

INTRODUCTION

Management of natural and cultural resources is critical to maintaining military readiness. The U.S. Armed Forces must test new equipment and train in environments similar to those they may encounter in a conflict. Conservation efforts ensure that these training environments are not degraded over time and that the Department of Defense (DoD) has continued access to test, train, and maintain readiness. This requires the Department to conserve the resources it holds in the public trust and to prevent impacts wherever possible. DoD's challenge is to balance the use of air, land, and water resources for current military readiness with requirements to protect and manage those resources for current and future uses.

The Department makes every effort to balance the need to conserve natural and cultural resources with the need to ensure the success of its mission. Often these two efforts go hand in hand as DoD manages threatened and endangered species, leads many migratory bird studies, implements ecosystem and land management initiatives, and protects the cultural resources on and around DoD lands.

DoD installations are often rich in natural and cultural resources, in part because of DoD's past conservation initiatives. These resources include more than 100,000 archaeological and historical sites, more than 300 threatened and endangered species, marine mammals, Native American burial and sacred sites, historic buildings, and wetlands. Installations contain some of the finest remaining examples of rare native vegetation, including old-growth forests, tall-grass prairies, and vernal pool wetlands. DoD has an obligation both to protect these resources for future generations and to ensure the success of the mission.

HIGHLIGHTS OF ACTIVITIES IN FISCAL YEAR 2002

DoD meets its conservation goals by using a systematic approach to identify, evaluate, and manage natural and cultural resources on its installations. DoD's conservation efforts yielded many successes in Fiscal Year (FY) 2002. Through DoD's Conservation Program, the Department preserves land, water, and airspace needed for new equipment testing and military training while maximizing environmental protection.

Natural and Cultural Resources Planning

Integrated planning encourages the sustained use of resources and facilitates while minimizing harmful effects of mission activities on the environment. DoD recognizes that installations are part of larger regional ecosystems. Therefore, DoD’s planning efforts consider not only activities on installations, but also issues within the larger regional ecosystem. Investments in resource conservation help avoid costs associated with repairs to damaged soil, vegetation, wildlife habitats, archaeological sites, and historic objects.

DoD installations inventory resources and develop plans to manage those resources. Installations identify potential habitats of threatened or endangered species; areas likely to contain archaeological sites; and areas likely to contain historical buildings, objects, or structures that require protection. Installations also identify stakeholders who may be impacted by or monitor compliance of DoD’s resource management practices.

Completing Natural Resource Inventories

Natural resources are the varieties of plants, animals, and their associated physical surroundings that make up a diverse ecosystem. Natural resources include both nonliving resources (such as soil, minerals, fossils, air, and water) and biological (living) resources.

Figure 23
Natural Resource Inventories Completed

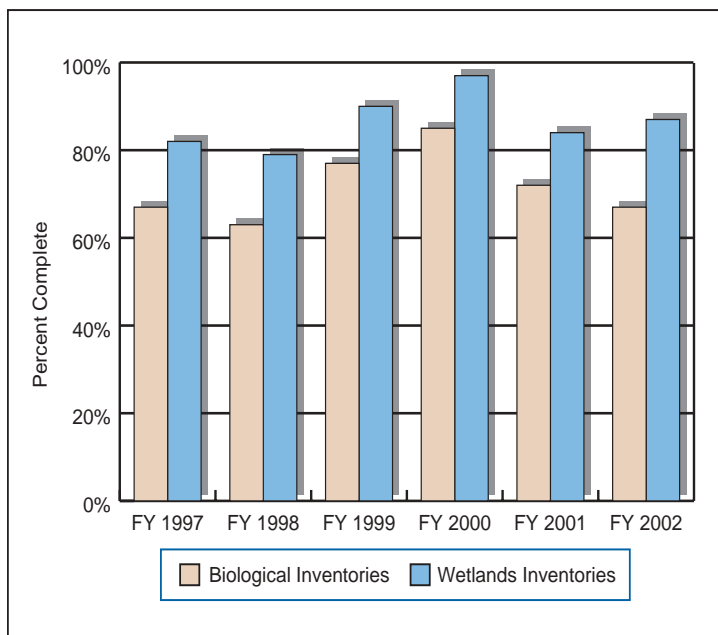


Figure 23 illustrates the progress DoD installations made in FY 2002 toward completing natural resource inventories. DoD has completed approximately 67 percent of biological resource inventories, and almost 87 percent of wetlands inventories. The decline in the percentage of natural resource inventories completed is largely due to an increase in the number of installations requiring these inventories. As the DoD Components review the data each year, it is not unusual to discover additional installations that require natural resource inventories. This may be because an installation discovered

new resources, acquired land containing biological resources or wetlands, or the condition of these resources changed.

Installations update their inventories periodically to ensure that personnel have the most up-to-date information. DoD also reevaluates installation resource management methods periodically, regardless of any actual changes to existing resources.

Sikes Act Requirements and INRMPs

The Sikes Act of 1960 requires each DoD installation to develop a plan to manage and maintain wildlife, fish, and game conservation and rehabilitation. In 1997, Congress passed amendments to the original Sikes Act. These amendments require DoD to prepare and implement an Integrated Natural Resource Management Plan (INRMP) for each installation in the United States with significant natural resources.

In preparing an INRMP, an installation must provide an opportunity for public comment, as well as consult with the U.S. Fish and Wildlife Service (FWS) and appropriate state fish and wildlife agencies. DoD policy requires that INRMPs also be coordinated with military trainers and operators. Stakeholders with a vested interest in natural resources management on the installation should be involved early in the process. Each plan also must ensure that the natural resource management activities at the installation ensure “no net loss” to the military mission. A further explanation of the Sikes Act and DoD’s progress in developing INRMPs is located in Appendix B.

An INRMP provides guidance and sets priorities for natural resource protection, improvement, and restoration. Installations use INRMPs to manage natural resources, fish and wildlife conservation, forestry, land management, outdoor recreation, and mission needs. An INRMP should—

- Integrate military operations and conservation measures
- Reflect cooperation between the FWS, the state, and the installation
- Document requirements for the natural resource budget
- Serve as a principal information source for National Environmental Policy Act documents
- Guide planners and facility managers in the use and conservation of natural resources on lands and waters under DoD control

- Balance the management of natural resources unique to each installation with mission requirements and other land use activities
- Identify and prioritize actions required to implement conservation goals and objectives.

Installations must update INRMPs at least every five years, or sooner if there are significant changes to the mission or affected resources. In addition, installations should internally review INRMPs at least once

each year. The installation commanders are responsible for preparing and implementing INRMPs.

**Figure 24
INRMPs Revised**

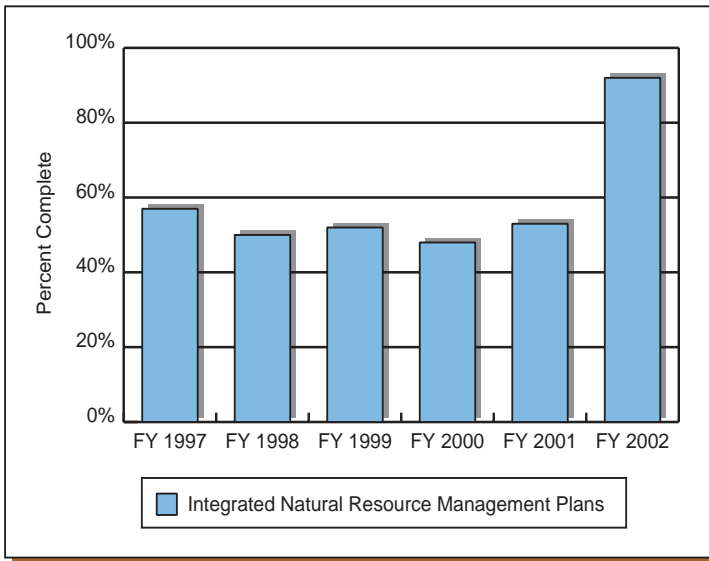


Figure 24 illustrates the progress that installations have made toward meeting the goals of the Sikes Act Amendments. DoD has completed revising 92 percent of its INRMPs. For this report, the DoD Components provided data on the number of INRMPs completed as of September 30, 2002. Several other plans are complete but were in coordination with FWS or state fish and game officials.

Cultural Resource Management

“I believe the essence of what we are as a nation resides in the wealth of our natural and and and cultural resources. To diminish the latter is surely to diminish the former”

— Senator Daniel K. Inouye, Hawaii

The primary mission of the U.S. military is to defend the United States—its people, its land, and its heritage. America’s cultural resources are an integral part of that heritage. Cultural resources include historic sites and districts, archeological sites, historic personal and related property, historic records, and sacred sites. Examples of cultural resources include—

- Buildings, structures, sites, districts, and objects eligible for or included in the National Register of Historical Places
- Cultural items as defined under the Native American Graves Protection Act

CULTURAL RESOURCE MANAGEMENT A PRIORITY AT FORT BENNING

Conserving cultural resources for present and future generations is important to DoD. The U.S. Army Infantry Center, Fort Benning, Georgia, has partnered with the National Infantry Association to develop a “World War II Company Street” exhibition for the National Infantry Museum, which will serve as a historic reminder of what military facilities were like during World War II. The installation established a curatorial facility that currently holds over 800 cubic feet of artifacts and over 100 linear feet of records.

In addition, the installation, in consultation with 11 American Indian Tribes, established a reinterment facility for burials covered under the Native American Grave Protection and Repatriation Act. This facility provides a location to receive other historic Indian human remains requiring removal from their original locations on Fort Benning or elsewhere in the region. The base has also improved and expanded its use of a geographic information system, which allows the cultural resources managers to monitor site locations, surveyed areas, cemeteries, historic structures, and districts.

- American Indian, Eskimo, Aleut, or Native Hawaiian sacred sites for which access is protected under the American Indian Religious Freedom Act
- Archaeological resources as defined under the Archaeological Resources Protection Act
- Archaeological artifacts and associated records, including artifacts and other physical evidence that are removed during a survey, excavation, or other study of a prehistoric or historic resource.

To effectively manage cultural resources, DoD personnel must understand the historic and cultural significance of these resources. Conserving cultural resources also enhances DoD’s ability to meet mission requirements. For example, preserving the records of historical structures on an installation is helpful during repair and maintenance. Often a cultural resource, such as a historic building or structure, can be used to meet current mission requirements. Sometimes the best management approach is to leave the resource untouched. This is the case for many archaeological resources and Native American religious sites.

DoD installations are home to many diverse cultural resources. DoD installations maintain an inventory of cultural resources located in a specific area. For example, Eglin Air Force Base’s Historic Preservation Division manages 1,600 archaeological sites and 125 historic structures ranging from American Indian hunting camps to World War II missile launch sites. Recently, archaeologists discovered the remains of two small buildings, which were determined to be from British colonists who occupied the area from 1763 to 1781.

Figure 25
Cultural Resource Inventories Completed

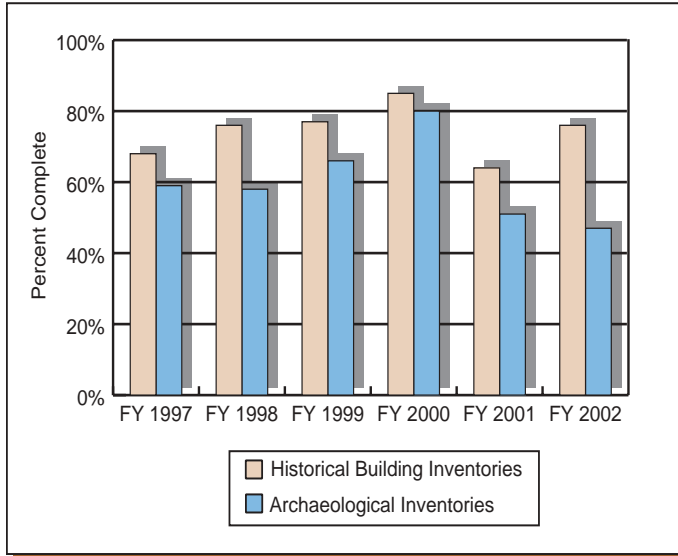
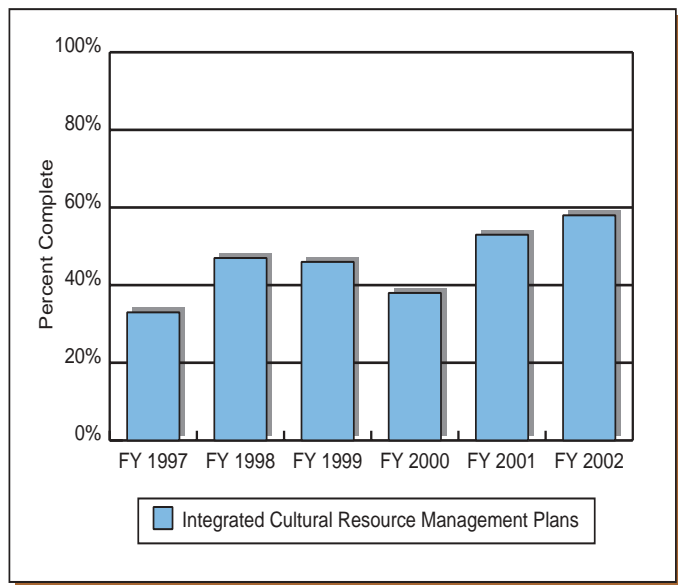


Figure 25 illustrates DoD’s progress in completing cultural resource inventories. Archaeological inventories are 47 percent complete, and 76 percent of the historic building inventories are complete. The reason for the increase in the number of cultural resource inventories completed is that, as with natural resources, installations update inventories periodically to ensure that personnel have the most up-to-date information.

Installations prepare integrated cultural resource management plans (ICRMPs) to manage historical sites and archaeological artifacts on installations. ICRMPs also help installation commanders comply with laws, such as the National Historic Preservation Act of 1966, the Native American Graves Protection and Repatriation Act, and the Archaeological Resources Protection Act.

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Figure 26
ICRMPs Revised



ICRMPs provide an effective method for measuring and monitoring the status of cultural resources on a DoD installation. Installations often use ICRMPs in conjunction with INRMPs to effectively manage installation resources.

Each installation within the United States with significant cultural resources must prepare an ICRMP. DoD installations must review their ICRMPs at least every year, and update the plans every five years. As illustrated in Figure 26, 58 percent of ICRMPs are complete.

ARMY TAKES PROGRAMMATIC APPROACH TO POST-WAR HOUSING

For the past several years, the Military Departments have been concerned about “a bow wave” of buildings and structures that would reach the National Register’s 50-year threshold over the next decade. Most of these buildings are military family housing. The majority of these houses were constructed between 1949 and 1962 under the Wherry funding program (1949-1955) and the Capehart funding program (1955-1962)—termed the “Capehart and Wherry” Era. While all of the Military Departments have many of these houses, 54 percent of the Army’s current housing is from the Capehart and Wherry era.



Capehart and Wherry Era apartment buildings, Aberdeen Proving Ground, Maryland.

With nearly 20,000 units of Chaphart and Whery housing, the Army was concerned that as these house approached the 50-year threshold, the costs of complying with National Historic Preservation Act (NHPA) would be considerable.

The U.S. Army Environmental Center (AEC) has been leading an effort to implement a one-time Army-wide programmatic NHPA compliance action for Capehart and Wherry Era Army family housing buildings. These “Army Alternate Procedures for Protection of Historic Properties” will cover maintenance, repair, rehabilitation, renovation, demolition, transfer, lease, and sale for all historic Capehart and Wherry Era family housing.

The Capehart-Wherry approach is a regulatory alternative that will eliminate delays in upgrading family housing. The approach removes the regulatory project-by-project review at each installation. This action also implements the Army’s Historic Quarters Cost Reduction Strategy Inventory Reduction Plan by reducing the total number of houses subject to NHPA requirements.

AEC coordinated with the Advisory Council on Historic Preservation, the National Conference of State Historic Preservation Officers, the National Trust for Historic Preservation, and other organizations early in the development of this process. Additionally, AEC sponsored a one-day symposium of recognized national experts on historic preservation to help highlight the issues and suggested treatment measures.

“Implementing the Army Alternate Procedures is best accomplished with thorough consultation with relevant stakeholders,” said Chris Hamilton, cultural resource manager at Fort Benning. “Transparency of action, qualified professionals, and demonstrated dedication to the conservation of our historic resources are the key elements that allow the various states and tribes with which we work to achieve and maintain confidence in our ability to meet NHPA Section 106 responsibilities in a professional and comprehensive manner.”

PARTNERSHIP TO PRESERVE FORT SAM HOUSTON HISTORIC PROPERTIES

Officials at Fort Sam Houston, Texas, recently announced a partnership they hope will serve as a model for military installation redevelopment. Partners in Preservation and Privatization brings together the Army; developer Orion Partners, Inc.; and environmental engineering company Roy F. Weston, Inc. to help preserve the historic Brooke Army Medical Center (BAMC) and two Beach Pavilion Complex buildings on Fort Sam Houston. The 63-year-old BAMC building was nominated for inclusion in the National Register of Historic Places. The Beach Pavilion Complex, included in a proposed national historic landmark district, contains two buildings built in 1931 as barracks to house an artillery regiment.



The BAMC is one of two historic buildings on Fort Sam Houston, Texas, preserved under a new public-private partnership.

“The partnership just forged at Fort Sam Houston will allow the Army to protect these buildings so important to our national heritage, while still allowing us to direct more resources to readiness issues,” said former Secretary of the Army Thomas White.

The developers have signed three 50-year leases based on a business plan that will generate more than \$50 million in private funds for the restoration and redevelopment of the properties. The agreements enable the developers to sublease the buildings to entities whose activities are compatible with the Army’s mission at Fort Sam Houston.

The partnership will provide direct economic benefits to DoD, in addition to preserving and improving the post facilities. The Army is projected to receive as much as \$253 million over the terms of the leases. This initiative will also enable Fort Sam Houston to meet its obligations to maintain and preserve these historic buildings.

Legacy Resource Management Program

Congress created the Legacy Resource Management Program in 1990 to balance the use of DoD lands for military training and testing with the need to protect natural and cultural resources. The goal of the Legacy Program is to preserve the military’s ability to test new equipment and train on its lands and waters while meeting conservation objectives. The cornerstones of the Legacy Program are—

- Leadership in exploring new ideas and implementing innovative technologies for natural and cultural resource management
- Partnership with other organizations to conserve natural and cultural resources in a cost-effective and technically-sound manner.

From FY 1991 through FY 2002, the Legacy Program has invested over \$230 million to fund more than 2,000 projects. The Legacy Program helps DoD determine how to best conserve biological, cultural, and geophysical resources while maintaining the military mission. The Program safeguards the environment through ecosystem management and preserves the nation's cultural heritage by managing historic properties and records. The Program also facilitates partnerships with Federal, state, and local agencies and private groups to cost-effectively manage resources.

Threatened and Endangered Species

Human activities, such as habitat destruction, have been one of the major causes of the decline of many plant and animal populations. Congress passed the Endangered Species Act (ESA) in 1973 to protect endangered and threatened species and to conserve the habitats where they live, nest, and migrate.

Endangered status means that a species is in danger of extinction throughout all or a significant portion of its range. Threatened status indicates that a species is likely to become endangered within the foreseeable future. As of January 8, 2003, there were 1,262 species listed by the FWS as either threatened or endangered within the United States. DoD lands are home to more than 300 of these U.S. listed species, as well as numerous state-listed species of concern. DoD lands also support a higher proportion of endangered species per unit area of land managed than other U.S. Federal land management agency. In addition to Federally-listed species, hundreds of state-listed species considered threatened, endangered, or of special concern also make their homes on DoD lands.

Under the ESA, Federal agencies, including DoD, must protect threatened and endangered species and preserve their habitats by making sure their activities do not jeopardize the survival of these species. In support of the ESA, DoD installations have developed programs to monitor and protect endangered and threatened species. The presence of Federally-listed species on DoD ranges can impact training, so properly managing species is vital to both DoD's ability to conduct realistic training and to the survival of the species on these lands.

Training activities can actually enhance the survival of some endangered species. Training activities that result in frequent, low-intensity fires mimic the natural disturbances that create ideal habitats for some plant and animal species. For example, some species of pine trees benefit from prescribed burning and other low-level fires. As a result, training areas are sometimes the last, best habitat for certain endangered and threatened species.

FOCUS ON THE FIELD

SPECIES MANAGEMENT AT EGLIN AIR FORCE BASE BENEFITS WILDLIFE

There are 1,209 miles of streams, 64 miles of coastline, and 64,810 acres of wetlands on Eglin Air Force Base, Florida, providing habitat for a variety of species. The Nature Conservancy has designated the installation one of seven “National Hot Spots” of biodiversity.

The installation is home to the only burrowing owl population in Northwest Florida, the fifth largest population of black bears, and almost half of Florida’s snowy plover population. New species discovered on the installation include the bog frog; three species of salamander, including the flatwoods salamander; a new order of wasp; a new beetle; and a wingless grasshopper once thought to be extinct.

An exceptional example of Eglin’s species management is the red-cockaded woodpecker, a Federally-listed endangered species. The red-cockaded woodpecker requires old-growth longleaf pine trees to survive. With the proper management of longleaf pine stands, these woodpeckers are recovering in a much shorter time frame than anticipated. In 1994, Eglin estimated that a successful program might result in 250 breeding pairs by 2010. However, through Eglin’s habitat management and species conservation actions, the red-cockaded woodpecker population has already grown from just under 170 breeding pairs to over 250 pairs. With the achievement of 250 breeding pairs, eight years earlier than anticipated, Eglin has now refocused its goal on attaining a population of 450 breeding pairs by 2010.

INVASIVE SPECIES

Invasive plants and animals are those that have been introduced into an environment in which they did not evolve and usually have no natural predators to limit their reproduction. Invasive species may be introduced to an area by accident, or on purpose to help control another species that is deemed a pest. Invasive species grow and reproduce at high rates, and often move further into new habitats. In addition to competing with native plants and wildlife, invasive species can impact DoD’s training areas, affecting mission readiness.

Although INRMPs usually focus on preserving resources, sometimes these plans require battling invasive species. This is especially important when an installation is the only place in the world where a particular species of plant or animal still exists.

The yellow star thistle, an invasive plant, was introduced to California in 1850. It is now common in open areas on roadsides, rangeland, wild lands, hay fields, pastures, and waste areas. Recent reports indicate that yellow star thistle infests between 10 and 15 million acres in California. The yellow star thistle has caused lands to be unusable for military training missions at Fort Hunter Liggett. As the yellow star thistle population has increased, so have the impacts on military operations.

The overabundance of the yellow star thistle at Fort Hunter Liggett has prompted a four-year project to substantially reduce the abundance of this invasive species in ways that promote recovery of the ecosystem and support realistic training and other military mission activities. The goal of the project is to demonstrate integrated approaches to manage the yellow star thistle in up to five habitats typical of California and other Western states.

DoD has contributed approximately \$1 million to the Pulling Together Initiative, a national partnership effort with the goal of managing, controlling, and eradicating harmful invasive plants (such as purple loosestrife) on a regional or ecosystem-wide basis. This partnership works effectively across jurisdictional boundaries through designated weed management areas.

The program is managed by the National Fish and Wildlife Foundation on a challenge grants basis. In FY 2002, each DoD dollar leveraged \$2.37 in non-Federal funds, meaning that for every dollar DoD put into the partnership, \$3.37 went directly towards the fight against invasive species.

PARTNERS IN FLIGHT

Partners in Flight is a partnership that recognizes organizations that protect neo-tropical migratory birds and their habitats. Through this partnership, DoD actively manages its natural resources to support mission needs and flight safety goals, while conserving the nesting and migration habitat of these birds. DoD's participation in Partners in Flight offers a coordinated framework for integrating migratory bird management efforts into existing natural resource and land management programs consistent with the military mission.

FOCUS ON THE FIELD

FORT RILEY WINS PARTNERS IN FLIGHT AWARD

The Directorate of Environment and Safety's Conservation Division at Fort Riley, Kansas, received the Partners in Flight Group Award for sound land stewardship in February 2002.

Fort Riley has managed its tallgrass prairie habitat in coordination with the military mission through prescribed burning, closely regulated hay harvesting, and invasive species control. These practices have led to healthy bird populations on the installation. Many bird species use installation land for breeding, migrating, or wintering.

In addition, Fort Riley has established two grassland and four woodland Monitoring Avian Productivity and Survivorship Program stations to assist in determining productivity and survivorship of birds on a local and national level.

In 2002, Partners in Flight unveiled its new 5-year planning document, “Department of Defense Partners in Flight Strategic Plan.” This plan outlines DoD’s strategy for managing migratory birds and their habitats as guided by the goals and initiatives of the regional and technical working groups. These groups identify actions to achieve the goal of maintaining secure populations of migratory birds. The plan lays out goals for the coming years, and highlights the achievements of the last five years.

2002 CONSERVATION CONFERENCE

The theme of the 2002 Department of Defense Conservation Conference was “Proactive Planning for Mission Support.” Presentations at the conference addressed conservation issues and how they pertain to adequately supporting DoD’s training and testing mission in the coming decade. One area of emphasis included encroachment from development on lands surrounding military installations. Encroachment has placed a great deal of strain on military land, and DoD is actively seeking a balance between necessary training and conservation. Speakers at the conference included representatives from DoD; the Department of the Interior; the Advisory Council on Historic Preservation; and other Federal, state, international, and nonprofit organizations.

The conference was designed as a forum for about 470 DoD and a select few non-DoD employees. Attendees were educated and trained on conservation issues, including threatened and endangered species, natural and cultural resources, historic buildings, land management, range sustainment, partnering, stakeholder involvement, invasive species, natural and cultural resources management plans, and Native American issues.

The conference highlighted successes in integrating conservation requirements with military needs. The conference also provided a forum to discuss issues, share success stories and lessons learned, and gain valuable perspectives from the attendees. At the closure of the conference, participants had an increased understanding of the conservation challenges facing DoD and ways that they can address and prepare for these challenges in the future. Due to the success of the 2002 Department of Defense Conservation Conference, plans are in the works for holding this conference every two years.

FY 2002 BUDGET EXECUTION

In FY 2002, DoD invested approximately \$156 million in conservation efforts. Of this amount, DoD invested approximately \$109 million, or 69 percent, in supporting nonrecurring, innovative conservation projects. Of the total Conservation Program nonrecurring budget, DoD invested approximately \$67 million in natural resource initiatives and \$42 million in historical and cultural resource initiatives (Figure 27).

Of the \$67 million allocated for natural resource protection, DoD invested \$5.9 million in wetlands protection—a decrease of 36 percent compared to FY 2001, allowing for inflation (Figure 28). DoD invested \$21 million in managing and protecting threatened and endangered species in FY 2002—an increase of 16 percent compared with FY 2001, allowing for inflation. In addition, DoD invested \$42 million in protecting other natural resources.

DoD invested approximately \$48 million, or 31 percent, of the Conservation Program appropriations in recurring costs. These activities include preparing and updating integrated natural and cultural resource management plans, coordinating with other conservation and regulatory agencies, and other management actions.

FY 2004 BUDGET REQUEST

The President’s FY 2004 Environmental Quality Program budget request includes \$153 million for DoD conservation initiatives. This request is \$7 million, or 6 percent, less than Congress appropriated in FY 2003, allowing for inflation. This decrease is due to a decrease in the number of non-recurring projects.

DoD funds and invests in Conservation Program efforts to develop innovative processes and technologies to improve efficiency. In FY 2004, DoD will continue to lead stewardship efforts through collaborative planning, process improvements, and comprehensive resource management.

Figure 27
DoD Budget Summary:
Natural vs. Historical and Cultural Resources

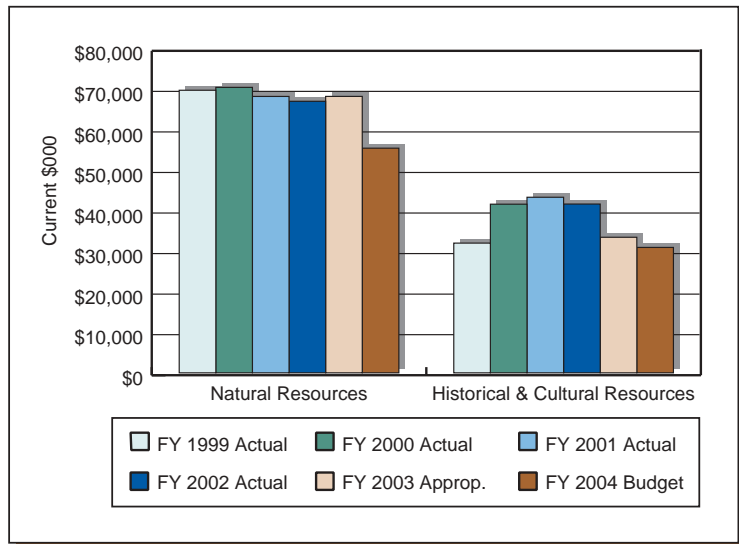


Figure 28
DoD Budget Summary:
Natural Resource Investment by Category

