluation of the military value and ranking of the installations in phase I. In phase II, study candidates were selected and then put through an evaluation process which ultimately ended up in closure or realignment recommendations. Of the 95 bases which were assessed for military value, the Army selected 35 study candidates.

One key feature used in selecting the study candidates was a capacity analysis of the Army installations. This was done by comparing existing installations to the force structure plan, which is a key element in determining future basing needs. However, because the need for all installations do not lend themselves to a direct correlation with the force structure, the Army used other studies and inputs such as military value assessments, major command visions, and the Army's basing strategy in its base closure candidate selection process. The Army's philosophy is that each major command must articulate its vision (how it will organize and operate) for the future before optimal basing decisions can be made. This is especially true for the installation-intensive major commands, such as those requiring maneuver areas.

### Candidate Analysis

Once the study candidates examined by the Total Army Basing Study (TABS) Groups were approved by the Under Secretary of the Army and Vice Chief of Staff, alternative approaches to addressing the candidates were developed. These alternatives were then analyzed based upon feasibility, affordability, economic impacts, and environmental impacts. The alternatives were also examined for consistency with the force structure, the Army basing strategy, the major commands' reshaping proposal (visions), and the DOD selection criteria. Portions of the analysis were performed using the following:

-- COBRA model to calculate the affordability of each recommendation.

-- DOD's Office of Economic Adjustment model to calculate the socioeconomic impacts.

-- Impact assessments prepared by the Office of the Chief of Engineers to evaluate environmental impacts.

-- Installation military value assessments.

The TABS Group used these assessments as a basis for developing recommendations to be presented for approval by the Army leadership. The standard Army approval process--Program and Budget Committee, Select Committee, and the Secretary of the Army--was used to obtain final decisions.

The Army Audit Agency (AAA) evaluated all aspects of phase II of the process. This evaluation included reviewing the return on investment calculations to include a verification of all data input into the cost model. The AAA review consisted of evaluating the appropriateness of the data sources, the approaches used, and the reasonableness of the assumptions made in the calculations.

Observations on Methodology Implementation

In our analysis of the process we evaluated both phases, which included the military value assessment and resulting rankings, the selection of candidates and the analysis of them, and the resulting recommendations. We relied heavily on the scope and results of the work done by AAA. We found that the Army followed its process and that the key features used in selecting study candidates, which included the force structure and other selection criteria established, were appropriate. We found no reason to question the resulting recommendations with the exception of the Acting Secretary's decision not to recommend Fort Monroe for closure.

Phase I

In the initial phase of the process the Army identified and categorized the installations to be reviewed and then evaluated their military value. In general, military value was based on measures of merit and related measurable installation attributes which were related to the DOD established selection criteria.

AAA performed a detailed analysis of this phase of the process. AAA performed its audit at each of the major commands--Forces Command, Training and Doctrine Command, and the Army Materiel Command--and also verified data accumulated at six installations which were randomly selected in a multi-stage statistical sample. We accompanied AAA to one of the installations it visited as well as each of the major commands, and to a limited extent validated its verification efforts. We also noted that the TABS Group did some independent verification of the major commands' submissions.

AAA found that the Army's assessment of installation military values was generally consistent with guidance that the TABS Group issued and was reliable for further use in the 1993 basing study. While AAA did find some errors, they were not material and did not cause the rankings of the installations to change. Based on AAA's review and our limited verifications of its work, we found no reason to question the data used to determine the military value or the resulting rankings of the installations.

Phase II--Candidate Selection

In determining the need for bases, the force structure was a key element. This requires assumptions relating to the number of divisions there will be in the structure and how many divisions

will be based in the United States versus overseas. Future decisions will be made by the administration which will address these questions. However, because the force structure was such a key element in base closing and realignment decisions, we believe that the Army's approach of using the Bush base force structure is reasonable given the uncertainty about future changes. In addition, because the need for many Army bases is not related, either directly or indirectly, to the number of divisions in the force structure, the other measures used for making basing decisions such as major command visions and the basing strategy, are also a reasonable approach.

The number of candidate bases selected for study as closure candidates in each of the installation categories and the number available and are shown in table 3.1.

Table 3.1: Army Installations and Number Selected as Study Candidates

| Installation categories | Number of installations | Number of study candidates |
|---|---|---|
| Command and control | 11 | 7 |
| Professional schools | 5 | 1 |
| Depots | 11 | 8 |
| Maneuver | 11 | 4 |
| Major training areas | 10 | 6 |
| Branch schools | 13 | 3 |
| Commodity oriented | 12 | 4 |
| Production | 13 | 0 |
| Proving grounds | 4 | 1 |
| Ports | 3 | 0 |
| Medical centers | 2 | 1 |
| Total | 95 | 35 |

The following summarizes our review of the process, with emphasis on how key features were used in selecting candidates in each of the categories.

Command and Control

The Command and Control installations such as Forts Belvoir, McPherson, and Monroe house primarily, but not exclusively, non-

deployable headquarters and activities which oversee the day-to-day functions that control the manning, equipping, training, and sustaining of the Army. There is no direct connection between the need for these types of installations and the force structure. The primary decision factors for these installations are the military value assessments and the major command vision statements as appropriate. In addition, the basing strategy states that functions should be consolidated and small, single-purpose bases should be closed where feasible. All but four of these bases were study candidates. The four that were not studied--Forts Meade, Myer, Ritchie, and Schafter--were deferred from study because there were no restructuring or reshaping initiatives in the vision statements that affected them. We are not aware of any evidence to question this decision.

The remaining bases were studied for closure or realignment. After varying degrees of analysis, they were all deferred from further study. For example, Forts McPherson and Monroe were study candidates because they are single-purpose bases. In both cases the study was deferred for operational reasons. In addition, Fort McPherson was deferred because of high costs and an extended return on investment.

The TABS Group had proposed that Fort Monroe be closed and that the headquarters of the Training and Doctrine Command be moved to a base about 20 miles away. The return on investment of this closure was calculated to be $28 million annually beginning in 1998. The Acting Secretary of the Army, however, rejected this proposal, citing (1) the "turbulence" within the Training and Doctrine Command and (2) the installation's high environmental cleanup costs, estimated to exceed $600 million.

We cannot support the reasons given for not considering this recommendation. First, the downsizing and restructuring of U.S. military forces have caused turbulence throughout DOD. Second, OSD has stated that restoration environmental costs are not to be a consideration in determining the return on investment. And third, the projected savings are sizeable.

### Army Professional Schools

Army professional schools such as West Point and Carlisle Barracks are not related to the force structure and are considered unique in the missions they perform. The only mention in the Training and Doctrine Command's vision statement that pertained to a Professional school was the relocation of defense language training to a follow-on training location. On this basis, the Army selected the Presidio of Monterey, home of the Defense Language Institute, as a candidate for study. Following its analysis, the Army recommended the Presidio be closed and the Institute's mission be moved to Fort Huachuca, Arizona. The Army anticipated contracting with a university to provide language training.

The Secretary of Defense, however, deleted this recommendation from the list transmitted to the Commission. The Secretary cited concerns by the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence that moving the Institute would severely disrupt the flow of linguists to national security missions. Among his concerns were the Army's plans to contract with a private university. In rebuttal, the Army cited other cases in which it has cooperated successfully with universities--the Judge Advocate School at the University of Virginia and the Comptroller School at Syracuse University. Further, the Army also pointed out that it has had considerable experience with realignments and that these have not resulted in significant disruptions.

We noted that base operating costs associated with the move appeared to be high; however, we did not have sufficient time to investigate the reasons. Also, the cost of the contract to provide the language training services, which is a key factor in determining the costs, has not been finalized. These final contracting costs are not known.

Depots

The major missions of Army depots (such as Anniston, Red River, Letterkenny, and Tooele) are to receive, store, issue, and maintain equipment and ammunition and to operate depot maintenance facilities for Army ammunition and equipment. There is an indirect relationship between the current depot capacity needed and the force structure. A study by the Joint Chiefs of Staff in 1992 identified a significant amount of excess depot capacity and widespread duplication among the services. The annual excess capacity identified at Army maintenance depots exceeded 8 million direct labor hours.

In analyzing the excess capacity and how to downsize, the Army considered, among other things, the following factors: the relative military value of all depots; the workforce skills; the excess capacity; the ability of the depots to accommodate new workload levels; the proximity of the depots to heavy forces; and the resulting savings. As a result, the Army is recommending that Letterkenny and Tooele be downsized and realigned to depot activities. While the Services were asked to streamline depot maintenance across service lines and eliminate duplication, as discussed in chapter 2, this was not done.

Maneuver

The Army currently has 14 divisions, 11 of which are stationed in the United States at installations such as Forts Hood and Carson. The Army force structure plans call for 12 divisions in the future, with 9 based in the United States. The Army recommended no bases for closure or realignment in this category. The Army believes it

would be premature to take these actions given the uncertain nature of the future U.S. force structure, the disposition of overseas forces, and the mix of forces. The Army also cited its fiscal year 1993 basing strategy, which states that the Army must maintain the capability to station up to 10 divisions in the United States. In addition, the Army determined that its maneuver bases are currently overcrowded. Each base has shortfalls in at least two of the four critical facility categories (barracks, family housing, maintenance, and operational/command and control).

The Army needs firm decisions on the future of the base force, disposition of forces overseas, and the mix of forces before closing a base capable of supporting a division. We found no evidence to cause us to question the reasonableness of this position.

Major Training Areas

These bases (for example, Forts Irwin, A.P. Hill and Greely) provide facilities for both the active and reserve components for large unit training exercises. With the exception of Fort Irwin (home of the National Training Center) and Fort Polk (home of the Joint Readiness Training Center), there are no active component tactical units stationed at these installations.

The need for these installations is indirectly related to the force structure. This is because there is a need for geographically dispersed large unit training areas that forces can use on a rotational basis. The primary user of these installations is the reserve components. All plans and indicators show that reserve components will not be reduced in large numbers. Also, because of demographics (the components need to be close to where they train), there appears to be is no basis for closing or realigning any of these bases at the present time.

Initial Entry/Branch Schools

Initial entry training/branch schools (such as Forts Benning, Bliss, and Jackson) have the mission of providing the Army with trained individual soldiers, developing the doctrine that describes how the Army will fight, defining the Army's material requirements, designing the Army's organizations and developing the Army's leaders.

The need for initial entry training/branch schools and how many are indirectly related to the force structure. However, these schools are directly related to the various branches of the Army--such as the Infantry school located at Fort Benning and the Armor school located at Fort Knox. The Training and Doctrine Command, which is the proponent for schools, stated in its vision statement that branch schools are necessary unless there is a change in Army doctrine or the battlefield. In other words, as long as the Army

plans to use infantry in future battles there will be a need for an infantry school. Therefore, the Command's approach is to find ways of operating the schools more efficiently through actions such as collocating or consolidating the schools to the extent possible.

The current recommendation to close Fort McClellan fits into this approach. If approved, there will be three schools located at Fort Leonard Wood--Engineers, Chemical, and Military Police. The Training and Doctrine Command is also looking at consolidating the combat service support schools--Transportation, Ordnance, and Quartermaster. According to Army officials, this action, if accomplished, does not meet the BRAC threshold of involving more than 300 authorized civilian personnel. Another initiative being looked at by the Command is the reduction of schools doing basic combat training. Currently, there are four schools--Forts Jackson, Leonard Wood, Knox, and Sill--doing basic combat training. All of them but Jackson have more than one type of training mission. According to an Army official the current thinking is to close down basic training at two of these bases that have other missions. If accomplished in this way, the action will not meet the BRAC threshold.

### Commodity Oriented

Commodity-oriented installations such as Fort Monmouth, Rock Island Arsenal, and Fort Detrick are industrial facilities that include laboratories, engineering and logistical management centers, and national inventory control points. Military value was the most important factor in the analysis of this category. The need for these installations is related to performance of their mission and not the force structure. While not specifically mentioned in the Army Materiel Command's vision, the need to relocate from leased to government-owned facilities was a vision objective that affected some of these facilities. Two recommendations were made related to installations in this category--closure of Vint Hill Farms and the move of the Communications and Electronics Command from a leased building in New Jersey to Rock Island Arsenal. The closure of Vint Hill Farms, which had a low military value, supports the basing strategy to consolidate similar functions and close small installations when feasible to do so. The Communications and Electronics Command move is based on reduced operations cost.

### Other Categories

Installations in the remaining Army categories (production, proving grounds, ports, and medical centers) were deferred from further study primarily because of their unique military value. For example, White Sands Missile Range, a proving ground, is one of the only sites in the United States that is large enough to fire all organic missile and artillery systems, and the Military Ocean Terminal in Oakland, California, provides the only secure water terminal facility in support of the Pacific and Far East theaters

of operation. We have no evidence to indicate that these exclusions were inappropriate.

## AIR FORCE PROCESS APPEARS REASONABLE BUT DIFFICULT TO VERIFY

The Air Force has proposed closures and realignments affecting seven bases. Our review shows that these recommendations will reduce both costs and excess capacity, and that the data used was generally accurate. The Air Force selection process complied with force structure and criteria requirements. The judgments of the Base Closure Executive Group and the Secretary of the Air Force played a major role in the process. However, these judgments were not clearly documented. As a result, in some cases the Air Force process does not lend itself to independent verification of the decisions from existing documentation.

### Key Factors of the Process

The principal elements of the Air Force process included: (1) DOD's future years' force structure plan; (2) a base capacity analysis; (3) a depot analysis; (4) detailed information gathered for each base; and (5) the eight DOD selection criteria.

In determining excess capacity, the Air Force performed a base capacity analysis (including on-site surveys at 48 bases) to determine the maximum number of aircraft or missions that could be accommodated at existing bases. The Air Force compared this capacity data to the future years' force structure plan to project the amount of excess capacity. This analysis resulted in the identification of four large aircraft bases and one small aircraft base as being excess to the Air Force's future needs. Additionally, the Air Force led a joint analysis of fixed-wing and rotary-wing aviation at the direction of OSD and determined that it had excess depot capacity of about 8.7 million direct labor hours.

Bases were analyzed against all eight DOD selection criteria with priority given to military value and with emphasis on readiness and training, future mission, and cost. A color coding system--red (low), yellow (medium), and green (high)--were used to distinguish between the military value attributes given to each of the bases. This analysis was based on detailed information on each base gathered through a structured questionnaire. In addition, each base was subject to a cost and savings analysis that assumed closure of the base.

### Observations on Implementation of the Process

We found that the data used to support the process was generally accurate, but we could not always independently verify the process decisions without extensive interpretation and discussion with Air Force officials. We found no evidence that would lead us to

challenge the decisions. However, the decisions require acceptance of OSD and Air Force assumptions regarding future operations. The Air Force Audit Agency validated data used in the process; however, its validation did not include validating the rating of bases and the selection process at the Air Force headquarters.

The following sections provide our observations, by installation category, on each recommended closure and realignment.

### Flying Category

The flying category included 38 bases that support flying operations. This category was divided into three subcategories--operations, pilot training, and special operations. The operations subcategory was further divided into missile, large aircraft, and small aircraft mission areas. The Air Force recommended actions affecting large and small aircraft bases. Our review of the recommendations illustrates the difficulty we had in tracking the decision-making process and also shows the emphasis the Air Force placed on costs and savings considerations in its decisions.

### Large Aircraft

The large aircraft subcategory included 21 bases that support bomber, tanker, airlift, and mobility missions. The bases were evaluated in terms of their capability to support these missions, and some bases were evaluated more than once. The bases were rated and arrayed in three groups from most to least desirable. A discussion on each large aircraft base recommended for closure or realignment follow.

#### Closure of K.I. Sawyer Air Force Base, Gwinn, Michigan

Our analysis indicates that closing this base will likely result in savings and reduce large aircraft base capacity. According to the Air Force's documentation, K.I. Sawyer did not appear to rate lower than other rated bases when measured against the DOD selection criteria, even though the Air Force reported it did. However, on the basis of its rating, it was grouped in the least desirable category and selected for closure.

In reviewing the Air Force data, we were unable to independently determine the basis for the grouping. We had to rely on Air Force officials for an explanation to understand the decision. The Air Force said that the low cost to close the base and quick payback period were major factors in its grouping and recommendation for closure. We noted that this base's primary mission currently has one bomber unit with 14 B-52s. On the basis of the information provided and our review of the cost and savings data, we have no reason to disagree with the Air Force's explanation.

We noted, and the Air Force concurred, that because of an error in the Air Force COBRA analysis for recurring costs, the payback period for the closure will be 3 years instead of 1 year. However, this payback period was still among the quickest of the large aircraft bases.

### Realignment of Griffiss Air Force Base, Rome, New York

Based on our review of Air Force data, we were unable to independently determine the basis for the Griffiss grouping, and we had to rely on Air Force officials to explain the grouping.

Our analysis indicates that realigning the base will likely result in base operation savings and reduce aircraft base capacity. Air Force documentation indicates that Griffiss, like K.I. Sawyer, did not appear to rate lower than the other rated bases when measured against the DOD selection criteria, even though the Air Force reported it as being in the least desirable category. The Air Force explained that Griffiss was first selected as a closure candidate, but upon further analyses it proved more economical to leave the Rome Laboratory at Griffiss and Griffiss became a realignment action. We have no reason to disagree with the Air Force decision.

Griffiss was also considered and evaluated as a potential site for the Air Force's mobility mission on the East Coast. However, when compared to other East Coast large aircraft bases for the principal mobility attributes considered important by the Air Force, Plattsburgh Air Force Base, New York, was found to be best suited for this mission.

### Realignment of McGuire Air Force Base, Wrightstown, New Jersey

Our review of this recommendation shows that realigning the base to an Air Force reserve facility will likely result in overall savings once the realignment is accomplished. However, realigning the base to a reserve facility does not eliminate the entire base capacity from the Air Force base structure. Under this realignment, the Air Force plans to reduce the number of aircraft at McGuire from 70 to 42. When measured against the DOD selection criteria, McGuire did appear to rank low compared to other large aircraft bases, according to Air Force documentation.

McGuire was also considered and evaluated for the Air Force's mobility mission on the East Coast. When compared to other East Coast aircraft bases for the principal mobility attributes considered important by the Air Force, and airspace congestion in the New York/Philadelphia area, Plattsburgh Air Force Base was found to be best suited for this mission. The Air Force told us that consideration had been given to potential fuel supply

shortages and other operational considerations in reaching its decision. However, these considerations were based on assumptions related to mobility issues which we did not review.

### Realignment of March Air Force Base, Sunny Meade, California

Our review of this recommendation shows that realigning March Air Force Base to an Air Force reserve facility will likely result in overall savings. However, realigning the base to a reserve facility does not eliminate the entire base capacity from the Air Force base structure. Under this realignment the Air Force plans to reduce the number of aircraft at March from 60 to 43. Air Force documentation shows that when March was measured against the DOD selection criteria it did rank low when compared to other large aircraft bases.

March Air Force Base was also considered for the Air Force's mobility mission on the West Coast. When compared to other West Coast aircraft bases for the principal mobility attributes, Travis Air Force Base, California, was found by the Air Force to be best suited for this mission.

## Small Aircraft

There were 11 bases included in the small aircraft subcategory that provide trained combat ready aircrews, aircraft, and support personnel for deployment in support of theater work plans and contingency operations. The bases were evaluated in terms of their capability to support a fighter wing. The bases were rated and arrayed in three groups from most to least desirable.

### Closure of Homestead Air Force Base, Homestead, Florida

Our analysis shows that closing Homestead Air Force Base will result in savings and reduce small aircraft base capacity. Homestead's low rating when measured against the selection criteria and the high cost to rebuild the base justify the Air Force's recommendation. Overall, Homestead rated lowest in three of the eight criteria, and it showed a fast payback and low closing costs.

## Industrial/Technical Support Category

The industrial/technical support category included 10 bases that provide technical support for depot-level maintenance, research, development, test and acquisition. This category was divided into three subcategories--depots, product centers and laboratories, and test facilities. Only the depot bases were evaluated against the DOD criteria. Two of the six depots were recommended by the Air Force for closure to reduce depot capacity. The recommendations were driven by the amount of excess depot capacity and costs and

savings considerations. As with the flying category aircraft, we had difficulty tracking the decision-making process.

### Closure of McClellan Air Force Base, Sacramento, California

The Air Force recommended McClellan for closure to reduce excess depot capacity by 6.3 million direct labor hours. DOD deleted the base from the list transmitted to the Commission. (See ch 2. for a more detailed discussion of this action.) Our analysis indicates that closing this base will likely reduce excess capacity. Our review of Air Force documentation indicates that McClellan has the lowest one-time closure costs ($635 million) and quickest payback periods of the six depots. According to Air Force officials, McClellan rated low compared to the other depots, although Newark was the lowest.

### Closure of Newark Air Force Base, Heath, Ohio

Our analysis shows that the closure of Newark would likely reduce overall Air Force depot capacity by 1.7 million hours. The Air Force rated Newark lower than the other depots against the selection criteria. Air Force opinion is that privatization of the facility could result in additional reduced costs to the Air Force. We noted that the Air Force in its costs and savings analysis included a $68 million recurring contractor cost, which approximately equals the reduced personnel savings. However, the Air Force data indicates a slight savings from reduced operating costs. The Air Force is uncertain whether a buyer can be found to purchase the facility or whether it will operate as a government-owned, contractor-operated facility.

### Excluded Bases

On the basis of its capacity analysis, the Air Force excluded 19 bases in categories and subcategories having no excess capacity, some excess capacity, or high costs to relocate and replicate the mission. The categories and subcategories included: the flying/pilot training, flying/special operation forces, industrial technical support/technical training centers, and other/major headquarters. Also, there were 16 bases excluded from the process because they were considered geographically or mission essential. For example, Elemendorf Air Force Base, Alaska, was considered a key port of entry into the United States, crucial to reinforcement in the Pacific, and critical to the defense of Alaska. We found no reason to question the exclusions.

## DEFENSE LOGISTICS AGENCY'S BASE CLOSURE AND REALIGNMENT PROCESS WERE GENERALLY SOUND, BUT SAVINGS ARE QUESTIONABLE

DLA recommended closure or realignment actions affecting 14 installations.[4] Our review found that DLA's selection process for identifying potential closure or realignment candidates was reasonable. The process followed force structure and criteria requirements and DOD policy guidance. However, we also found that due to problems in DOD's cost and savings model, the savings resulting from the DLA recommendations were overstated.

### Key Features of the Process

DLA did not participate in the 1991 round of closures and realignments. At that time, the agency was involved in a major reorganization as a result of DOD's decision to transfer the distribution mission and related facilities, as well as the contract management missions and plant representative offices, from the military services to the DLA. The agency currently occupies many old, outdated facilities with high operating, maintenance, and overhead costs. DLA viewed the 1993 base closure and realignment process as an opportunity to consolidate bases and achieve significant efficiencies.

DLA's mission, unlike those of the military services, is not specified in the DOD force structure plan, even though DLA is a combat support agency. The agency based its closures and realignment analysis on the eight DOD selection criteria and the agency's concepts of operation, with reduction in cost as a key objective. The concepts of operations played a key role because they serve as long-term strategic planning documents for DLA's major business areas. Through application of the force structure plan to the concepts of operations, DLA assessed its current and future operations to identify organizational needs and base structure requirements.

To assess its installations for closure or realignment, DLA first classified its bases into four categories that reflect its operations: (1) inventory control points, (2) service and support activities, (3) distribution depots, and (4) regional headquarters.

Each base in these categories was evaluated for excess capacity and military value. DLA performed the military value analysis using the first four DOD selection criteria, along with considerations of

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[4]The DLA distribution depot at McClellan Air Force Base, California, is not included in this total. This depot was removed from DOD's recommended list of closures as part of the Secretary of Defense's decisions not to close McClellan Air Force Base.

the seventh and eighth criteria. The agency developed more specific measures of merit, related to the criteria, to assess the military value of its bases.

Observations on Implementation of the Process

DLA's selection process complied with force structure and criteria requirements; however, some of its cost savings appear questionable. The data used in the selection process was certified as to its accuracy and completeness by the commanders at each of the bases. Most of the data used in the process was reviewed and favorably reported on by the DLA Office of Internal Review. We selectively reviewed the Office of Internal Review's workpapers and performed our own independent analysis of certain aspects of the process and resulting recommendations for each category of activities. Our analysis indicates that DLA's recommendations were driven by cost and savings implications.

Inventory Control Points

DLA manages six inventory control points whose responsibilities are to acquire supply items and manage inventories. By September 1994, the inventory control points are expected to manage approximately 90 percent of DOD's consumable items. The inventory control points are the Defense General Supply Center, Richmond, Virginia; the Defense Construction Supply Center, Columbus, Ohio; the Defense Electronics Supply Center, Dayton, Ohio; the Defense Personnel Supply Center and the Defense Industrial Supply Center, Philadelphia, Pennsylvania; and the Defense Fuel Supply Center, Cameron Station, Alexandria, Virginia. The Defense Fuel Supply Center was excluded from the process because it was affected by a 1988 decision to close Cameron Station.

DLA considered excess capacity at the inventory control points to be the amount of space not currently utilized and the capability to assume more work load. The revised requirements were derived from the implications of the DOD force structure plan and from the DLA concepts of operations for inventory control points. Four inventory control points--the Defense Construction Supply Center, Defense Electronics Supply Center, Defense Industrial Supply Center, and Defense General Supply Center--were evaluated for excess capacity as a group because they manage similar hardware items. The Defense Personnel Supply Center was considered separately, as it handles personnel items (including clothing, medical supplies, and food) which are not comparable to hardware items. The results of the military value analysis were used as a starting point in reconfiguring inventory control points and determining which should be evaluated for closure or realignment.

Our analysis indicates that DLA's evaluation of the inventory control points was primarily designed to identify the potential for reductions in overhead costs. DLA used DOD's cost and savings

model to evaluate the potential costs and savings of closing or realigning the inventory control points. However, several of DLA's realignment cost saving assumptions are not compatible with the basic cost model assumptions. As a result, DLA's closures and realignments savings were overstated.

Service and Support Activity Bases

When DLA began its selection process, it had four service and support activity bases--the Defense Logistics Services Center, Battle Creek, Michigan; the Defense Reutilization and Marketing Service, Battle Creek, Michigan; the Defense Logistics Agency Systems Automation Center, Columbus, Ohio; and the Defense Logistics Agency Clothing Factory, Philadelphia, Pennsylvania. The assets and resources of the DLA Systems Automation Center were subsequently transferred to the Defense Information Systems Agency, and it was excluded from the selection process. DLA determined that its remaining service and support activities have unique missions, functions, and work load. As a result, DLA evaluated these bases individually rather than as a group. We agree that this was an appropriate approach.

The Defense Logistics Service Center is responsible for implementing the legislative requirements for a federal catalog of items used by the U.S. government, providing support relating to item intelligence, and managing data development and dissemination. The Defense Reutilization and Marketing Office is responsible for property disposal (including hazardous items) and reutilization and marketing of excess personal property within DOD. Both of the activities, located in General Services Administration-owned space, were determined to have excess capacity as a result of changes in mission requirements. The reduction in their space requirements is projected to result from decreased personnel, increased workload activities, and consolidated missions/activities. DLA recommended that these activities be realigned to the Defense Construction Supply Center as a means of reducing DLA overhead cost. While this may be cost-effective from DOD's perspective, it may not be from an overall government perspective. Because of the problems in the cost model, we believe the projected savings from the consolidation will not be as large as projected. Since the move is from one government-owned facility to another, the overall cost and savings implications for the federal government should be considered in the Commission's decision.

The DLA Clothing Factory, part of the Defense Personnel Supply Center, produces approximately 3 percent of DOD's clothing requirements. Based on a study by the Defense Personnel Supply Center, DLA concluded that the work performed by the factory could be done at less cost by commercial sources. We reviewed the study and believe its overall conclusions are reasonable.

Distribution Depots

Following the lead of the military services, DLA has recommended closing five of its distribution depots that are collocated with military service maintenance depots also recommended for closure. These five depots have a total of 56 million cubic feet of storage space. In addition, DLA reviewed all distribution facilities and identified additional storage space reduction opportunities totaling 105 million cubic feet. However, no recommendations were made to close additional depots. Officials stated that this area will be looked at in the future.

Excess capacity for distribution depots was based on current storage space and production capability that exceeds current requirements, projected decreases in demand for material through 1999, increases in workload efficiencies, and reductions in inventory. Over the next several years, reducing defense operating forces in accordance with the DOD force structure plan reductions will result in a similar reduction in the DOD logistics support infrastructure. Additionally, based on the recently completed DOD supply depot consolidation, DLA projects that it will achieve efficiencies and economies of scale in distribution operations. DLA believes that its distribution initiatives will (1) redefine the distribution spectrum to include the full process cycle from vendor to customer, (2) improve the direct vendor delivery process, and (3) use a single location stockage policy that will reduce operating costs and storage requirements. The result will be a supply depot structure that is more streamlined from the current configuration, with fewer depots and less annual workload, and that operates more efficiently to support the DOD mission.

The elimination of excess capacity was a major factor in DLA's distribution depot recommendations, with some consideration given to the military services' closure and realignment recommendations. DLA was conservative in making its estimates of the excess capacity that would result from reduction of the supplies it stores for the military services. It assumed that the services would focus their inventory reduction efforts on high value items and not on those that are taking up large amounts of storage space. Accordingly, DLA translated the 42-percent inventory value reduction goal into a 30-percent space reduction estimate. DLA officials say this estimate also considers supplies returned to their depot system from reductions in force structure. A large portion of supplies stored by DLA is owned by the military services and decisions about when to buy, store, and dispose of those items is made by the services, not DLA. An estimate of how much DOD inventory will need to be stored in the future is clearly critical to determining DLA's capacity needs.

In addition, as discussed in chapter 2, the Commission has decided to consider the closure of McClellan Air Force Base. The DLA

distribution depot located there should be included in that consideration.

Regional Headquarters

The Regional Headquarters category consists of the Defense Distribution Region headquarters locations and the various headquarters sites of the Defense Contract Management Districts. The Defense Distribution Region headquarters mission is to provide overall administrative support, including resourcing and budgeting, operational support, and distribution management for all the depots located within their respective boundaries. The Defense Contract Management Districts perform worldwide contract administration services for DOD organizations, U.S. government agencies, foreign governments, and international agencies. According to DLA, the Defense Distribution Region headquarters involve less than 300 authorized civilian personnel each and were excluded because they did not meet these criteria for submission under the act.

Capacity for the Defense Contract Management Districts may be viewed in terms of the number of Defense Contract Management Area Operations and Defense Plant Representative Offices for which operational support and management oversight is performed. Excess capacity was measured by administrative space, span of control, space available to accommodate additional personnel, the type of space available, and efficiencies for the category through 1999. The evaluation of excess capacity was based on assumptions derived in part from implications and trends related to the DOD force structure plan, such as: (1) reduced procurement funding; (2) fewer major weapon systems in full-scale production; (3) more research and development contracts; (4) more maintenance, overhaul, and repair work; (5) additional reimbursable workload for the Defense Logistics Agency to provide support to civilian agencies; and (6) additional workload for the Defense Logistics Agency as military services and DOD agencies delegate more to the Defense Contract Management Command.

Since Defense Contract Management Command international field activity bases are located outside of continental United States, the command was evaluated independently. For the determination of military value, the Defense Contract Management Districts were evaluated within their peer group based on several critical areas such as essentially of mission, suitability of location, operational efficiency and expendability of mission. The results of military value analysis were used as a starting point in reconfiguring the Defense Contract Management Districts and determined which districts should first be evaluated for closure and mission realignment. Reducing the number of districts, with a corresponding reduction in overhead cost, appeared to be the basis for these recommended realignments.

In assessing DLA's recommendations for realignment or closure of the Defense Contract Management Districts, we found that the Internal Review staff for Defense Contract Management District Northcentral was unable to verify the base operating cost figures that were submitted to DLA. The cost and savings model runs submitted to us by DLA had major differences in the base operating cost of Northcentral Defense Contract Management District when compared to the other four Defense Contract Management Districts. Although we question the accuracy of the base operating costs figures for Defense Contract Management District Northcentral, our analysis shows that there are still cost savings associated with the closure of Defense Contract Management District Northcentral and Defense Contract Management District Midatlantic and the realignment of their workloads to the remaining districts.

## DEFENSE INFORMATION SYSTEMS AGENCY PROCESS AND IMPLEMENTATION WERE GENERALLY SOUND

DOD is reorganizing its data processing facilities. In its current phase, DOD plans to merge some existing facilities into 15 consolidated "megacenters." DOD estimates this consolidation will save $599 million from fiscal years 1994 to 1999. Although none of the affected facilities exceeds the BRAC thresholds, DOD has submitted these proposed consolidations for Commission consideration because DOD believes (1) that their combined effect is significant in that 636 civilian positions will be realigned and 2,804 military and civilian positions will be eliminated and (2) that based on past experience, legislation may be passed that would delay the implementation (such as P.L. 102-396).

### Key Features of the Process

In November 1989, DOD initiated plans to consolidate data processing facilities as a means of achieving budget reductions. This effort, described and directed by Defense Management Review Decision (DMRD) 924, called for each DOD component to obtain approval of a plan detailing its proposed consolidation actions. The Army's and DLA's actions under this decision are largely completed, whereas Air Force actions are still underway. Legislative restrictions have inhibited the Navy's attempts to activate its plan. DMRD 924 was followed by DMRD 918, which mandated a DOD-wide approach to consolidation and required the transfer of data processing facilities, personnel, and equipment to DISA.

In January 1993, DISA chartered a team to develop a consolidation proposal for submission to the Commission. The DISA approach is to close excess data processing facilities by moving their work loads to a selected number of megacenters located in existing facilities.

The DISA team used the most current consolidation plans developed by the Defense components under DMRD 924 as a basis for identifying

megacenter candidates. The DOD components had initially identified a total of 192 candidate sites for consolidation; the DOD components, and then the DISA team, applied certain selection criteria and reduced this number to 36. After ranking the 36 sites, the team projected the total work load and distributed it to the ranked megacenter candidates, one by one, until all work load requirements were satisfied. This exercise determined that 15 megacenters would be necessary; the remaining 21 candidate sites would be disestablished. Other sites initially identified by the component agencies have been or are being disestablished under those agencies' DMRD 924 processes, except for 23 of the Navy's sites.

Observation on Implementation of the Process

There are two processes that led to DOD's recommended list of 15 megacenters: the process used by the individual components to arrive at candidate sites and the process used by the DISA team to eventually select 15 of those sites.

We did not evaluate the components' processes during this review. However, in a December 1992 report,[5] we stated that the Navy used verifiable data and a conceptually sound analytical rationale to ensure that its consolidation plan met applicable requirements.

DISA team members told us that they have concerns about the accuracy and completeness of some of the work load data contained in the Air Force's DMRD 924 plan. They said the Air Force plan was outdated, piecemeal, and not as complete as the other components' plans. Moreover, the Air Force Audit Agency reported in January 1993 that the Air Force's planned consolidation could actually lose rather than save money.

Regarding the DISA process used to select the 15 megacenter sites, we believe the approach DISA used and the proposals that resulted were reasonable. DISA, however, used data that was not validated for the 36 megacenter candidate sites. Recognizing this flaw, the DISA team sent members to visit the sites and validate the data. DISA officials told us that these visits, which were completed by March 15, 1993, still had not resulted in consistent and uniform data on the sites. Additional visits are to be scheduled. However, DISA officials told us that this data problem, as well as the concerns with the Air Force work-load data, are not significant enough to change the list of 15 megacenters.

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[5]Information Technology: Comments on Navy Facility Consolidation Plan (GAO/NSIAD-93-87, Dec. 3, 1993).

## CONCLUSIONS

The military services' and defense agencies' base closure and realignment processes produced recommendations to close 32 major bases and realign 12 others. In addition they included recommendations for closure, realignment, and disestablishment of 122 small bases. We found the processes and resulting recommendations to be generally sound. However, we did find problems concerning the adequacy of documentation and accuracy of technical data and cost and savings estimates. This occurred in varying degrees among the services and defense agencies. In most cases, these problems were not severe enough to question the recommendations. In some cases, accepting the recommendation requires acceptance of certain key judgments and assumptions. Our service- and defense agency-specific conclusions follow.

### Navy

The Navy's closure and realignment recommendations represent a substantial portion of DOD's overall recommendations. We found the process used as the basis for developing the recommendations to be generally sound. We did note that the Navy's process had an overall goal of reducing excess capacity and there are situations where recommendations were made to close a base with a higher absolute military value than other bases in the same category that were not closed. Further, as a general rule the Navy did not attempt to optimize costs and savings; it only ensured that reasonable savings resulted from the scenarios that were selected. We did note in one case where selection of an alternative scenario resulted in larger savings.

### Army

The Army's closure and realignment recommendations affected seven installations. The process and recommendations were generally well supported and documented. The Army's actions were principally based on force structure considerations. Given the uncertainty about future force structure changes, the Army's approach was reasonable. However, we did identify two specific concerns. First, it is unclear whether the movement of the DLI would have a negative impact on intelligence capabilities, and there are potentially significant unresolved cost and savings issues associated with the move. Second, the reasons the Army gave for not recommending Fort Monroe for closure are not well supported.

### Air Force

The Air Force recommendations affected seven bases. The data used to support the selection process was generally accurate. However, in several cases, understanding the conclusion reached using the data required interpretation and discussion with Air Force officials. While we have no basis to question the decision, they

do require the acceptance of Air Force assumptions. In addition the Air Force Audit Agency was not involved in verifying data during the final stages of the process.

Defense Logistics Agency

DLA recommended closure and realignment actions involving 14 installations. Because DLA operations are not directly related to changes in the force structure, DLA focused on reducing excess capacity and optimizing savings. DLA's process was well documented, and it used generally accurate data. However, savings estimates were overstated in a number of cases. In addition, military service inventory reduction plans were not fully considered in assessing depot capacity needs.

Defense Information Systems Agency

DISA is recommending the merging of its existing facilities into 15 consolidated centers. We did not independently verify the data used in this process; however, it appears that data accuracy problems exist. The extent of these problems has not been determined by DOD.

RECOMMENDATIONS

We recommend for the 1995 round of base closure and realignments that the Secretary of Defense direct:

-- the Air Force to establish procedures to fully describe all decision justifications and expand the Air Force Audit Agency involvement to include validating the military value grading and

-- the Director of DLA to consider future reductions in the military services' inventory when assessing capacity needs.

We recommend that the Base Closure and Realignment Commission consider taking the following actions:

-- Closely analyze those Navy recommendations where (1) the base recommended for closure had a higher military value than ones that are remaining open; (2) judgments and assumptions about the future were critical to the recommendations; and (3) an alternative scenario would have produced approximately the same amount of excess capacity reduction and military value, but cost and savings were not analyzed.

-- Closely analyze the Army recommendations relating to the realignment cost of DLI and reexamine the Army's justification for not including Fort Monroe on the closure list.

-- Request the Air Force to provide additional information where necessary to support the basis for its recommendations, in those cases where it is not evident from existing documentation.

-- Closely analyze the Defense Logistics Agency's cost and savings estimates and include DLA's McClellan Air Force Base distribution depot in its considerations.

-- Request DOD to provide its most current work-load data projections on the DISA consolidation in order to better consider the DISA recommendations.

## CHAPTER 4

## SAVINGS ARE SUBSTANTIAL, BUT IMPROVEMENTS CAN BE MADE TO THE ESTIMATES

DOD has corrected many of the limitations and weaknesses of the COBRA cost model used to calculate costs and savings; however, problems still exist. Further, DOD continues to exclude costs that may be incurred by other federal agencies as a result of its actions. These could be substantial, particularly where realignment recommendations involve moving from federally owned facilities and building to new DOD facilities.

Further, because of problems associated with the model, DLA miscalculated the overhead costs and savings of its proposed closures and realignments. We also have some concerns about the impact of differing assumptions used by each of the DOD components in performing their calculations. We estimate that, after correction for these problems, DOD's proposed base closures and realignments will result in savings of about $940 million less than the $12.8 billion in savings it estimated for major bases over the 20-year period.

We agree with DOD's position that environmental restoration costs are a liability to DOD regardless of its base closure recommendations, and that DOD should not consider those costs in developing its cost and savings estimates as a basis for closure recommendations. However, the cleanup costs are substantial. For the bases on the closure list, environmental restoration costs are estimated to be about $725 million. The past experience has been that DOD's preliminary estimates tend to be conservative.

### HOW THE COBRA COST MODEL WORKS

The cost model consists of a set of formulas, or algorithms, that use standard factors and base-specific data in its calculations. Each DOD component had its own set of standard cost factors derived from readily available information.[1] For example, the Air Force used a cost factor of $42,986 as the average civilian salary of its personnel. This factor was derived from prior-year Air Force budgets. The Army, on the basis of engineering planning factors, used a cost factor of $102 per square foot as the construction cost for administrative buildings. The DOD components obtained base-specific data from each installation and from centralized data bases. This data, for instance, might specify that 100 civilian positions would be eliminated if certain activities at a base are eliminated.

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[1]Some cost factors are identical for each component because they are mandated by regulation or law.

With these standard cost factors and base-specific data, the cost model can be used to calculate the estimated costs and savings of closure and realignment actions for both closing and receiving installations. The model can also be used to compare various closure and realignment scenarios to determine the most cost-effective one. The model also estimates both the number of years until the return on investment (ROI) of these actions is achieved and the net present value (NPV) of each action over a 20-year period. The return-on-investment year occurs when the savings generated by a closure or realignment equals the costs incurred. The net present value is the current total value of a closure or realignment over the 20-year period given certain assumptions about future inflation and interest rates.

## FURTHER IMPROVEMENTS NEEDED TO THE COST MODEL

DOD has improved the cost model since it was first developed and used in 1988. However, it still does not include governmentwide cost implications, and the model's formulas have not been validated.

### Improvements to the Model

The 1993 version of the cost model is the product of a number of improvements incorporated into the model since the 1988 round of closures and realignments. For the first round, the model was a complex spreadsheet, and we found a number of errors in it. By 1991, DOD had converted the model into a formal computer language and had corrected a number of problems. However, we identified several additional weaknesses and limitations in the 1991 model.

Prior to the 1993 BRAC round, representatives from each of the services and OSD participated in working groups that incorporated improvements to the model that addressed many of the weaknesses and limitations we previously identified. These improvements are shown in table 4.1.

Table 4.1: Improvements to the COBRA Cost Model

| Weaknesses and limitations found in 1988 and 1991 | 1993 cost model features |
|---|---|
| Formulas: Users may alter algorithms. | Users cannot alter formulas. |
| Military construction: Actual known costs of military construction projects cannot be entered. | Military construction costs can be entered. |
| Data entry: Data entry format is limited and net result is inaccurate data. | Data entry format problems are eliminated. |
| Health care costs: Percentage of retirees liable for Medicare at each installation should be entered into model. | Percentage of retirees eligible for Medicare can be entered into the model for each installation analyzed. |
| Multibasing capability: Model needs an expanded capacity to include more losing and gaining facilities. | Model allows up to 15 bases to be included in the scenario as either gainers, losers, or both. |
| Family housing: Operational cost of family housing not fully considered. | Model includes estimates of family housing operation savings at losing bases and cost increases at gaining bases. |
| Force structure: Overhead savings due to force structure reductions should not be included in the model. | Overhead savings due to force structure reductions are excluded. |
| Homeowners Assistance Program: Methodology is not standardized for all DOD components. | Methodology has been standardized. |
| Land sales: Revenues from land sales are difficult to estimate. | Analyses rarely include land sales. |
| Documentation: Models have not been documented. | Model is documented in a users manual, algorithm manual, and programmers' manual. |

Governmentwide Cost Not Included

DOD did not act on our recommendation in the 1989 and 1991 reports that Medicare costs be included in the cost model. When hospitals close, some military retirees over age 65 who previously used these facilities will be required to use Medicare, increasing the cost of this program to the federal government. DOD, however, continued to exclude Medicare costs from the 1993 cost model. DOD believes only direct DOD costs should be included. The 1993 list of recommended closures and realignments includes a number of hospitals. The associated Medicare costs will increase the total cost of these actions to the federal government, but data was not readily available to estimate these costs.

In addition, and potentially significant in terms of the acceptability of closure and realignment recommendations, is the treatment of costs when DOD moves from space it is renting from the General Services Administration. DOD counts the reductions in rent as savings even when the buildings are federally owned facilities. In some cases, the moves require construction of new DOD facilities and the rental savings are used to offset and justify the construction costs. In actuality, this may not represent an overall savings to the government.

### Model Not Validated

In a June 1992 letter to the Assistant Secretary of Defense (Production and Logistics), we recommended that the cost model's algorithms and programming be independently validated. We noted that formulas for computing costs and savings are complex and have in past base closure and realignment efforts contained errors that have produced inaccurate estimates. DOD, however, has not independently validated the model.

## PROBLEMS EXPERIENCED IN USING THE COST MODEL RESULTED IN OVERSTATED SAVINGS

Generally, the military services accurately applied the cost model in developing the return on investment for their recommendations. However, this was not the case for DLA. DLA did not adjust overhead rates to reflect weaknesses in the model. Other DOD components were aware of this problem from prior use of the model and made adjustments accordingly. In recalculating DLA's estimates, we found that in most cases overall estimated savings decreased significantly.

### DLA Experienced Problems Using the Model

If shortcomings in the model are not compensated for, the model generates excessive savings when an installation's functions are moved to a base with a lower overhead rate. For example, DLA recommended that the functions of the Defense Logistics Service Center in Battle Creek, Michigan, be moved to the Defense Construction Supply Center in Columbus, Ohio. DLA calculated an

overhead savings of $30.2 million annually by moving from the Battle Creek facility, based on that installation's per person overhead rate of $71,243. In calculating the costs and savings for this move, DLA used the existing overhead rate at the Columbus facility. DLA calculated that existing overhead costs at Columbus would increase by just $2,250 per person after this move. The Columbus facility communications costs are only 30 percent of the Battle Creek facility cost. While the consolidation should produce some cost efficiencies in existing communications, much of the communications costs at Battle Creek will be transferred to Columbus along with the functions being realigned and should be reflected in the operations cost.

In addition to the above problem, DLA realized after its recommendations had been submitted to the Commission, that it had entered erroneous information on the communications costs into the model for each base it analyzed. DLA is planning to submit revised calculations to the Defense Base Closure and Realignment Commission.

Another problem in DLA's methodology as it related to overhead costs was its use of some Army standard cost factors, including a factor that is critical to calculating overhead costs and savings. The factor is based on the relationship of assigned personnel and existing square footage to overhead costs. DLA used the Army cost factors because it lacked previous experience in the base closure and realignment process and deferred to the Army's experience. DLA, however, has primarily industrial- or commercial-type facilities that are not comparable to Army installations. Using this overhead cost factor in the model may have overstated the cost-effectiveness of recommended closures and realignments.

Revised Estimates Show Reduced Savings

When overhead costs and savings of DLA's recommended closures and realignments are recalculated to correct the previously discussed problems, the overall savings estimates decrease significantly.

To obtain a more accurate estimate of overhead costs and savings, we adjusted the overhead calculation when it appeared that (1) the savings estimate for an action was significantly overstated due to the model's overhead computation methodology and (2) costs we believe will continue at the receiving installation were claimed as savings. In place of the Army standard cost factor used by DLA, we used a more conservative cost factor--one that was similar to that used by the Navy, which is more in line with DLA-type installations. When appropriate, we adjusted the communications cost of the realigning function to the new installation and revised other overhead costs at realigning installations to reflect the possible impact of functions they are to receive. Our numbers are based on DOD figures and do not reflect the impact of non-DOD costs.

Table 4.2 shows the impact of these overhead adjustments on the overall savings and the net present value of these actions over 20 years. Although reduced, DLA's proposed closures and realignments should result in savings. As previously noted these estimates do not include governmentwide cost implications.

Table 4.2: Impact of GAO Adjustments on Savings Calculations

| Base | DLA estimate | GAO estimate |
|---|---|---|
| Defense Logistics Service Center/Defense Reutilization Marketing Center | $403,423,000 | $246,176,000 |
| Defense Electronic Supply Center | 190,736,000 | 89,211,000 |
| Defense Personnel Support Center and Defense Industrial Supply Center[a] | 474,793,000 | 139,919,000 |
| Defense Clothing Factory | 171,850,000 | 171,944,000 |
| Defense Contract Management District West | 33,160,000 | 18,199,000 |
| Defense Distribution Depots, Oakland, Pensacola, Letterkenney, Charleston, Toelle | 111,304,000 | 110,846,000 |
| Defense Contract Management District Northcentral/ Midatlantic | 185,024,000 | 165,112,000 |

[a]These two bases are considered as a package because of the interrelated nature of their moves.

## Problems Noted in the Components' Use of the Model

We have two other concerns about the cost and savings estimates generated by the DOD components. First, the components used cost factors in some cases that led to significantly different calculations of the specific costs and savings associated with closure and realignment actions. Second, the components decided unilaterally that they did not need to calculate some costs and savings because they believed the costs and savings would not occur or would be insignificant.

## Different Cost Factors Were Used

The DOD components used different cost factors to calculate (1) the percentage of civilian salary to be paid to employees who are subject to a reduction in force, and (2) the cost increases due to the administrative support of base closure and realignment actions. We do not believe the use of different cost factors was justified. While it appears the use of these different cost factors is not significant enough to alter a closure decision, their use affects the accuracy of cost and savings estimates.

When a base is closed, DOD compensates the civilians who lose their jobs in a reduction in force. The compensation is a percentage of their salary based on their age and their years of service. The older the employee and the longer the time in service, the higher the percentage. In calculating cost and savings estimates, the Army and the Navy used a much lower percentage than that used by the Air Force and DLA. The Army and the Navy assumed they will pay 11.2 percent and 15 percent, respectively. The Air Force assumed it would pay 31 percent, and DLA assumed it would pay 42.69 percent.

The Army and the Navy based their figures on previous reductions in force. An Air Force official, however, told us that historical experience was not a sound guideline. The official stated that when future closures occur, there will be limits on the ability of DOD personnel to transfer to other positions within DOD or other federal agencies. As a result, the Air Force estimates that a significantly larger number of individuals with more time in federal service would be subject to reductions in force, which increase compensation costs. In addition, all services assumed that 30 percent of individuals affected by these reductions would find other positions in DOD or with other federal agencies under the Priority Placement program and could not be subject to reductions in force. This does not seem to be a reasonable assumption.

The Army deviated from the other DOD components in calculating the administrative costs to support closure and realignment actions. The standard factor for this cost used by all DOD components, except the Army, was 10 percent. The Army decided that this factor overstated the administrative support costs for these moves, particularly when a small percentage of individuals is realigned from a large base. The Army subsequently changed this cost factor to .1 percent. Although there was no analytical basis for the 10-percent factor, the Army's use of the low factor may understate these costs.

## Certain Costs and Savings Were Excluded

The services decided that certain costs would not occur. The Army, the Navy, and the Air Force did not think that hiring new personnel

resulting from realignments would generate any costs. Also, the Army did not include factors for costs and savings for military health care at closing or realigning bases.

The Army, the Air Force, and the Navy assumed that if the base receiving additional personnel must hire new employees to meet personnel requirements, this would not result in added costs to DOD. In 1991, the Army used a standard factor for new hire costs of $5,000 per new employee. While this cost is difficult to calculate, hiring new employees generates a cost. The Defense Logistic Agency used a standard factor of $1,056 in its costs estimates for each new employee hired.

The Army did not calculate the costs or savings of realignment and closure actions for the military health insurance program; however, the other services did. Army officials stated that closing bases such as Fort McClellan would have increased costs for military health insurance because retirees who had used its medical facility would be required to use the military health insurance program. These officials also stated that offsetting this cost at the closing installation are medical program cost savings at receiving bases that increase their capacity to care for retirees. The Army said these costs and savings would be roughly equal and did analyze them further. In contrast, the Navy and the Air Force calculated these costs and, since these services transferred medical personnel to areas that had higher military health insurance costs than were incurred at the closing facility, they claimed savings.

## REVISED SAVINGS ESTIMATES ARE LESS, BUT STILL SUBSTANTIAL

Taking into consideration the problems previously discussed, we developed revised cost and savings estimates for all base realignments and closures having major cost and savings implications. Table 4.3 shows DOD's estimates on a service basis and our revised estimates. We calculated the net present value and the return on investment over a 20-year period, the one-time costs incurred, for major base closure and realignment recommendations. (See app. IV for estimates for each major base.) As we noted earlier, this estimate is for DOD savings only and does not reflect governmentwide cost implications.

Table 4.3: Recalculation of Components' Savings for Major Closure Recommendations

| Service | DOD estimate | GAO estimate |
|---|---|---|
| Army NPV | $996,393,000 | $967,751,000 |
| Air Force NPV | 2,043,602,000 | 1,854,401,000 |
| Navy NPV | 8,214,044,000 | 8,122,440,000 |
| DLA NPV | 1,570,290,000 | 941,407,000 |
| Total NPV | $12,824,329,000 | $11,885,999,000 |

Note: To estimate the one-time costs of these actions, we assumed that all civilian employees would receive 50 percent of their salary if subject to a reduction in force, that none of these employees would find positions in DOD or other federal agencies, and that any civilian hired due to a realignment would cost $1,056.

## CERTAIN SAVINGS ESTIMATES ARE VERY SENSITIVE TO CHANGES IN CONSTRUCTION PROJECTIONS

We also tested the sensitivity of closure and realignment costs and savings to increases in military construction by reviewing the effect on estimates if construction costs were increased 100 percent. We found that while most estimates were not sensitive to this increase, a few were. Table 4.4 lists the closure and realignment estimates that were sensitive to the cost increase.

Table 4.4: Estimates That Are Sensitive to Military Construction Costs

| Service/base | DOD estimate | Estimate with 100-percent increase in construction |
|---|---|---|
| Air Force/McGuire | | |
| NPV | $255,132,000 | $105,776,000 |
| One-time cost | 197,477,000 | 361,837,000 |
| ROI (years) | 4 | 10 |
| Navy/NAS[a] Cecil Field | | |
| NPV | 200,926,000 | 24,688,000 |
| One-time cost | 312,338,000 | 516,262,000 |
| ROI (years) | 6 | 14 |
| Navy/NTC[b] Orlando/San Diego | | |
| NPV | 323,910,000 | 90,447,000 |
| One-time cost | 327,928,000 | 589,383,000 |
| ROI (years) | 2 | 9 |
| Navy/consolidation of naval aviation functions at NAWC[c] Patuxent | | |
| NPV | 169,365,000 | 68,316,000 |
| One-time cost | 197,990,000 | 314,732,000 |
| ROI (years) | 3 | 8 |

[a]Naval Air Station.

[b]Naval Training Center.

[c]Naval Air Warfare Center.

In addition, we noted military construction costs associated with the recommendations are a substantial portion of the one-time cost of the recommendations. The Navy will require an estimated $2 billion in military construction costs to accomplish its recommendations.

## ENVIRONMENTAL CLEANUP COSTS ARE NOT CONSIDERED IN MAKING CLOSURE DECISIONS, BUT ARE SUBSTANTIAL

The costs of environmental restoration were not, with one exception, a factor in the DOD base closure decision-making process, and we concur that they should not be. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (P.L. 96-510) and the Superfund Amendments and Reauthorization Act of 1986 (P.L. 99-499) require the Department to restore contaminated sites on military bases, whether the bases are closing or not. Environmental cleanup costs, however, are likely to have a significant budgetary impact since pressure for rapid conversion and reutilization of closed bases will not allow these costs to be spread over many years.

### Estimated Cleanup Costs

The services' estimated cleanup costs for 32 bases affected by the 1988 and 1991 closure actions exceed $2 billion, and their preliminary estimates for the bases recommended for closure in the current round are about $725 million.

Service officials indicated that the 1993 BRAC estimates are preliminary because detailed environmental surveys have not been done. Past preliminary estimates have proven to be very low. For instance, when Pease Air Force Base was recommended for closure in 1988, the Air Force's initial estimated cleanup cost was $11 million. The estimated restoration cost increased to $63.6 million in fiscal year 1992 and $102.1 million in fiscal year 1993. Most recently, the estimate had reached $114 million.

It is too early to assess what impact environmental cleanup will have on the timely disposal of properties since most bases are not expected to close until the last quarter of fiscal year 1993 or later. As of December 31, 1992, DOD had sold $15.5 million worth of base closure property.

## CONCLUSIONS

Despite problems we noted concerning the accuracy of certain cost factors, DOD's 1993 recommendations for base closures and realignments should yield a substantial savings to the Department of Defense. However, DOD did not consider the governmentwide costs and savings associated with its recommendations. Although we did not have sufficient time to estimate the costs and savings, they involve such areas as the impact of hospital closures on Medicare costs and the loss of rental fees paid to the General Services Administration. Consequently, the ultimate governmentwide budgetary impact of the recommendations is not known.

The cost model used to generate the costs and savings of closure and realignments actions, while an effective instrument for generating the cost and savings of most actions, is not as effective when calculating the costs and savings of certain realignment actions. The impact of these limitations most significantly impacted DLA's cost and savings estimates.

Additionally, certain of the major recommended closure and realignment cost and savings estimates are very sensitive to changes in military construction cost estimates.

RECOMMENDATIONS

To improve DOD's cost and savings estimates, we recommend that the Secretary of Defense direct the following actions be taken:

-- Identify the governmentwide implications of the 1995 base closures and realignment recommendations.

-- Form working groups similar to those that previously addressed the limitations of the cost model and address problems experienced during the 1993 round. At a minimum, the group should focus on those problems that affect estimating overhead costs for realigning activities.

We also recommend that the Base Closure and Realignment Commission have (1) DOD identify those closures and realignments that have cost and savings implications that affect other federal agencies and (2) closely examine those recommendations that could be affected by the weaknesses in the cost model and that are sensitive to changes in military construction costs.

## OFFICE OF THE SECRETARY OF DEFENSE BASE REALIGNMENT AND CLOSURE DEFINITIONS

The following definitions were provided by OSD to the Department of Defense components for use in the base closure and realignment process. Following the definitions is a list of major closures which we identified as not consistent with the "close" definition.

### CLOSE

All missions of the base will cease or be relocated. All personnel (military, civilian and contractor) will either be eliminated or relocated. The entire base will be excessed and the property disposed.

Note: A caretaker workforce is possible to bridge between base closure (missions ceasing or relocating) and property disposal, which are separate actions under Public Law 101-510.

### CLOSE, EXCEPT

The vast majority of the missions will cease or be relocated. Over 95 percent of the military, civilian, and contractor personnel will either be eliminated or relocated. All but a small portion of the base will be excessed and the property disposed. The small portion retained will often be facilities in an enclave for use by the reserve component. Generally, active component management of the base will cease. Outlying, unmanned ranges or training areas retained for reserve component use do not count against the "small portion retained." Again, closure (missions ceasing or relocating) and property disposal are separate actions under Public Law 101-510.

### REALIGN

Some missions of the base will cease or be relocated, but others will remain. The active component will still be most of the remaining portion of the base. Only a portion of the base will be excessed and the property disposed, with realignment (mission ceasing or relocation) and property disposal being separate actions under Public Law 101-510. In cases where the base is both gaining and losing missions, the base is being realigned if it will experience a net reduction of DOD civilian personnel. In such situations, it is possible that no property will be excessed.

RELOCATE

The term used to describe the movement of missions, units, or activities from a closing or realignment base to another base. Units do not realign from a closing or a realigning base to another base, they relocate.

RECEIVING BASE

A base which receives missions, units, or activities relocating from a closing or realigning base. In cases where the base is both gaining and losing missions, the base is a receiving base if it will experience a net increase of DOD civilian personnel.

MOTHBALL, LAYAWAY

Terms used when retention of facilities and real estate at a closing or realigning base are necessary to meet the mobilization or contingency needs of DOD. Bases or portions of bases "mothballed" will not be excessed and disposed. It is possible they could be leased for interim economic uses.

INACTIVATE, DISESTABLISH

Terms used to describe planned actions which directly affect missions, units, or activities. Fighter wings are inactivated, bases are closed.

MAJOR BASES IDENTIFIED AS "CLOSURES"
THAT ARE NOT CONSISTENT WITH OSD'S DEFINITION

Army

Fort George B. McClellan, Alabama

Close Fort McClellan. . . . Retain an enclave for the U.S. Army Reserves. Retain the capability for live-agent training at Fort McClellan.

Navy

Mare Island Naval Shipyard, Vallejo, California

Close the Mare Island Naval Shipyard (NSY). . . . Family housing located at Mare Island NSY will be retained as necessary to support Naval Weapons Station Concord.

Naval Air Station Alameda, California

Close Naval Air Station (NAS), Alameda, California . . . . Ship Intermediate Maintenance Department disestablishes.

Naval Training Center, Orlando, Florida

Close the Naval Training Center (NTC), Orlando . . . . Naval Education and Training Program Management Support Activity disestablishes.

Naval Aviation Depot, Pensacola, Florida

Close Naval Aviation Depot Pensacola (NADEP) . . . . The dynamic components and rotor blade repair will remain in place.

Naval Air Station Barbers Points, Hawaii

Close the Naval Air Station (NAS) Barbers Point . . . . Retain the family housing as needed for multi-service use.

Naval Air Station, Glenview, Illinois

Close the Naval Air Station (NAS), Glenview . . . . Family housing located at NAS Glenview will be retained to meet existing and new requirements of the nearby Naval Training Center (NTC), Great Lakes.

Naval Electronics Centers

Close Naval Electronics Systems Engineering Center (NESEC) St. Inigoes, Maryland . . . . The ATC/ACLS facility at St. Inigoes and the Aegis Radio Room Laboratory will remain in place and will be transferred to Naval Air Systems Command.

Naval Station, Staten Island, New York

Close Naval Station Staten Island . . . . Recruiting District, New York, disestablishes; Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP), Brooklyn Detachment disestablishes.

Naval Station Charleston, South Carolina

Close Naval Station (NS), Charleston . . . . Family housing located within the Charleston Navy complex will be retained as necessary to support the nearby Naval Weapons Station Charleston.

## Air Force

### Homestead Air Force Base, Florida

Close Homestead Air Force Base (AFB), Florida . . . . All essential cleanup and restoration activities associated with Hurricane Andrew will continue until completed. If Homestead AFB resumes operations as a civilian airport, the NORAD alert facility may be rebuilt in a cantonment area.

### Newark Air Force Base, Ohio

Close Newark AFB, Ohio . . . . some workload will move to other depot maintenance activities including the private sector. We anticipate that most will be privatized in place.

### O'Hare International Airport, Air Force Reserve Station, Illinois

Close O'Hare Air Reserve Station (ARS) . . . . The City desires to acquire the property for aviation-related commercial use. . . Close O'Hare ARS as proposed by the City of Chicago. . . . If these conditions are not met, the units should remain at O'Hare International Airport.

## BASES AFFECTED BY DOD's MARCH 1993 BASE CLOSURE AND REALIGNMENT RECOMMENDATIONS

This appendix shows, by military service and DOD agency, the bases and activities that would be affected by the Secretary of Defense's recommendations. Table II.1 shows the major bases that were recommended for closure, table II.2 shows the major bases that are affected by realignment recommendations, and table II.3 lists the smaller bases and activities that would be affected by closures and realignments.

Table II.1: Major Bases Recommended for Closure

| Service/agency | Base/installation |
|---|---|
| Army[a] | Ft. McClellan, Anniston, Alabama |
| | Vint Hill Farms, Warrenton, Virginia |
| Navy | Naval Station Mobil, Alabama |
| | Mare Island Naval Shipyard, Vallejo, California |
| | Marine Corps Air Station El Toro, Iroine California |
| | Naval Air Station Alameda, California |
| | Naval Aviation Depot Alameda, California |
| | Naval Hospital Oakland, California |
| | Naval Station Treasure Island, San Francisco, California |
| | Naval Supply Center Oakland, California |
| | Naval Training Center San Diego, California |
| | Naval Air Station Cecil Field, Florida |
| | Naval Aviation Depot Pensacola, Florida |
| | Naval Training Center Orlando, Florida |

| | |
|---|---|
| | Naval Air Station Barbers Point, Hawaii |
| | Naval Air Station Glenview, Illinois |
| | Naval Electronic Systems Engineering Center, St. Inigoes, Maryland |
| | Naval Air Station Meridian, Mississippi |
| | Naval Air Station South Weymouth, Massachusetts |
| | Naval Station Staten Island, New York |
| | Aviation Supply Office, Philadelphia, Pennsylvania |
| | Charleston Naval Shipyard, South Carolina |
| | Naval Station Charleston, South Carolina |
| | Naval Air Station Dallas, Texas |
| | Naval Aviation Depot Norfolk, Virginia |
| Air Force | Homestead Air Force Base, Florida |
| | K.I. Sawyer Air Force Base, Gwinn, Michigan |
| | Newark Air Force Base, Heath ,Ohio |
| | O'Hare Airport Air Force Reserve Station, Chicago, Illinois |
| Defense Logistics Agency | Defense Electronics Supply Center, Dayton, Ohio |
| | Defense Personnel Support Center, Philadelphia, Pennsylvania |

[a]The Army base closure and recommendations listed are only those included in the Secretary of Defense's report.

Table II.2: Major Bases Recommended for Realignment

| Service | Base/installation |
|---|---|
| Army | Ft. Monmouth, New Jersey |
| | Letterkenny Army Depot, Pennsylvania |
| | Tooele Army Depot, Utah |
| | Ft. Belvoir, Alexandria, Virginia |
| Navy | Naval Submarine Base, New London, Connecticut |
| | Naval Surface Warfare Center (Dahlgren) White Oak Detachment, White Oak, Maryland |
| | 1st Marine Corps District, Garden City, New York |
| | Naval Education and Training Center, Newport, Rhode Island |
| | Naval Air Station Memphis, Tennessee |
| Air Force | March Air Force Base, California |
| | McGuire Air Force Base, New Jersey |
| | Griffiss Air Force Base, New York |

Table II.3: Smaller Bases and Activities Recommended for Closure and Realignment

| Service/agency | Base/activity |
|---|---|
| Navy | Naval Civil Engineering Laboratory, Port Hueneme, California |
| | Naval Facilities Engineering Command, Western Engineering Field Division, San Bruno, California |
| | Planning, Estimating, Repair and Alternations (Surface) Pacific, San Francisco, California |
| | Public Works Center San Francisco, California |
| | Naval Electronic Security Systems Engineering Center, Washington, D.C. |
| | Naval Hospital Orlando, Florida |
| | Naval Supply Center Pensacola, Florida |
| | Naval Surface Warfare Center-Carderock, Annapolis Detachment, Annapolis, Maryland |
| | Navy Radio Transmission Facility, Annapolis, Maryland |
| | Sea Automated Data Systems Activity, Indian Head, Maryland |
| | Naval Air Facility Detroit, Michigan |
| | Naval Air Facility, Midway Island |
| | Submarine Maintenance, Engineering, Planning and Procurement, Portsmouth, New Hampshire |
| | Naval Air Warfare Center-Aircraft Division, Trenton, New Jersey |
| | DOD Family Housing Office, Niagara Falls, New York |

| | |
|---|---|
| | Naval Air Technical Services Facility, Philadelphia, Pennsylvania |
| | Planning, Estimating, Repair and Alternations (Surface) Atlantic (HQ), Philadelphia, Pennsylvania |
| | Naval Electronic Systems Engineering Center, Charleston, South Carolina |
| | Naval Hospital Charleston, South Carolina |
| | Naval Supply Center Charleston, South Carolina |
| | Naval Surface Warfare Center-Port Hueneme, Virginia Beach Detachment, Virginia Beach, Virginia |
| | Navy Radio Transmission Facility, Driver, Virginia |
| | Naval Undersea Warfare Center, Norfolk Detachment, Norfolk, Virginia |
| | Planning, Estimating, Repair and Alternations (Surface) Atlantic, Norfolk, Virginia |
| | Planning, Estimating, Repair and Alternations, Bremerton, Washington |
| Navy National Capital Region activities | Security Group Command, Security Group Station, and Security Group Detachment, Potomac, Washington, D.C. |
| | Bureau of Navy Personnel, Arlington, Virginia (including the Office of Military Manpower Management, Arlington, Virginia) |
| | Naval Air Systems Command, Arlington, Virginia |
| | Naval Facilities Engineering Command, Alexandria, Virginia |
| | Naval Sea Systems Command, Arlington, Virginia |

| | |
|---|---|
| | Naval Supply Systems Command, Arlington, Virginia (including Defense Printing Office, Alexandria, Virginia, and Food Systems Office, Arlington Virginia |
| | Naval Recruiting Command, Arlington, Virginia |
| | Tactical Support Office, Arlington, Virginia |
| Navy/Marine Reserve activities | |
| Naval Reserve activities | Gadsden, Alabama |
| | Montgomery, Alabama |
| | Fayetteville, Arkansas |
| | Fort Smith, Arkansas |
| | Pacific Grove, California |
| | Macon, Georgia |
| | Terre Haute, Indiana |
| | Hutchinson, Kansas |
| | Monroe, Louisiana |
| | New Bedford, Massachusetts |
| | Pittsfield, Massachusetts |
| | Joplin, Missouri |
| | St. Joseph, Missouri |
| | Great Falls, Montana |
| | Missoula, Montana |
| | Atlantic City, New Jersey |
| | Perth Amboy, New Jersey |
| | Jamestown, New York |
| | Poughkeepsie, New York |

| | |
|---|---|
| | Altoona, Pennsylvania |
| | Kingsport, Tennessee |
| | Memphis, Tennessee |
| | Ogden, Utah |
| | Staunton, Virginia |
| | Parkersburg, West Virginia |
| Naval Reserve facilities | Alexandria, Louisiana |
| | Midland, Texas |
| Navy/Marine Corps Reserve Centers | Fort Wayne, Indiana |
| | Billings, Montana |
| | Abilene, Texas |
| Readiness Command regions | Olathe, Kansas (Region 18) |
| | Scotia, New York (Region 2) |
| | Ravenna, Ohio (Region 5) |
| Defense Logistics Agency | Defense Distribution Depot Oakland, California |
| | Defense Distribution Depot Pensacola, Florida |
| | Defense Contract Management District Northcentral, Chicago, Illinois |
| | Defense Logistics Service Center, Battle Creek, Michigan |
| | Defense Contract Management District Midatlantic, Philadelphia, Pennsylvania |
| | Defense Distribution Depot Letterkenny, Pennsylvania |
| | Defense Logistics Agency Clothing Factory, Philadelphia, Pennsylvania |

| | |
|---|---|
| | Defense Distribution Depot Charleston, South Carolina |
| | Defense Distribution Depot Tooele, Utah |
| | Defense Contract Management District West, El Segundo, California |
| | Defense Reutilization and Marketing Service, Battle Creek, Michigan |
| | Defense Industrial Supply Center, Pennsylvania |
| DOD data processing centers | |
| Navy | Facilities Systems Office, Port Hueneme, California |
| | Fleet Industrial Support Center, San Diego, California |
| | Naval Air Warfare Center, Weapons Division, China Lake, California |
| | Naval Air Warfare Center, Weapons Division, Point Mugu, California |
| | Naval Command Control and Ocean Surveillance Center, San Diego, California |
| | Navy Regional Data Automation Center, San Francisco, California |
| | Naval Computer and Telecommunications Station, San Diego, California |
| | Bureau of Naval Personnel, Washington, D.C. |
| | Naval Computer and Telecommunications Station, Washington, D.C. |
| | Naval Air Station, Key West, Florida |
| | Naval Air Station, Mayport, Florida |
| | Naval Computer and Telecommunications Station, Washington, D.C. |

| | |
|---|---|
| | Trident Refit Facility, Kings Bay, Georgia |
| | Naval Computer and Telecommunications Area Master Station, Pearl Harbor, Hawaii |
| | Naval Supply Center, Pearl Harbor, Hawaii |
| | Enlisted Personnel Management Center, New Orleans, Louisiana |
| | Naval Computer and Telecommunications Station, New Orleans, Louisiana |
| | Naval Air Station, Brunswick, Maine |
| | Naval Air Warfare Center, Aircraft Division, Patuxent River, Maryland |
| | Aviation Supply Office, Philadelphia, Pennsylvania |
| | Naval Supply Center, Charleston, South Carolina |
| | Naval Air Station, Oceana, Virginia |
| | Naval Computer and Telecommunications Area Master Station, Atlantic, Norfolk, Virginia |
| | Navy Data Automation Facility, Corpus Christi, Texas |
| | Navy Recruiting Command, Arlington, Virginia |
| | Naval Supply Center, Norfolk, Virginia |
| | Naval Air Station, Whidbey Island, Washington |
| | Naval Supply Center, Puget Sound, Washington |
| | Trident Refit Facility, Bangor, Washington |

| | |
|---|---|
| Marine Corps | Marine Corps Air Station, El Toro, California |
| | Regional Automated Services Center, Camp Pendleton, California |
| | Marine Corps Air Station, Cherry Point, North Carolina |
| | Regional Automated Services Center, Camp Lejeune, North Carolina |
| Air Force | Regional Processing Center, McClellan Air Force Base, California |
| | Air Force Military Personnel Center, Randolph Air Force Base, Texas |
| | Computer Service Center, San Antonio, Texas |
| | 7th Communications Group, Pentagon, Arlington, Virginia |
| Defense Logistics Agency | Information Processing Center, Battle Creek, Michigan |
| | Information Processing Center, Philadelphia, Pennsylvania |
| | Information Processing Center, Ogden, Utah |
| | Information Processing Center, Richmond, Virginia |
| Defense Information Systems Agency | Defense Information Technology Service Organization, Indianapolis Information Processing Center, Indiana |
| | Defense Information Technology Service Organization, Kansas City Information Processing Center, Kansas |
| | Defense Information Technology Service Organization, Columbus Annex (Dayton), Ohio |

## SUMMARY OF SELECTION PROCESSES USED BY DOD COMPONENTS

This appendix summarizes the processes used by the Army, the Navy, the Air Force, the Defense Logistics Agency (DLA), the Defense Information Systems Agency (DISA), and the Defense Finance and Accounting Service (DFAS) to evaluate and select bases for closure or realignment. Each DOD component developed its own selection process, so terms and definitions are not always consistent.

### ARMY

The Army followed a two-phase process to select bases for closure and realignment. In the first phase, the Army identified its U.S. installations, categorized them by function, and evaluated their military value. In the second phase, the Army used the base force structure, along with the military value assessments and other information, to identify candidates for closure or realignment and then performed a more detailed analysis of the candidates. The Army followed basically the same process in making its 1991 base closure and realignments proposals.

The Army's process was directed by the Total Army Basing Study (TABS) Group, which the Army established on August 1, 1992. The TABS Group was responsible for developing, evaluating, and documenting base closure and realignment alternatives and recommending alternatives to the Secretary of the Army.

#### Determining Military Value

The Army identified 95 installations, which included all installations meeting the criteria for consideration by BRAC within the United States, and grouped them into 11 major installation categories related to Army functions such as training. Each category was assigned to an Army major component, which would be responsible for evaluating the bases' military value. Table III.1 shows the five Army functions and related installation categories and the evaluating components.

Table III.1: Army Installation Categories and Evaluating Components

| Installation category | Number | Evaluating component |
|---|---|---|
| Fighting | | Army Forces Command |
| Maneuver | 11 | |
| Major training area | 10 | |
| Subtotal | 21 | |
| Training | | Army Training and Doctrine Command |
| Initial entry/branch schools | 13 | |
| Professional schools | 5 | |
| Subtotal | 18 | |
| Industrial | | Army Materiel Command |
| Depots | 11 | |
| Commodity-oriented | 12 | |
| Proving grounds | 4 | |
| Production | 13 | |
| Ports | 3 | |
| Subtotal | 43 | |
| Medical centers | 2 | Army Health Services Command |
| Command and control | 11 | TABS Group |

To assess the military value of the installations and rank them within their category, the Army developed the following five broad measures--termed "measures of merit":

-- Mission essentiality: The ability of an installation to generate, project, and sustain combat power in support of national military goals.

-- Mission suitability: The ability of an installation to support the operational requirements of its assigned units.

-- Operational efficiencies: The cost of operating and maintaining the installation.

-- Expandability: The ability of an installation to increase current mission activities and accept other functions at the same location.

-- Quality of life: The ability of an installation to support soldiers and their families.

The relationship between the Army's measures of merit and DOD's criteria for military value is shown in table III.2.

Table III.2: DOD Military Value Criteria and the Army's Corresponding Measures of Merit

| DOD criteria for military value | Army measures of merit |
|---|---|
| 1. The current and future mission requirements and the impact on operational readiness of DOD's total force. | Mission essentiality<br>Mission suitability |
| 2. The availability and condition of land, facilities, and associated airspace at both the existing and potential receiving locations. | Mission suitability<br>Expandability<br>Quality of life |
| 3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations. | Mission suitability |
| 4. The cost and manpower implications. | Operational efficiencies<br>Expandability<br>Quality of life |

The measures of merit were weighted numerically to reflect their relative importance, with the weights varying for each category. However, the mission essentiality and mission suitability measures received the strongest emphasis for all categories. Specific installation attributes were established for each measure of merit to enable comparison among installations and help provide an overall assessment of an installations's military value. The attributes, like the measures of merit, were weighted.

The Army component responsible for evaluating each installation category gathered the necessary data and assessed the military value of the individual installations. The components followed guidance issued by the TABS Group that defined the attributes, described their purpose, identified the methodology for measuring the attributes, identified the reference or source where data should be obtained, determined the unit of measure, and provided criteria for scoring the weighted values of the attributes among competing installations.

The components calculated military value using a decision support software package called Decision Pad (D-Pad). D-Pad allows the decision maker to evaluate a set of alternatives or courses of action (in this case, the installations) by weighing a given set of criteria (attributes). The output of D-Pad was a rating, ranked from best to worst relative to the criteria, for each installation. Army officials stressed that this quantitative assessment provided the starting point in the evaluation of the Army's base structure; it did not produce recommendations for closing or realigning bases.

Identifying and Assessing Alternatives

In the second phase of the Army's selection process, the TABS Group developed a list of study candidates for possible closure or realignment. The basis for selecting these candidates included the force structure plan for fiscal years 1993 to 1999 developed under President Bush. This was used to identify excess capacity. In addition, because the need for all installations do not lend themselves to a direct correlation with the force structure, the following information was also used:

-- The military value assessments produced in the first phase;

-- The Army's fiscal year 1993 basing strategy, which discusses (1) the Army's force structure; (2) opportunities to eliminate, collocate, or consolidate branch, school, center, and industrial base functions; and (3) the closure of small, single-purpose installations where feasible.

-- The major commands' vision statements of how they saw themselves organizing and operating in the future. These vision statements were prepared specifically for the Army's base closure and realignment process and were approved by the Secretary of the Army and the Army Chief of Staff.

After considering the TABS Groups recommendations, the Under Secretary of the Army and the Army Vice Chief of Staff made the final decisions on which installations would be candidates for

further study. Of the 95 installations within the United States, 35 were approved as candidates. These are listed in table III.3 by installation category. No ports or production facilities were selected for further study.

Table III.3: Candidates for Closure or Realignment

| Installation category | Base |
|---|---|
| Fighting | |
| Maneuver | Ft. Drum, New York |
| | Schofield Barracks, Hawaii |
| | Ft. Richardson, Arkansas |
| | Ft. Wainwright, Arkansas |
| Major training area | Ft. McCoy, Wisconsin |
| | Ft. Chaffee, Arkansas |
| | Ft. A.P. Hill, Virginia |
| | Ft. Dix, New Jersey |
| | Ft. Pickett, Virginia |
| | Ft. Indiantown Gap, Pennsylvania |
| Training | |
| Initial entry/branch schools | Ft. McClellan, Alabama |
| | Ft. Eustis/Ft. Story, Virginia |
| | Ft. Lee, Virginia |
| Professional schools | Presidio of Monterey, California |
| Industrial | |
| Depots | Tobyhanna, Pennsylvania |
| | Anniston, Alabama |
| | Red River, Texas |
| | Tooele, Utah |
| | Letterkenny, Pennsylvania |
| | Seneca, New York |

| | |
|---|---|
| | Sierra, California |
| | Savannah, Illinois |
| Commodity-oriented | Rock Island, Illinois |
| | Ft. Monmouth, New Jersey |
| | Vint Hill Farms, Virginia |
| | St. Louis Federal Center, Missouri |
| Proving grounds | Dugway, Utah |
| Medical centers | Fitzsimons, Colorado |
| Command and control | Ft. Belvoir, Virginia |
| | Ft. McPherson, Georgia |
| | Ft. Monroe, Virginia |
| | Ft. Gillem, Georgia |
| | Ft. Buchanan, Pennsylvania |
| | Ft. Hamilton, New York |
| | Ft. Totten, New York |

Once the candidates were approved, the TABS Group assessed the return on investment (payback period in terms of years), the feasibility that the proposed actions could be completed within prescribed time frames, and the economic and environmental impacts. The group performed these assessments using (1) the COBRA cost model, (2) internal feasibility studies, (3) the Office of Economic Adjustment's economic impact model, and (4) environmental impact statements prepared by the Office of the Chief of Engineers. The TABS group provided its final list of candidates for closure and realignment to the Secretary of the Army.

NAVY

The Department of the Navy selected bases for closure and realignment using a four-step process. First, the Department of the Navy identified its U.S. installations, grouped the installations into categories and subcategories, and developed a comprehensive data base. Second, the Department of the Navy analyzed the total capacity of each subcategory and assessed the relative military value of similar bases. Third, the Department of

the Navy developed closure scenarios for reducing excess capacity in each subcategory while accommodating future force requirements. Finally, after developing options, the Department of the Navy estimated the costs and savings of the potential closure and realignment actions and analyzed their economic, community, and environmental impacts. With this information, the Department of the Navy finalized its list of recommended closures and realignments.

The Secretary of the Navy established the Base Structure Evaluation Committee to direct the selection process and recommend installations for possible closure and realignment. The Evaluation Committee consisted of six flag/general level officers, of which three were from the Navy and three were from the Marine Corps, and was chaired by a senior civilian. A team of technical experts and analysts was also formed to provide assistance.

Categorizing Installations and Developing a Data Base

The Department of the Navy identified a total of 1,027 installations within the United States without regard to whether they had fewer than 300 civilian personnel. To facilitate its analysis of these bases, the Evaluation Committee divided them into three major categories and 30 subcategories, as follows:

-- Military Personnel Support: Administrative Activities, National Capital Region Activities, Recruit Training Centers, Marine Corps Recruit Depots, Training/Education Activities, Reserve Centers, Medical/Dental Activities.

-- Weapon System and Material Support: Technical Centers; Inventory Control Points; Weapon Stations; Naval Aviation Depots; Shipyards/Ship Repair Facilities; Supervisors of Shipbuilding, Conversion and Repair; Marine Corps Logistics Bases; Public Works Centers; Reserve Maintenance Facilities; Industrial Reserve Plants.

-- Shore Support of Operating Forces: Operational Air Stations, Reserve Air Stations, Training Air Stations, Naval Bases, Marine Corps Bases, Supply Centers, Construction Battalion Centers, Naval Facilities, Naval Satellite Operations Centers, Security Activities, Surveillance Activities, Telecommunications Activities, Miscellaneous Other Support Activities.

The Department of the Navy developed a data base of information--the Base Structure Data Base--for use in its analysis. Some of the information in the data base came from existing Department of the Navy data bases, but most of it was gathered through a series of

questions or requests for specific data sent to the installations. In accordance with the Department for the Navy's implementation of the certification requirements in the law, the responses to the data calls were certified as accurate and complete by the originator (the installation) and by each level of the chain of command up to the Evaluation Committee.

Assessing Capacity

Using the information in the Base Structure Data Base, the Department of the Navy analyzed the capacity of installations. Capacity measures varied by installation type. For example, the capacity of a naval air station was the maximum number of aircraft squadrons that could be accommodated by existing facilities; the capacity of a naval station was based on its ability to perform intermediate-level maintenance and the amount of berthing space it had, etc.

The Department of the Navy compared this capacity data against the requirements anticipated under the Bush Base force fiscal year 1999 force structure plan to determine the amount of projected excess capacity. Certain subcategories, such as medical/dental activities were found to have no or minimal excess capacity and were excluded from further consideration. The Department of the Navy also determined that it would be inappropriate to consider industrial reserve plants, which are operated by contractors.

When a subcategory was projected to have excess capacity, the Department of the Navy analyzed the military value of the individual installations within that subcategory. The Evaluation Committee utilized a series of questions relating to military value developed from the data calls that could be answered yes/no or true/false from the information in the data base. The questions were ranked on their importance, given a numerical value, and aligned with one or more of the four DOD selection criteria for military value.

Determining Closure and Realignment Options

The Department of the Navy developed a computer model as a tool to consider alternative base structure configurations for the more complex subcategories. The capacity and military value data developed in the second phase of the process provided the basic inputs for the model. The model's algorithm was constructed to produce a solution in each base category that minimized excess capacity, and to the extent possible, produced an average military value at least as high as the average for each category.

Additional constraints were entered into the model for each subcategory as the Evaluation Committee believed appropriate to consider operational realities. Thus, for example, the model was designed to require that there be at least one fleet concentration on the Atlantic Coast and one on the Pacific Coast.

The configuration options produced by the model were then evaluated. In some cases, the Evaluation Committee made changes to the configurations on the basis of military judgment. For instance, the model determined that closing the naval station and submarine base at Pearl Harbor would maximize the reduction of excess capacity, but the Evaluation Committee believed it was important to retain these bases in order to preserve a naval presence in the Pacific theater. In addition, the Department of the Navy stated that, while the Marine Corps' two training bases, two logistics bases, and two recruit depots were projected to have excess capacity, it was not possible to close any of them because the remaining base in each subcategory could not handle the 1999 force structure requirements.

### Analyzing Costs and Savings and Economic and Environmental Impacts

As its final step, the Department of the Navy calculated the cost and savings, economic, and environmental impacts of the closure and realignment actions contained in the final configurations. The Department of the Navy used the COBRA cost model to analyze costs and savings and used the Office of Economic Adjustment's economic impact model to determine how the closures and realignments would affect the local area.

For installations that would receive more personnel as a result of other bases' being closed or realigned, the Department of the Navy determined the impact on local and regional infrastructure, including housing, schools, public utilities, public transportation, and recreational facilities. Two installations indicated a need to expand the local infrastructure, according to the Department of the Navy, and these costs were factored into the COBRA cost model.

## AIR FORCE

The Air Force followed essentially the same selection process as it did in 1991. It first identified bases within the United States and sent them a questionnaire to collect relevant data. It then analyzed the capacity of the bases and determined base structure requirements for future years. After excluding some bases from further consideration because they are mission essential, the Air

Force performed a more detailed analysis of the remaining installations to develop its final recommendations.

Key Players in the Air Force Process

The Secretary of the Air Force appointed the Base Closure Executive Group to direct the selection process and provide him with recommended base closure and realignment actions. Staff support was provided by a working group.

The Executive Group and working group continued to function without interruption following the 1991 process. This decision allowed the retention of expertise and the ability to improve the 1993 process. The Executive Group approved an internal control plan and milestone dates for the 1993 process, and involved the Air Force Audit Agency to assist the bases and commands to validate the data collection for the questionnaire. This action resulted in additional guidance to the bases and major commands to improve the data gathering process. The audit agency reviewed the base closure questionnaire data and provided the Executive Group reasonable assurance that data used to compare active bases were materially accurate and questions asked treated all bases objectively. We monitored the Audit Agency's involvement in the process. Guidance to the major commands also established a responsible person in each command to ensure primary responsibility for certifying the accuracy of the data.

Bases Included in the Process

The Air Force identified 100 bases (75 active and 25 reserve) that met the criteria for consideration under the Defense Base Closure and Realignment Act. The Executive Group sent a detailed questionnaire to these bases to gather the necessary data for its analysis. The Executive Group also directed an analysis to determine each base's excess capacity by comparing the fiscal year 1992 force structure requirement (for example, the number of aircraft it could accommodate) with the requirement projected for fiscal year 1999. The results of the capacity analysis were used in conjunction with the force structure plan for fiscal years 1993 to 1999 to determine the Air Force's base structure requirements. In addition, the Air Force determined the costs of relocating or replicating the facilities of a given base if it were closed or realigned.

At this point, the Air Force excluded 16 installations from further consideration because they were deemed either to be essential to the Air Force's mission, or to be located in geographically important areas. For instance, Andrews Air Force Base, Maryland,

was considered a key base for providing airlift support to the President and Congress. The remaining bases--84--were grouped into five major categories and subcategories, as shown in table III.4.

Table III.4: Air Force Installation Categories

| Installation category | Number |
|---|---|
| Flying | |
| Operations[a] | 32 |
| Pilot training[b] | 5 |
| Special operations forces | 1 |
| Industrial/technical support | |
| Depots | 6 |
| Product centers and laboratories | 3 |
| Test facilities | 1 |
| Training | |
| Technical training[b] | 4 |
| Education | [c] |
| Other | |
| Major headquarters | 6 |
| Space operations | [c] |
| Cantonments | 2 |
| Air Reserve component | |
| Air National Guard | 14 |
| Air Force Reserve | 11 |

[a]This subcategory was further divided into missile bases, large aircraft bases, and small aircraft (fighter-type aircraft) bases. The missile bases were also considered under the large aircraft category.

[b]One base was considered under both the pilot training and technical training subcategories.

[c]The bases in this subcategory were deemed "mission essential" and excluded from further consideration.

The Air Force evaluated the remaining bases by subcategory, eliminating from further analysis those that were projected to have no excess capacity or unreasonably high relocation or replication costs. Six subcategories with a total of 19 installations were eliminated. These subcategories (and the number of bases) were

-- industrial/technical support--test facilities (1 base),

-- industrial/technical support--product centers and laboratories (3 bases),

-- training--technical training (4 bases),

-- flying--special operations forces (1 base),

-- flying--pilot training (5 bases), and

-- other--major headquarters (6 bases).[1]

Color Coding and Ranking the Bases

The remaining bases (40 active and 25 reserve) were subjected individually to a more detailed analysis. The Air Force evaluated the active bases against DOD's eight selection criteria (listed in ch. 1). To do this, the Air Force developed sub-elements for each criterion. The information for the sub-elements was gathered by the working group primarily from the bases through a standard questionnaire. The bases were evaluated under common sub-elements for seven of the eight criteria. For the first criterion--current and future mission requirements and impact on operational readiness of DOD's total force--different sub-elements were developed to reflect the different missions of the various categories of bases.

The Air Force scored bases on a color-coded rating system: A "green" rating meant that for a particular characteristic, the base was more desirable for retention; "red" meant least desirable; and a "yellow" rating fell in between. Each color could also have a plus or minus designation. After scoring the bases for individual sub-elements, the Air Force gave an overall color rating for six of the eight DOD selection criteria for each base. The COBRA cost model was used in the Air Force's analysis to provide quantitative data for the other two DOD criteria.

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[1]One installation, Sheppard Air Force Base, Texas, was listed in two subcategories: training--technical training and flying--pilot training.

The Acting Secretary of the Air Force made the final selections of the active bases to be recommended for closure and realignment. The Air Force stated that these selections were based on the force structure plan and the selection criteria, with consideration given to excess capacity, efficiencies in base use, and evolving concepts of basing the force.

Air Reserve and Air National Guard

The 25 Air Reserve components, including Air National Guard and Air Force Reserve bases, were considered separately from active Air Force bases for two reasons. First, these bases have special relationships with their respective states, and moving units across state boundaries was believed to be impractical. Second, the force structure plan does not call for a reduction in reserve components, and the Air Force found no excess capacity. Consequently, the Air Force considered cost-effective realignments, but not closures, in evaluating reserve component bases.

Some potential realignments were analyzed, but none proved to be cost-effective. However, during this review the Executive Group identified a cost-effective air reserve realignment that did not meet the base closure threshold (300 civilians) and included it in the Air Force recommendations. The recommendation moves the Springfield, Ohio, air reserve to Wright-Patterson Air Force Base, Ohio.

The Air Force also considered that, as proposed by the city of Chicago, its air reserve base at the O'Hare International Airport, Illinois, be relocated to the Greater Rockford, Illinois, airport. This recommendation is contingent on the city of Chicago's financing the full cost of the transfer without any cost to the federal government. Such proposals are allowed under section 2924 of Public Law 101-510. This provision mandates the Department to give special consideration to the proposal.

Changes to 1988 and 1991 Base Closure Commission Recommendations

The Air Force recommended changes to six active bases and one guard base that were recommended for closure and realignment in 1988 and 1991 because of force and base structure changes and Air Force evaluations that redirected missions and functions. The changes will result in military construction cost avoidances. For example, the Air Force recommends that the 1991 Commission recommendation to close Rickenbacker Air Guard Base, Ohio, and relocate it to Wright Patterson Air Force Base, Ohio, be rescinded. The Air Force wants to retain certain functions at Rickenbacker in an cantonment area

and operate as a tenant at the Rickenbacker Port Authority airport. According to the Air Force the State of Ohio is willing pay for much of the cost associated with the operations of the airfield. The Air Force projected a savings of $11.7 million for military construction cost avoidances at Wright Patterson.

DEFENSE LOGISTICS AGENCY

To select bases for possible closure or realignment, DLA first categorized them by function and collected pertinent data. The agency then determined whether the bases had excess capacity and evaluated their military value. Using this information, it eliminated certain bases from further consideration. For the remaining bases, DLA developed various closure and realignment scenarios and analyzed these scenarios in more detail to determine its final list of recommendations.

This effort was directed by the DLA Base Realignment and Closure Executive Group, which was assisted by a working group.

Categorizing Bases and Collecting Data

DLA identified 49 bases in the United States and grouped these into four categories by their function. These categories are listed in table III.5.

Table III.5: DLA Installation Categories

| Category | Number |
|---|---|
| Regional headquarters | 9 |
| Distribution depots | 30 |
| Inventory control points | 6 |
| Service/support activities | 4 |

To gather data for its analysis, the Executive Group sent questionnaires to the bases (DLA uses the term "primary level field activities"). The questionnaires were tailored to each category. Other data sources included DLA headquarters, OSD, and the military services.

Evaluating Capacity and Military Value

DLA analyzed how much physical space was available at each base and how much space was currently used, determined what work load changes were anticipated and whether the base had space to accommodate these changes, and evaluated whether the base had room to expand its facilities. This data was used to quantify the extent to which an installation could be constrained by physical space, production capability, and other limitations. In performing this analysis, DLA considered

-- the future years' force structure plan,

-- projected changes in the military services' basing and operations, and

-- DLA initiatives to improve operational efficiency and effectiveness.

DLA next analyzed the military value of its bases. This analysis resulted in a ranking of each installation relative to others in its category. To perform this analysis, DLA developed four measures of merit, each of which had applicability to one or more of the DOD selection criteria. These were as follows:

-- Mission essentiality: The mission assigned to an installation plays an essential role within DOD and also benefits non-DOD customers. The functions performed in accomplishing the mission may be unique. The strategic location of the facility and the span of control are important to effectively accomplishing the mission.

-- Mission suitability: The installation supports assigned missions. This criterion also includes such issues as the age and condition of facilities, the quality of life, location, and proximity to transportation links.

-- Operational efficiencies: The installation's mission is performed economically. Operational costs include transportation, mechanical systems, use of space, personnel costs, and facility operating costs.

-- Expandability: The installation can accommodate new missions and increased work loads, including sustained contingencies. Considerations include requirements for space and infrastructure, community encroachment, and increased work load.

These measures were refined by category and assigned numerical weights to reflect their relative importance within the category. More specific sub-elements were also developed for each measure, and these were weighted as well. Each base received a final score on its military value, and the results were assigned one of three color scores: green for the highest rated bases, yellow for the next highest rated group, and red for the lowest rated group.

When the working group presented the results of its analysis to the Executive Group, the names of the individual installations were coded to preclude subjectivity regarding their scores. The Executive Group approved a final ranked stacking of the bases in each category.

Developing and Evaluating Scenarios

DLA began this stage in the process by eliminating certain bases from further consideration on the basis of their capacity and military value rankings. According to DLA, the bases that remained candidates for closure or realignment were those that were ranked "significantly lower" than similar bases within their category.

With these prospects, DLA developed alternative scenarios. A number of factors were considered, including the implications of the DOD force structure plan and projected work load estimates. DLA stated that coordination with the military services and other agencies was vital in developing scenarios that were viable. DLA evaluated the return on investment of the scenarios using the COBRA cost model. The Office of Economic Adjustment's economic impact model was used to assess community impact. DLA also reviewed the infrastructure and environmental impacts of the scenarios.

The DLA Director reviewed the Executive Group's recommended base closure and realignment actions and forwarded his recommendations to OSD.

DEFENSE INFORMATION SYSTEMS AGENCY

DISA's objective in the base closure and realignment process was select data processing centers for disestablishment, consolidati their work loads at new "megacenters." Using plans developed b the DOD components, the agency selected candidates for consideration as megacenters. DISA established criteria for ranking the sites, scored each site against the criteria, and developed a rank ordering of the sites. To determine the numbe megacenters needed, the agency determined data processing work requirements and distributed this work load to the sites, star with the top-ranked site, until the requirements were satisfie

On the basis of its analysis, DISA recommended that 44 data processing centers be disestablished and their work loads transferred to 15 megacenters.

This analysis was performed by the DOD Data Center Consolidation Planning Team, which the Director of the Defense Technology Services Office established in January 1993.

Selecting Candidate Sites

The 1989 Defense Management Review called for the consolidation of data processing centers as a way to streamline administrative support systems. Following the review, OSD directed DOD components to prepare a plan for consolidating their data processing centers. The plans submitted by the Army, the Air Force, the Navy, and DLA identified a total of 158 data processing centers that were to be disestablished, their work loads transferred to consolidated centers operated by the individual DOD components.

OSD subsequently changed its approach to the management of data processing centers. In September 1992, OSD directed that a central agency--DISA--be responsible for DOD's information support capability and required that data processing facilities, technology, personnel, and other related assets be transferred to DISA. OSD also mandated that future consolidations be undertaken DOD-wide. Beginning in January 1993, DISA piggybacked its consolidation efforts onto DOD's base closure and realignment process.

The DISA team that performed the analysis is the same team that had ieveloped the Navy's site selection methodology and consolidation ›lan. The team applied this methodology to DOD's megacenter lanning. DISA's first step was to identify data processing enters that could be considered candidates for megacenters. The ›nsolidation plans developed by the DOD components served as the sis for identifying candidates. DISA believed this was the most pedient approach given its 3-month deadline. The agency entified 36 candidates.

ting the Candidates

next established criteria for ranking the candidate sites. It d 15 selection criteria grouped into three broad categories: ties, security, and operations and cost. The team weighted riteria in accordance with their relative importance, as table III.6.

Table III.6: DISA Selection Criteria and Their Weights

Weights in percentages

| Criteria | Weight |
|---|---|
| Facilities criteria | |
| Total space | 2 |
| Conditioned space | 18 |
| Convertible space | 2 |
| Contiguous space | 2 |
| Air conditioning | 6 |
| Chilled water | 2 |
| Electrical power | 8 |
| Building condition | 10 |
| Subtotal | 50 |
| Security criteria | |
| Back-up power | 10 |
| Communications diversity | 5 |
| Security perimeters | 15 |
| Survivability | 5 |
| Subtotal | 35 |
| Operations criteria | |
| Proximity to fiber optic hub | 2 |
| Communications bandwidth | 3 |
| Regional operations costs | 10 |
| Subtotal | 15 |
| Total | 100 |

Using information obtained through data calls and site visits, the team scored each candidate against the 15 criteria and weighted and

summed the results. This provided the rank order of the 36 candidate sites.

Determining the Number of Megacenters Needed

DISA determined the required number of megacenters based on data processing work loads. The agency determined the total megacenter work load by totaling the installed processing capacity of all sites to be consolidated, then adding a factor of 50 percent. According to DISA officials, the 50-percent factor was used to allow for a contingency of unspecified future work load increases.

This work load was then distributed to the candidate sites beginning with the top-ranked site. When that site's maximum capacity was reached, the work load was distributed to the next site on the list. DISA worked its way down the list until all the work load requirements were met. The results showed that DOD required 15 megacenters, and the cut-off point on the list of candidates was set accordingly. The proposed megacenters are

-- Resource Management Business Activity, Columbus, Ohio;

-- Logistics Systems Business Activity--Information Processing Center, Mechanicsburg, Pennsylvania;

-- Logistics Systems Business Activity--Information Processing Center, Ogden, Utah;

-- Logistics Systems Business Activity--Information Processing Center, Dayton, Ohio;

-- Logistics Systems Business Activity--Information Processing Center, San Antonio, Texas;

-- Multi-functional Information Processing Activity, St. Louis, Missouri;

-- Multi-functional Information Processing Activity, Rock Island, Illinois;

-- Logistics Systems Business Activity--Information Processing Center, Oklahoma City, Oklahoma;

-- Multi-functional Information Processing Activity, Gunter Annex, Montgomery, Alabama;

-- Multi-functional Information Processing Activity, Jacksonville, Florida;

-- Resource Management Business Activity, Denver, Colorado;

-- Multi-functional Information Processing Activity, Chambersburg, Pennsylvania;

-- Logistics Systems Business Activity--Information Processing Center, Warner-Robins, Georgia;

-- Resource Management Business Activity, Cleveland, Ohio; and

-- Multi-functional Information Processing Activity, Huntsville, Alabama.

The DISA team determined the return on investment of the consolidations using the COBRA cost model. The team also reviewed the DOD selection criteria and determined that the proposed consolidations (1) met the criteria regarding military value; (2) would yield a return on investment of 247 percent; and (3) would have minimal to no economic, community, and environmental impact. Consolidations of the data processing centers are expected to achieve a net savings of $599 million from fiscal years 1994 to 1999. Annual savings are estimated at $290 million, with an immediate return on the one-time investment of $408 million.

DEFENSE FINANCE AND ACCOUNTING SERVICE

The 1991 Defense Base Closure and Realignment Commission recommended that DOD submit a plan to the 1993 Commission for consolidation DFAS's finance and accounting operations. DFAS subsequently developed a plan for (1) consolidating its work force and (2) selecting sites for the consolidated finance and accounting centers, a process it refers to as the "Opportunity for Economic Growth." The Secretary of Defense, however, rejected the site selection process, citing concerns about its public policy implications. Instead, the Secretary directed that the DFAS consolidation continue, for the time being, at the existing centers. OSD plans to review options for a permanent consolidation and make a final decision later. If this review indicates that any part of the consolidation plan requires review by the Commission, the Secretary will submit recommendations as appropriate in 1995.

Consolidating Finance and Accounting Personnel

DFAS was established in January 1991 to consolidate all of the finance and accounting activities of the military services and defense agencies, with the aim of improving service and saving money. The agency had begun formulating its strategic plans and related consolidation initiatives when the Commission recommended

that these efforts be included in the base closure and realignment process.

In 1992, DFAS identified about 45,000 personnel working in the DOD finance and accounting network. About 10,000 of these are located at the five existing DFAS centers. The remaining personnel are scattered at more than 360 field offices operated by the military services and defense agencies. DFAS expects many of these personnel to eventually transfer to DFAS centers.

Initiating the Site Selection Process

When the Commission recommended that the consolidation be part of the base closure and realignment process, DFAS's initial response was to determine whether existing DOD facilities could satisfy its anticipated consolidation requirements. The Assistant Secretary of Defense (Production and Logistics) said that the existing facilities would be insufficient without considerable cost to DOD.

Subsequently, DFAS initiated a nationwide site selection process--the "Opportunity for Economic Growth." This process, modeled after a similar process used by the Bureau of Engraving and Printing in 1985, was designed to provide DFAS with modern, low-cost facilities in exchange for jobs and ancillary employment opportunities. DFAS believes this process would allow it take advantage of incentives offered by local communities hoping to attract these jobs and thereby reduce the cost to the federal government.

Soliciting Proposals

In its solicitation, DFAS requests that interested communities submit proposals for 4,000- or 7,000-employee future centers (or both). DFAS required that each proposal address specific requirements in three major categories: (1) cost to DOD, (2) site and office characteristics, and (3) community characteristics. DFAS also encouraged communities to offer special features and incentives such as transitional office space, employee benefits, training programs and facilities, and other support that would reduce costs to DOD and its employees. Since DFAS's mission does not dictate that its facilities be specially configured or located in specific geographical location, the site selection process had few restrictions.

DFAS announced the site selection process on March 2, 1992, and published it in the Commerce Business Daily on March 3, 1992. To ensure widespread publicity, DFAS also delivered the announcement to each Member of Congress and to the National Governors Association.

## Evaluating the Proposals

DFAS received a total of 216 proposals from 112 communities in 33 states by the due date of June 1, 1992. To evaluate the proposals the agency developed about 50 criteria prior to receiving community proposals. Using these criteria, DFAS chose 20 communities, including a total of 44 specific sites, as finalists.

The finalists were notified on December 1, 1992, and DFAS, GAO, and DOD Inspector General officials visited each community during December to discuss each community's proposals, address questions, explain the final proposal requirements, and inspect the proposal sites. DFAS received final proposals that were limited to no more than one 4,000-employee site and one 7,000-employee site per community by the January 4, 1993, due date.

DFAS considered five existing centers equally with the community proposals because it did not consider them existing centers as having special military value related to its mission requirements, operational readiness, physical location, facilities, labor force, or mobilization support capabilities. DFAS officials reasoned that the agency is primarily an administrative support organization that can carry out its mission in any geographic location. Therefore, DFAS used the same criteria to evaluate the new proposed sites and the current center sites.

As the site selection process proceeded, DFAS needed to determine its future personnel requirements. The agency projected an increase to about 33,000 personnel by 1996 and then a decrease to about 21,000 personnel by 2012. The projected decrease beginning in 1996 is based on several key assumptions involving the downsizing of U.S. military forces, the increase in productivity, and the implementation of standard systems.

DFAS evaluated the final proposals and ranked them to employ 21,000 personnel. DFAS selected a facility structure of five 4,000-employee finance centers.

## Costs and Savings

Each of the above alternatives were evaluated for costs and savings (including relocation costs). Costs during the period 1993-1999 varied from a low of about $173 million for alternative four to a high of about $360 million for alternative two. Annual outyear savings varied from a high of about $47 million per year for alternative four to a low of about $4 million for alternative two. Using DFAS's calculations, alternative four was the most advantageous to the agency. On the basis of DFAS's cost analysis,

the rate at which DFAS consolidates and transitions to a future structure is the single largest cost determinate.

These cost estimates, however, do not include salary cost savings that DFAS expects to realize from its consolidation plan. The consolidation plan will reduce the number of finance and accounting personnel from its current total of about 45,000 to 21,000 by the year 2012. If DFAS is able to carry out this plan, it projects that it will save about $870 million per year in salary costs after the consolidation is complete.

## RECALCULATION OF SERVICES COSTS AND SAVINGS

Table IV.1: Recalculation of Army Costs and Savings

| Base | DOD estimate | GAO estimate |
|---|---|---|
| McClellan | | |
| NPV | $135,433,000 | $129,945,000 |
| One-time cost | 110,316,000 | 117,270,000 |
| ROI (years) | 3 | 4 |
| Vint Hill Farms | | |
| NPV | 92,707,000 | 91,846,000 |
| One-time cost | 72,421,000 | 73,511,000 |
| ROI (years) | 3 | 3 |
| Monmouth | | |
| NPV | 95,995,000 | 92,989,000 |
| One-time cost | 92,863,000 | 96,592,000 |
| ROI (years) | 3 | 3 |
| Letterkenny | | |
| NPV | 166,970,000 | 161,071,000 |
| One-time cost | 105,696,000 | 112,629,000 |
| ROI (years) | Immediate | Immediate |
| Tooele | | |
| NPV | 387,204,000 | 377,100,000 |
| One-time cost | 73,730,000 | 85,472,000 |
| ROI (years) | Immediate | Immediate |
| Fort Belvior | | |
| NPV | 118,084,000 | 114,800,000 |
| One-time cost | 11,304,000 | 14,967,000 |
| ROI (years) | Immediate | Immediate |
| Totals | | |
| NPV | $996,393,000 | $967,751,000 |
| One-time cost | $466,330,000 | $500,441,000 |

Table IV.2: Recalculation of Air Force Costs and Savings

| Base | DOD estimate | GAO estimate |
|---|---|---|
| Homestead | | |
| NPV | $725,750,000 | $725,132,000 |
| One-time cost | 75,090,000 | 75,729,000 |
| ROI (years) | Immediate | Immediate |
| K.I. Sawyer[a] | | |
| NPV | 483,418,000 | 302,301,000 |
| One-time cost | 143,648,000 | 144,394,000 |
| ROI (years) | 1 | 3 |
| Newark | | |
| NPV | 6,532,000 | 599,000 |
| One-time cost | 31,624 | 38,290,000 |
| ROI (years) | 8 | 13 |
| March | | |
| NPV | 305,283,000 | 305,221,000 |
| One-time cost | 134,798,000 | 134,871,000 |
| ROI (years) | 2 | 2 |
| McGuire | | |
| NPV | 255,132,000 | 254,735,000 |
| One-time cost | 197,477,000 | 197,947,000 |
| ROI (years) | 4 | 4 |
| Griffis | | |
| NPV | 267,487,000 | 266,413,000 |
| One-time cost | 120,829,000 | 122,017,000 |
| ROI (years) | 3 | 3 |
| Totals | | |
| NPV | $2,043,602,000 | $1,854,401,000 |
| One-time cost | $703,466,000 | $713,248,000 |

[a]The difference between the DOD and GAO estimates was caused by an error made concerning recurring costs for this action (see ch. 3).

Table IV.3: Recalculation of Navy Costs and Savings

| Base | DOD estimate | GAO estimate |
|---|---|---|
| NSY[a] Mare Island | | |
| NPV | $1,112,028,000 | $1,103,464,000 |
| One-time cost | 279,922,000 | 290,019,000 |
| ROI (years) | Immediate | Immediate |
| MCAS[b] El Toro/NAS Barbers Point | | |
| NPV | 1,374,169,000 | 1,368,850,000 |
| One-time cost | 898,543,000 | 904,697,000 |
| ROI (years) | Immediate | Immediate |
| NAS[c] Alameda | | |
| NPV | 197,100,000 | 193,208,000 |
| One-time cost | 193,964,000 | 198,604,000 |
| ROI (years) | 4 | 4 |
| NADEP[d] Alameda | | |
| NPV | 538,881,000 | 535,313,000 |
| One-time cost | 126,808,000 | 130,868,000 |
| ROI (years) | Immediate | Immediate |
| NAS Cecil | | |
| NPV | 200,926,000 | 198,596,000 |
| One-time cost | 312,338,000 | 315,290,000 |
| ROI (years) | 6 | 6 |
| NADEP Pensacola | | |
| NPV | 341,203,000 | 335,745,000 |
| One-time cost | 165,391,000 | 171,339,000 |
| ROI (years) | 2 | 2 |
| NTC[e] Orlando/San Diego | | |
| NPV | 323,910,000 | 318,093,000 |
| One-time cost | 327,928,000 | 334,532,000 |
| ROI (years) | 2 | 2 |
| NS[f] Charleston | | |
| NPV | 748,105,000 | 739,955,000 |
| One-time cost | 184,981,000 | 193,978,000 |
| ROI (years) | Immediate | Immediate |
| NSY Charleston | | |
| NPV | 385,356,000 | 375,797,000 |
| One-time cost | 246,700,000 | 258,127,000 |
| ROI (years) | 1 | 1 |

| | | |
|---|---|---|
| NADEP Norfolk | | |
| NPV | 748,546,000 | 738,558,000 |
| One-time cost | 172,506,000 | 184,113,000 |
| ROI (years) | Immediate | Immediate |
| NSC[g] Oakland | | |
| NPV | 259,963,000 | 255,666,000 |
| One-time cost | 119,420,000 | 124,945,000 |
| ROI (years) | Immediate | Immediate |
| Naval Hospital Oakland | | |
| NPV | 286,367,000 | 282,065,000 |
| One-time cost | 57,551,000 | 63,102,000 |
| ROI (years) | Immediate | Immediate |
| Naval Hospital Orlando | | |
| NPV | 21,831,000 | 19,929,000 |
| One-time cost | 51,248,000 | 53,699,000 |
| ROI (years) | 6 | 6 |
| Sub Base New London | | |
| NPV | 502,959,000 | 498,064,000 |
| One-time cost | 258,873,000 | 265,769,000 |
| ROI (years) | Immediate | Immediate |
| NAS Meridian/Memphis | | |
| NPV | 481,101,000 | 479,325,000 |
| One-time cost | 274,092,000 | 276,194,000 |
| ROI (years) | 2 | 2 |
| Naval aviation functions to Paxutent River | | |
| NPV | 169,365,000 | 164,607,000 |
| One-time cost | 197,990,000 | 203,514,000 |
| ROI (years) | 3 | 3 |
| NESEC[h] St. Inigoes, Charleston, Washington, D.C. | | |
| NPV | 123,817,000 | 122,407,000 |
| One-time cost | 147,329,000 | 149,092,000 |
| ROI (years) | 3 | 3 |

| | | |
|---|---|---|
| Bureau of Navy Personnel | | |
| NPV | 118,172,000 | 117,802,000 |
| One-time cost | 59,252,000 | 60,610,000 |
| ROI (years) | 4 | 4 |
| NSWC[i] Whiteoak | | |
| NPV | 103,319,000 | 102,892,000 |
| One-time cost | 74,577,000 | 75,119,000 |
| ROI (years) | 2 | 2 |
| NAWC[j] Trenton | | |
| NPV | 74,111,000 | 71,781,000 |
| One-time cost | 97,020,000 | 99,916,000 |
| ROI (years) | 5 | 5 |
| Naval supply functions consolidate to Mechanicsburg, Pa. | | |
| NPV | 102,815,000 | 100,323,000 |
| One-time cost | 88,947,000 | 91,860,000 |
| ROI (years) | 1 | 1 |
| Totals | | |
| NPV | $8,214,044,000 | $8,122,440,000 |
| One-time cost | $4,335,110,000 | $4,445,387,000 |

[a]Naval Shipyard.

[b]Marine Corps Air Station.

[c]Naval Air Station.

[d]Naval Aviation Depot.

[e]Naval Training Center.

[f]Naval Station.

[g]Naval Supply Center.

[h]Naval Electronic Systems Engineering Center.

[i]Naval Surface Warfare Center.

[j]Naval Air Warfare Center.

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Frank

United States General Accounting Office

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Fact Sheet for the Honorable Vic Fazio, House of Representatives

September 1990

# MILITARY BASES

# Information on Air Logistics Centers

GAO/NSIAD-90-287FS

GAO

United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-240995

September 10, 1990

The Honorable Vic Fazio
House of Representatives

As you requested, we obtained selected data on the performance and capacity for depot maintenance operations at the five Air Force Air Logistics Centers (ALC). The five ALCs are Ogden ALC, Hill Air Force Base, Utah; Oklahoma City ALC, Tinker Air Force Base, Oklahoma; Sacramento ALC, McClellan Air Force Base, California; San Antonio ALC, Kelly Air Force Base, Texas; and Warner Robins ALC, Robins Air Force Base, Georgia.

## Results in Brief

Each ALC is assigned responsibility for maintaining, modifying, and repairing specific types of aircraft, engines, and reparable parts. The ALCs have different missions and facilities and consequently cross comparisons between them are of limited value, according to Air Force officials.

Some indicators of performance are the number of aircraft on which maintenance is completed, the number of engines and other items repaired, and labor hours expended annually on depot maintenance. For example, in fiscal year 1989, the number of aircraft on which maintenance was completed ranged from 62 at the San Antonio ALC to 291 at the Ogden ALC; however, the type of aircraft were different, and the nature and extent of maintenance performed may have varied. Only two ALCs repair aircraft engines. In fiscal year 1989, 5,029 engines were repaired at the San Antonio ALC and 1,372 were repaired at the Oklahoma City ALC.

Some indicators of capacity are the size of maintenance facilities and the depot maintenance work force. For example, the square footage of facilities, such as hangars, machine shops, and test facilities, ranged from 2.7 million at the Warner Robins ALC to 3.9 million at the San Antonio ALC. The work years expended on depot maintenance ranged from about 6,000 at the Sacramento ALC to about 8,000 at the Oklahoma City ALC.

The Department of Defense is currently evaluating depot maintenance operations to determine how best to lower the overall cost while retaining essential operating capability. The Secretaries of the military services are scheduled to submit their coordinated long-range plan to the Assistant Secretary of Defense for Production and Logistics by October

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# Depot Maintenance Missions Assigned to the Air Logistics Centers

| | |
|---|---|
| Ogden ALC, Hill Air Force Base, Utah | The Ogden ALC repairs and modifies the F-4, F-16, and C-130 aircraft (a recent addition). The Center also maintains Air Force missile systems and components, including the Peacekeeper, Minuteman, Maverick, and Sidewinder. Ogden is the technology repair center[1] (TRC) for weapons, air munitions, landing gears, reconnaissance/photographic equipment, and training and simulation equipment. |
| Oklahoma City ALC, Tinker Air Force Base, Oklahoma | Oklahoma City ALC is the source of repair for the B-1B, B-52, C-135, and E-3 aircraft. The Center has also been assigned repair responsibility for the B-2 Stealth bomber. It is also one of the two Centers (San Antonio is the other) that repairs and overhauls jet engines. Oklahoma City is the TRC for automatic flight controls, airframe and engine-related components, engine instruments, and oxygen components. |
| Sacramento ALC, McClellan Air Force Base, California | Sacramento ALC is the designated source of repair for the F-111, A-7, and A-10 aircraft. The Center recently began F-15 modification work and has been assigned repair responsibility for the Advanced Tactical Fighter. Sacramento is the TRC for electrical components, flight control instruments, tactical shelters, and ground communications-electronics equipment. |
| San Antonio ALC, Kelly Air Force Base, Texas | The San Antonio ALC maintains and repairs the B-52 and C-5 aircraft. The Center has been designated the source of repair for the C-17 aircraft. The Center also repairs and overhauls a large number of engines and engine modules. The Center is the TRC for electronic aerospace ground equipment, electro-mechanical support equipment, nuclear components, and automatic test equipment. |
| Warner Robins ALC, Robins Air Force Base, Georgia | Warner Robins ALC repairs and modifies the F-15, C-141, and C-130 aircraft. The Center is the TRC for life support systems, propellers, and airborne electronics. The airborne electronics work load includes more than 300 avionics systems and almost 10,000 parts and components. |

[1] Under the technology repair center concept, selected homogeneous maintenance work loads are assigned to a single center rather than maintaining capabilities at multiple locations.

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