



Introduction

Significant victories for environmental awareness were achieved during 2007. On August 8, the bald eagle—the national symbol of strength and integrity—was formally removed from the list of threatened and endangered species. This success reflects the efforts of government agencies to protect the nation's natural resources, and to comply with pesticide usage reduction levels. On December 10, the world showed a commitment to raising awareness of environmental changes through the Nobel Peace Prize, which honored contributors for their significant accomplishments and educational dissemination to increase the public's understanding on the subject. From micro to macro, environmental concerns are top priorities for all governments seeking to conserve resources, remediate lands, comply with environmental regulations, and prevent pollution.

Our Nation is engaged in an intense and worthy campaign to protect freedom and democracy around the globe. The Department of Defense (DoD) is developing and applying innovative practices within its environmental management programs to ensure safe training, protect the health of military personnel, and support the defense mission while also providing for the long-term protection and sustainability of national landmarks, wildlife, and lands. The Department is proud of its active efforts to sustain mission readiness in concert with environmental compliance and improvement.

- ▶ **Conservation**— DoD employs both natural and cultural resource professionals who balance mission needs with compliance and stewardship of the nation's entrusted lands. The Conservation program ensures soldiers have the ability to train now and in the future. To conserve natural resources and protect the defense mission, DoD and the Components have created buffer zone programs that provide funding for conservation easements to restrict or prevent development around military lands and ensure that testing and training operations continue. These programs have the dual purpose of creating protective habitats for native plants and animals while limiting civilian exposure to military operations.

- ▶ **Restoration**—DoD has been restoring military lands for 22 years through the identification, assessment, and remediation of environmental contamination accomplished through programs that track progress towards future land restoration goals. The value of maintaining safe environments is incalculable to the operators, troops, and managers who perform real-time activities at former, current, and realigned Defense properties on a daily basis. DoD's restoration program ensures that ongoing operations are safe, uninterrupted, and contribute to sustained military readiness.
- ▶ **Compliance**—DoD adheres strictly to compliance guidelines governing air and water quality. Troops in training for combat missions rely on these resources to be safe and readily available. Therefore, noncompliance with environmental requirements can delay military training and operations. The Department is committed to operating under full compliance to protect valuable funding in support of military personnel, resources, and supplies.
- ▶ **Pollution Prevention**—DoD employs pollution prevention practices every day to reduce, reuse, and recycle the materials commonly used in military operations. Through pollution prevention management, DoD limits the exposure of military personnel to hazardous wastes and materials, improves quality of life, slows ozone depletion, and achieves cost savings in waste disposal. Adhering to these practices allows military personnel to concentrate on their wartime responsibilities and the strengthening of national security.

Successes and challenges of each environmental program over the past fiscal year are detailed in the following pages, fulfilling the reporting requirements of 10 U.S.C. 2706; the Comprehensive Environmental Response, Compensation, and Liability Act; the Resource Conservation and Recovery Act; and various other laws and regulations. Regardless of the program being implemented, DoD's goal is to secure a sustainable future through operational readiness. Together, these programs function as a single cohesive environmental management resource to effectively assess and address risks to both the environment and national defense.



Defense Environmental Funding

Quality of Life, and Veteran's Affairs Appropriations Act (hereafter, MilCon Appropriations Act).

Most funding for DoD's Conservation, Compliance, and Pollution Prevention Programs comes from the Operations and Maintenance appropriations of the DoD Appropriations Act. The Components also use funds for these programs obtained through the MilCon Appropriations Act to build necessary facilities, such as wastewater treatment plants. Small funding amounts are also provided to Military Personnel and through the DoD Appropriations Act for Procurement; Research, Development, Testing, and Evaluation; and the Defense Working Capital Fund.

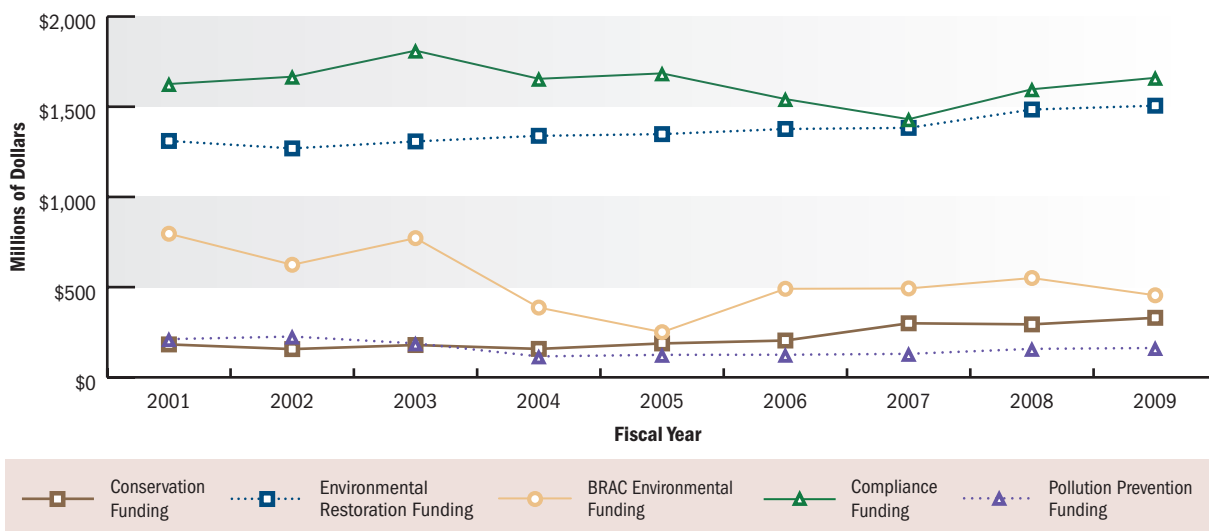
The Department of Defense (DoD) maintains, promotes, and restores environmental assets at its domestic and overseas ranges and installations through an effective planning, programming, budgeting, and execution process that allocates financial resources to where they are needed. This budget and review process ensures that the Components—Army, Navy, Air Force, and the Defense Agencies—identify and request adequate funding to meet mission, legal, and regulatory environmental requirements.

The budget cycle for each fiscal year begins years in advance, requiring DoD to anticipate and plan for its future environmental activities. The Components build their environmental cleanup budgets from the site-level up. The remaining environmental budgets are developed at the installation-level up. These site- and installation-level estimates form the basis for Component environmental budget submissions to the Secretary of Defense. The Secretary includes these requirements as part of the overall Defense budget submitted to Congress by the President. Each fiscal year, Congress authorizes DoD's activities through the National Defense Authorization Act and provides funds through the Department of Defense Appropriations Act and the Military Construction, Military

The Department's Compliance Program (and to a lesser degree, Conservation and Pollution Prevention Programs) includes funding for infrastructure sustainment activities at overseas installations—including activities needed to comply with environmental requirements determined after a review of existing treaties, laws, and other agreements (known as the Final Governing Standards).

Restoration activities within the Defense Environmental Restoration Program (DERP) are funded from the Environmental Restoration (ER) and Base Realignment and Closure (BRAC) accounts. The ER account funds DERP environmental restoration activities at active military installations and formerly used defense sites (FUDS) within the U.S. and its territories. These funds are further separated into five Component-specific ER accounts. A separate appropriation funds environmental restoration activities at BRAC installations, which also addresses closure-related environmental compliance and environmental planning activities. Restoration activities outside the U.S. are funded through the Compliance Program, since ER funds are restricted for use within the U.S. and its territories.

Figure 1 Defense Environmental Funding Trends



Defense Environmental Funding Trends

Over the past 10 years, DoD has invested nearly \$42 billion to ensure the success of its environmental programs. In Fiscal Year (FY) 2007, DoD obligated approximately \$4.0 billion for environmental activities—\$299.6 million for conservation; \$1.4 billion for ER at active installations and FUDS properties; \$492.7 million for BRAC environmental requirements; \$1.4 billion for compliance; \$130.1 million for pollution prevention; and \$227.8 million for environmental technology. While all of DoD's environmental programs work toward the same goal—maintaining readiness while protecting human health and the environment—each program has a unique focus and different funding needs. Figure 1 illustrates how the funding priorities differ for each program.

Environmental Activities

Congress appropriates funding for DoD's Conservation, Restoration, Compliance, and Pollution Prevention Programs, as well as for Environmental Technology, to ensure that the Department is able to continue serving as an environmental steward for the U.S. and its territories. While all recurring costs associated with Manpower, and Education and Training were reported separately under compliance in previous years, these costs were distributed across the appropriate environmental program budgets beginning in FY2007. There is a resulting decrease in Compliance recurring costs and a corresponding increase in the Conservation and Pollution Prevention Programs. Restoration funding for Manpower is included in the total program costs and not broken out separately.

Conservation

Through the Conservation Program, the Department invests in protecting natural and cultural resources located on and near its installations. Policy and funding are provided to manage and protect:

- ▶ Natural Resources, such as threatened and endangered flora and fauna, rivers and other waters, wetlands, land, and air
- ▶ Cultural Resources, including archeological sites, historic buildings, relics of prior civilizations, recovered artifacts, and other national historic treasures.

The Components obligated \$299.6 million in FY2007 for conservation efforts. Conservation funding from FY2006 through FY2009 reflects DoD's efforts to work with surrounding communities to reduce the impact of development that would inhibit training and adversely affect mission accomplishment. Figure 2 shows actual, estimated, and requested funds for recurring and nonrecurring Conservation Program activities. Recurring funds finance continuous conservation management activities, while nonrecurring funds pay for one-time conservation projects associated with threatened and endangered species, wetland protection, or other natural resources.

Additional information about Conservation funding by Component is located in Appendix B: Environmental Management Budget Overview and Appendix C: Conservation Budget Overview.

Figure 2 Conservation Funding (millions)*

	FY2006 Actual	FY2007 Actual	FY2008 Estimated	FY2009 Requested
Recurring†	\$49.7	\$128.7	\$131.3	\$147.3
Nonrecurring	\$154.4	\$170.9	\$162.3	182.7
Total	\$204.1	\$299.6	\$293.6	\$330.0

* Due to rounding, subtotals may not equal fiscal year totals.

† Beginning in FY2007, recurring costs include Manpower, and Education and Training

Restoration

In FY2007, the Components obligated approximately \$1.4 billion in ER funding for environmental restoration activities at active installations and FUDS properties. The Components obligated an additional \$492.7 million for environmental activities at BRAC installations. Of the nearly \$1.9 billion obligated for restoration activities, \$1.6 billion funded cleanup of hazardous substances, pollutants, and contaminants from past DoD activities through the Installation Restoration Program (IRP) and \$277.5 million funded through the Military Munitions Response Program (MMRP). Figure 3 shows actual, estimated, and requested ER funding with breakouts by IRP and MMRP program category. Figure 4 displays actual, estimated, and requested funding for BRAC installations.

Figure 3 Environmental Restoration Funding (millions)*

	FY2006 Actual	FY2007 Actual	FY2008 Estimated	FY2009 Requested
IRP	\$1,203.9	\$1,167.2	\$1,235.8	\$1,212.5
MMRP	\$172.8	\$215.8	\$248.7	\$293.3
Total	\$1,376.7	\$1,383.0	\$1,484.5	\$1,505.8

* Due to rounding, subtotals may not equal fiscal year totals.

ER Account Funding

The ER account funds environmental restoration activities at active installations and FUDS properties. As shown in Figure 3, of the \$1.4 billion obligated for ER activities in FY2007, \$1.2 billion funded cleanup activities under the IRP and \$215.7 million funded cleanup under the MMRP.

The Department currently invests the greatest portion of funding on its remaining high relative-risk sites, continuing its commitment to implement remedies at all of these sites by FY2007. The amount of funding required for high relative-risk sites decreases as DoD nears this goal. Funding priorities will then shift to medium relative-risk sites, to meet the Department's FY2011 goal for implementing remedies at these sites. As the Department achieves its IRP goals, DoD will reallocate IRP funding to the MMRP to further investigate and prioritize MMRP sites and implement cleanup remedies in support of MMRP goals. Funding amounts for FY2006 through FY2009 also reflect the transfer of funds from the ER to the BRAC

account to provide funding for the 2005 round of base closures. These funding shifts are permanent to remediate installations affected by BRAC 2005.

New requirements to address emerging contaminants such as perchlorate; naphthalene; and 1,4-dioxane also drive investments in cleanup. The Department will continue to modify its plans and programs to meet these challenges and adjust total cleanup cost-to-complete estimates accordingly.

Further information about ER funding by Component is located in Appendix B: Environmental Management Budget Overview and Appendix D: Restoration Budget Overview.

BRAC Environmental Funding

The BRAC account provides funding for restoration, closure-related compliance, and planning activities at closing or realigned military installations in the U.S. and its territories. Unlike other appropriations, Congress provides BRAC funding according to BRAC rounds and allows it to remain available until expended—there are no expiration dates for these funds. Over the past 10 years, Congress has provided \$5.8 billion for environmental activities at BRAC installations. FY2006 through FY2009 funding levels reflect funding for restoration at BRAC rounds I-IV, as well as BRAC 2005 installations.

Figure 4 shows actual, estimated, and requested BRAC environmental funding. The estimated Congressional appropriation for BRAC environmental activities in FY2008 is \$550.6 million, and DoD is requesting \$454.8 million for FY2009.

Additional information about BRAC environmental funding by Component is located in Appendix B: Environmental Management Budget Overview and Appendix D: Restoration Budget Overview.

Figure 4 BRAC Environmental Funding (millions)*

	FY2006 Actual	FY2007 Actual	FY2008 Estimated	FY2009 Requested
Total	\$569.2	\$492.7	\$550.6	\$454.8

* Due to rounding, subtotals may not equal fiscal year totals.

Compliance

Congress appropriates funding each year to ensure that DoD remains in compliance with all applicable federal, state, and local environmental laws and regulations. During FY2007, DoD invested \$1.4 billion for activities under the Compliance Program.

Recurring compliance funding is used to cover the relatively constant activities that an installation must perform to maintain compliance with environmental regulations and permit requirements. These activities can include routine sampling and analysis of discharges to air and water, as well as hazardous waste disposal. Other recurring costs include managing National Pollutant Discharge Elimination Systems, updating Clean Air Act inventories, and

conducting self-assessments. Nonrecurring compliance costs address one-time events, such as projects to upgrade wastewater treatment facilities or install air pollution controls to meet existing standards. Typically, DoD's largest annual nonrecurring compliance investment results from Clean Water Act (CWA) requirements for infrastructure investment in wastewater treatment plants; petroleum, oil, and lubricant storage tanks that meet CWA requirements; and storm water management. Figure 5 shows actual, estimated, and requested funds for recurring and nonrecurring compliance activities.

Additional information about compliance funding by Component is located in Appendix B: Environmental Management Budget Overview and Appendix E: Compliance Budget Overview.

Figure 5 Compliance Funding (millions)*

	FY2006 Actual	FY2007 Actual	FY2008 Estimated	FY2009 Requested
Recurring	\$951.1	\$842.5	\$842.7	\$878.3
Nonrecurring	\$591.3	\$588.4	\$754.1	\$782.0
Total	\$1,542.5	\$1,430.8	\$1,596.8	\$1,660.3

* Due to rounding, subtotals may not equal fiscal year totals.

Pollution Prevention

DoD employs pollution prevention efforts to minimize health and safety risks to its personnel and residents of nearby communities, and to reduce environmental conservation, restoration, and compliance costs. The Pollution Prevention Program also promotes sustainment by minimizing the asset footprint required to manage hazardous materials used in support of the Department's mission. As a result, DoD's pollution prevention investments have the potential to reduce costs in all three of the environmental areas. During FY2007, DoD invested \$130.2 million for pollution prevention activities, as shown in Figure 6.

Recurring pollution prevention investments include associated Manpower, Education and Training, supplies, travel, data management, Toxics Release Inventory, and other reporting activities. Hazardous material reduction and CWA requirements are the priorities within the nonrecurring budget. These nonrecurring projects are significant drivers in reducing compliance costs.

Additional information about pollution prevention funding by Component is located in Appendix B: Environmental Management Budget Overview and Appendix F: Pollution Prevention Budget Overview.

Figure 6 Pollution Prevention Funding (millions)*

	FY2006 Actual	FY2007 Actual	FY2008 Estimated	FY2009 Requested
Recurring†	\$55.4	\$79.7	\$88.1	\$90.1
Nonrecurring	\$69.8	\$50.5	\$69.8	\$72.5
Total	\$125.2	\$130.2	\$157.9	\$162.6

* Due to rounding, subtotals may not equal fiscal year totals.

† Beginning in FY2007, recurring costs include Manpower, and Education and Training.

Environmental Technology

DoD's environmental technology programs provide new and improved methods, equipment, materials, and protocols to meet military readiness needs. For example, these programs have produced increased efficiency in paint application and metal plating, resulting in less hazardous waste and lower associated treatment costs. The DoD Environmental Technology Annual Report to Congress covers this area in more detail, and fulfills Congressional reporting requirements. Environmental technology is included exclusively in the budget section of this report to ensure completeness of the environmental budget discussion.

The Office of the Secretary of Defense administers the Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP). SERDP and ESTCP focus on the highest-priority environmental technology needs that apply to more than one Component, and help avoid duplication of effort among Components with similar problems. A portion of environmental technology funding is also invested in Defense Warfighter Protection (DWFP). Environmental technology funding for FY2006 through FY2009 is shown in Figure 7.

Figure 7 Environmental Technology Funding (millions)*

	FY2006 Actual	FY2007 Actual	FY2008 Estimated	FY2009 Requested
Army	\$76.2	\$69.2	\$71.2	\$54.5
Navy	\$53.3	\$46.9	\$40.3	\$34.6
Air Force	\$16.6	\$12.3	\$23.1	\$16.6
SERDP	\$65.5	\$62.2	\$69.1	\$69.2
ESTCP	\$44.7	\$32.3	\$30.9	\$31.6
DWFP	\$5.0	\$5.0	\$5.0	\$5.0
Total	\$261.3	\$227.8	\$247.6	\$211.6

* Due to rounding, subtotals may not equal fiscal year totals.

Overseas Environmental Activities

The Department complies with environmental requirements overseas through the implementation of programs similar to those that have proved to be successful domestically. Funding for remediation activities is included in the overseas compliance activities budget—these investments are necessary to sustain the use of, and access to, the infrastructure and natural resources needed to meet the military mission and comply with environmental requirements as determined by review of the Final Governing Standards. Overseas environmental funding is included in the Conservation, Compliance, and Pollution Prevention funding charts—Figures 2, 5, and 6, respectively—and is also displayed separately in Figure 8.

Figure 8 Overseas Environmental Funding (millions)*

	FY2006 Actual	FY2007 Actual	FY2008 Estimated	FY2009 Requested
Conservation	\$8.3	\$14.3	\$13.8	\$16.5
Cleanup	\$24.1	\$25.1	\$25.5	\$28.3
Compliance	\$110.2	\$102.2	\$115.3	\$130.4
Pollution Prevention	\$12.6	\$12.7	\$13.6	\$13.5
Total	\$155.3	\$154.4	\$168.2	\$188.7

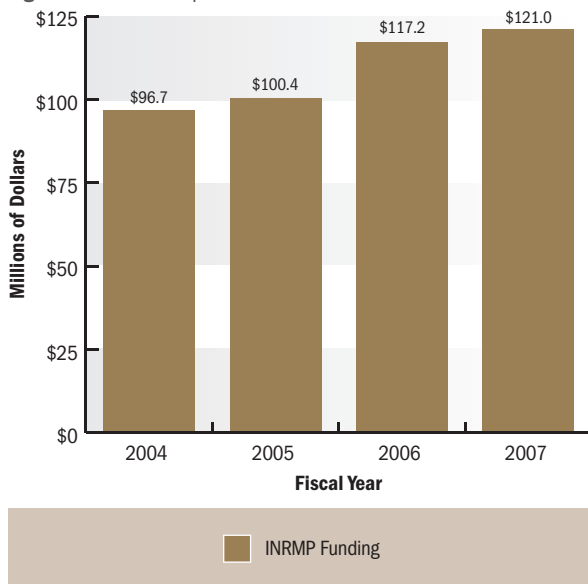
* Due to rounding, subtotals may not equal fiscal year totals.



Conservation

As the fifth-largest federal land management agency in the U.S., the Department of Defense (DoD) serves as the custodian and environmental steward for 30 million acres of land at more than 3,700 locations. DoD installations are rich in natural and cultural resources, which include wetlands, rare ecosystems, threatened and endangered species, archaeological sites, historic records, buildings and structures, cultural landscapes, archaeological collections, traditional cultural places, and sacred sites. By identifying and inventorying natural and cultural resources, the Department is able to develop plans and initiatives to manage those resources. During Fiscal Year (FY) 2007, DoD's conservation efforts continued to focus on sustainable use, management, and resource protection; as well as achieving full and sustained compliance with all federal, state, and local environmental laws and regulations while preserving the military mission. In addition, DoD partnered with other federal, state, and local agencies and interested stakeholders to improve the efficiency of conservation efforts and stewardship of natural and cultural resources under the Department's jurisdiction. Through conservation efforts, DoD maintains the land, water, and airspace needed for military readiness while protecting these valuable resources for current and future generations.

Figure 9 Costs to Implement INRMPs



As a valuable resource for current and future generations, military museums contain some of the finest examples of artifacts and collections depicting the Nation's colorful military history. DoD recently published an update to its report on Operation and Financial Support for Military Museums. Each Military Service sets museum policies and requirements applicable to their individual training, collection, display, and mission needs. By establishing funding priorities, updating policy as needed, and implementing procedures to improve management processes, the Military Services increase efficiency while balancing mission needs, training requirements, and conservation. DoD remains committed to improving museum management, exercising best business practices, and increasing operational efficiency to ensure that these valuable resources are available to members of the Armed Forces, their families, retirees, and the public for years to come.

Natural Resource Management

DoD identifies and manages natural resources on its installations by analyzing natural resource information to determine management needs, resource characteristics, and constraints related to military training and testing activities. By engaging in integrated planning to encourage the sustained use of these resources, the Department preserves the land, water, and airspace needed for military readiness while maximizing critical environmental protection.

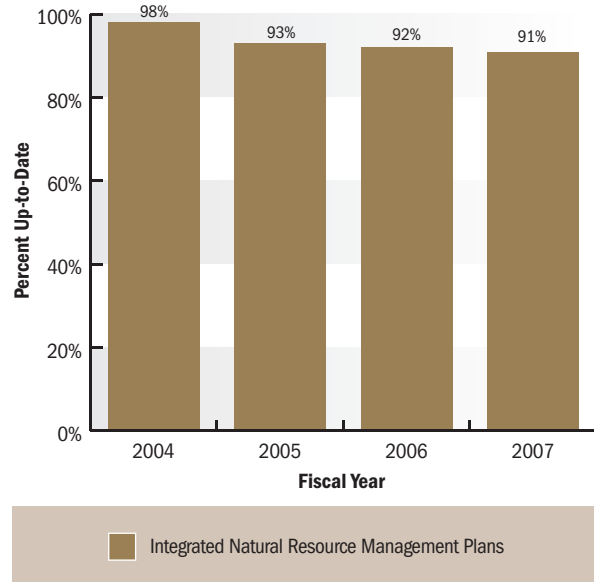
Natural Resource Inventories

DoD conducts inventory assessments (i.e., planning level surveys) of natural resources at installations, enabling managers to develop plans to manage and protect natural assets. Depending on legislative requirements, regulatory status, or facility resource conditions, installations update their inventories frequently to ensure that information is current. DoD also reevaluates installation resource management methods periodically, regardless of any actual changes to existing resource inventories, to ensure that installations are providing the most appropriate management strategy.

Sikes Act Requirements and Integrated Natural Resource Management Plans

The Sikes Act, as amended in 1997, requires DoD to prepare and implement an Integrated Natural Resource Management Plan (INRMP) for each installation in the U.S. with significant natural resources to manage it for conservation and rehabilitation. Additional information on DoD's efforts under the Sikes Act can be found in Appendix G: Natural Resources. An INRMP provides management guidance and sets priorities for natural resource protection, improvement, and restoration. Installations use INRMPs to manage and maintain natural resources, fish and wildlife, forestry, land resources, and outdoor recreation, while supporting mission needs. INRMPs are intended to:

Figure 10 INRMP Progress



- ▶ Reflect “mutual agreement” between the U.S. Fish and Wildlife Service (FWS), state fish and wildlife agency, and the installation
- ▶ Document budget requirements for natural resources
- ▶ 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 for current and future military operations and conservation activities
- ▶ Ensure no net loss in the capability of installation lands to support the military mission
- ▶ Outline the natural resource management activities needed to develop required military mission training platform.

In preparing an INRMP, each installation must work cooperatively with other installation parties (i.e., military trainers and operators, facilities, installation planners, etc.), provide an opportunity for public comment, and formally cooperate with the FWS and appropriate state fish and wildlife agencies.

The Sikes Act requires that all INRMPs be formally reviewed for “Operation and Effect” by the installation, the FWS, and the state fish and wildlife agency on a regular basis, but no less than every 5 years. This does not mean an INRMP needs to be revised every 5 years. An INRMP should be revised when there are significant changes to the military mission or affected assets. Figures 9 and 10 illustrate DoD’s costs to implement INRMPs and progress updating and approving INRMPs, respectively.

Threatened and Endangered Species

Congress passed the Endangered Species Act (ESA) in 1973, to protect species at risk of extinction. The ESA defines an endangered species as one “in danger of extinction throughout all or a significant portion of its range,” while a threatened species is “likely to become endangered” within the foreseeable future. As of September 30, 2007, the FWS listed 1,311 species as either threatened or endangered within the U.S., 319 of which inhabit DoD lands. DoD installations contain some of the finest remaining examples of rare native vegetative communities, such as old-growth forests, tallgrass prairies, and vernal pool wetlands.

DoD spends more than \$40 million each year to protect threatened and endangered species. The Department is required to conserve these species and their habitat that is crucial to their survival and taking no action that would jeopardize their continued existence or adversely modify critical habitat. Under the ESA, any area that is essential to the conservation of a species can be classified as critical habitat by FWS. The FY2004 National Defense Authorization Act modified the critical habitat provision in the ESA to allow the Department of the Interior to utilize an approved INRMP in lieu of a critical habitat designation if the following three-point criteria are met: 1) the plan provides a benefit to the species, 2) the plan provides certainty that the management plan will be implemented, and 3) the plan provides certainty that the conservation effort will be effective. INRMPs can be more effective than the critical habitat designation because they provide a more holistic approach to species conservation and provide greater flexibility for installations to manage natural assets.

Cultural Resource Management

Cultural assets include archaeological sites, historic records, buildings and structures, cultural landscapes, archaeological collections, and traditional cultural places and sacred sites. Protection of the nation’s heritage is an essential part of DoD’s mission. DoD manages 75 National Historic Landmarks; more than 125,000 archaeological sites; and over 600 entries in the National Register of Historic Places, comprised of over 19,000 historic properties on over 200 installations nationwide. DoD uses cultural asset management to support the sustained use of and access to these valuable assets. This planning ensures that operational requirements are met, while minimizing harmful effects on these assets.

Additional information on DoD’s efforts to protect cultural resources can be found in Appendix H: Cultural Resources.

Cultural Resource Inventories

Each DoD installation conducts surveys and maintains an inventory of cultural resources found on the installation. These inventories help installations manage assets and protect important national treasures. Figure 11 illustrates the percentage of up-to-date cultural resource inventories at DoD installations. By the end of FY2007, DoD completed 62 percent of historic building/structure inventories and 54 percent of archaeological inventories.

Integrated Cultural Resource Management Plans

Installations can prepare Integrated Cultural Resource Management Plans (ICRMPs) to define and implement their cultural resources management program. ICRMPs provide a valuable tool for monitoring the status of cultural resources on DoD installations and integrating preservation initiatives with ongoing mission activities. Installations often use ICRMPs in conjunction with INRMPs to effectively manage installation assets.

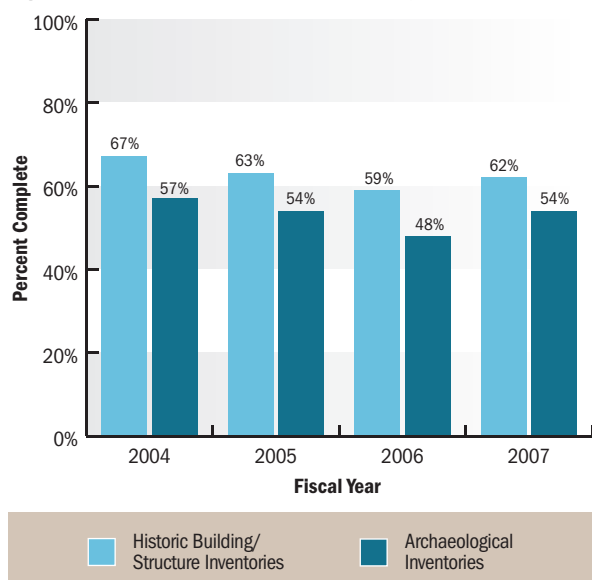
DoD Instruction (DoDI) 4715.3, “Environmental Conservation Program,” requires each U.S. installation with significant cultural resources to prepare an ICRMP. Since 1996, DoD installations have been required to review their ICRMPs at least once annually, and revise and update their plans at least every 5 years. Illustrated in Figure 12, DoD ICRMP progress increased 9 percent since FY2004.

DoD uses ICRMPs to 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.

Legacy Resource Management Program

In recognition that military lands have significant natural and cultural resources, 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 those resources. The Legacy Resource Management Program funds projects that emphasize leadership in exploring new ideas and implementing innovative technologies for natural and cultural resource management. DoD also works in partnership with other organizations under the program to conserve natural and cultural assets in a cost-effective and technically sound manner. The Legacy Resource Management Program facilitates partnerships with federal, state, and local agencies and private groups to cost effectively manage natural and cultural resources.

Figure 11 Cultural Resource Inventories Completed



In FY2007, the Legacy Resource Management Program invested \$7.1 million in 74 projects. These projects focused on Readiness and Range Sustainment, Integrated Natural Resources Management, Regional Ecosystem Management, Invasive Species Control, Monitoring and Predicting Migratory Patterns of Birds, Cultural Resources Management, National and International Initiatives, Historic Preservation and Force Protection, Cooperative Conservation, and Native American Issues.

Native Americans

DoD is proud of the progress it has made towards building collaborative relationships with Native Americans. In FY2006, DoD’s major efforts included the completion of a significant policy initiative concerning federally-recognized tribal governments by signing DoDI 4710.02, entitled “DoD Interactions with Federally-Recognized Tribes.” This Instruction further implements DoD’s October 1998 American Indian and Alaska Native Policy and provides additional details on statutory and regulatory requirements relative to tribal governments. In addition, Congress appropriated \$10.1 million for the Native American Lands Environmental Mitigation Program in FY2007, of which 69 percent was provided directly to the tribes for mitigation costs through Cooperative Agreements.

Details on DoD’s Native American partnerships and projects are located in Appendix I: Native Americans.

Figure 12 ICRMP Progress





Restoration

The Department of Defense (DoD) is committed to the environmental cleanup of contaminated soils, sediment, groundwater, and surface water at military installations in the United States and its territories that resulted from past storage and management activities. Standard practices once used to manage and dispose of hazardous waste and hazardous substances were later found to be detrimental to the environment, and DoD began to identify, characterize, and clean up related contamination in the 1970s. Since 1986, DoD has applied the Defense Environmental Restoration Program (DERP) to restore environmentally impacted property and pursue restoration activities at its active installations, Base Realignment and Closure (BRAC) installations, and Formerly Used Defense Sites (FUDS).

In 1980, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that established a framework for the identification, investigation,

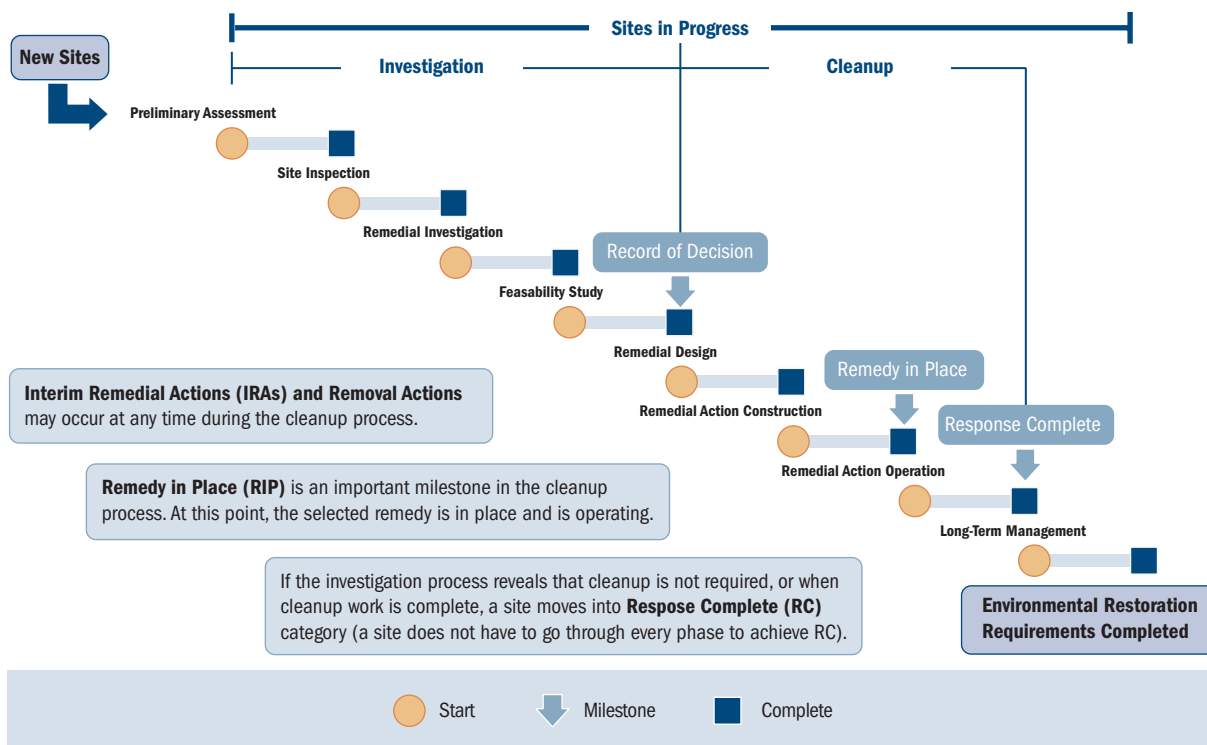
and cleanup of hazardous substances resulting from past practices. While CERCLA was not initially applied at federal government sites, the passage of the Superfund Amendments and Reauthorization Act (SARA)—which codified DoD’s environmental stewardship responsibilities and established restoration standards for use in the U.S. and its territories—in 1986, Congress amended CERCLA and created the DERP. Since the DERP’s inception, the Office of the Secretary of Defense has overseen the program and its implementation by the Components—the Army, Navy, Air Force, Defense Logistics Agency, and Defense Threat Reduction Agency.

CERCLA’s environmental restoration process consists of several phases which are illustrated in Figure 13. While some phases may overlap or occur concurrently, environmental response activities at DoD sites are generally conducted in the order shown. DoD applies the environmental restoration process set by CERCLA and its implementing regulation, the National Oil and Hazardous Substances Pollution Contingency Plan, to all the DoD restoration sites.

The DERP provides for the identification, investigation, and cleanup of contamination and military munitions associated with past activities at DoD facilities to ensure that potential threats to public health and the environment are appropriately assessed and addressed. To effectively address remediation at current and former installations, DoD organized the DERP into three distinct program categories:

- **Installation Restoration Program (IRP)**—The IRP, established in 1985, addresses the release of hazardous substances, pollutants, or contaminants resulting from past practices that

Figure 13 DoD CERCLA Environmental Restoration Process Phases and Milestones



pose environmental health and safety risks. There are currently 27,950 IRP sites at 3,449 active and BRAC installations and FUDS properties.

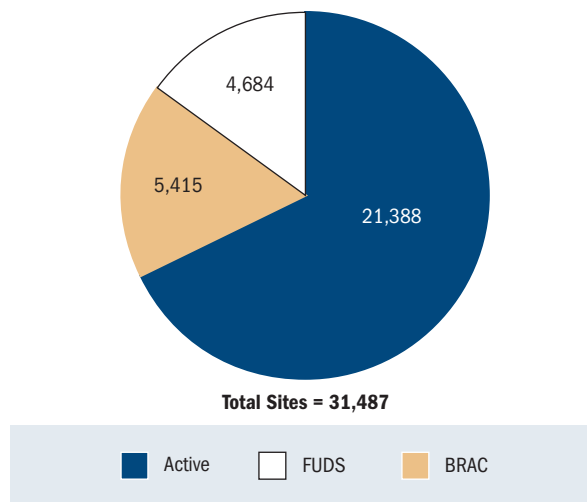
- ▶ **Military Munitions Response Program (MMRP)**—The MMRP, initiated in 2001, addresses safety, environmental and health hazards from unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) found at locations other than operational ranges on active and BRAC installations and FUDS properties. The DoD maintains an inventory of all munitions response sites (MRSs) addressed under the MMRP. There are currently 3,537 MRSs at 1,906 present and former defense properties listed on DoD’s MRS inventory.
- ▶ **Building Demolition/Debris Removal (BD/DR)**—BD/DR provides for the demolition and removal of unsafe buildings or structures at facilities or sites that meet specified criteria. Most BD/DR activities take place on FUDS properties. DoD conducts BD/DR activities at 452 sites on 424 active installations and FUDS properties; these sites are included in IRP site counts unless indicated otherwise.

Through Fiscal Year (FY) 2007, the DoD has conducted environmental activities at 31,487 sites on 1,812 active and BRAC installations and 2,812 FUDS properties. Response actions have been completed at 21,635 sites (approximately 69 percent) and DoD is making progress toward achieving its environmental restoration goals.

Three types of property classifications—active installations, BRAC installations, and FUDS properties—are included under the DERP, and are supported by different funding accounts. Figure 14 shows the site breakdown of these property types, which are described below.

- ▶ **Active installations**—Bases where DoD currently conducts its training and operations. Sites at these installations are funded through four environmental restoration (ER) accounts, one for each Component and one DoD-wide, each managed by its respective Component. Additional information on active installations is located in Appendix J: Active Installations Environmental Restoration Progress.
- ▶ **BRAC installations**—Properties that have been identified for closure or realignment under one of the five BRAC rounds (1988, 1991, 1993, 1995, and 2005). Like the ER accounts, BRAC funding is appropriated by Congress—but these funds are managed through a separate account structure. BRAC environmental funding is used solely for financing environmental remediation, compliance, and closure-related requirements for BRAC installations. Additional information on BRAC installations is located in Appendix K: BRAC Installations Environmental Restoration Progress.

Figure 14 DERP Site Status



- ▶ **FUDS Properties**—Real properties that were under the jurisdiction of the Secretary of Defense and owned by, leased by, or otherwise possessed by DoD. These properties are now owned by private individuals, corporations, state and local governments, federal agencies, and tribal governments. Similar to active installation, FUDS are funded through an ER account. Additional information on FUDS properties is located in Appendix L: FUDS Environmental Restoration Progress.

Prioritization

It is crucial that DoD be able to direct necessary resources to sites that pose the greatest risk because with over 31,000 sites under the DERP, it does not have the capability to address every site at once. Prioritization of sites allows DoD to apply careful consideration and planning to ensure that resources are effectively used to maximize reductions in risk and the progress made toward restoration goals. To reduce health and safety risks posed by historical contamination, DoD employs a risk-based management approach for the DERP made up of three main elements—(1) a systematic process for prioritizing sites based on risk evaluation; (2) program goals and performance metrics to track progress and fulfill restoration requirements at sites; and (3) an outreach program focusing on regulators and stakeholder communities to identify and address concerns.

DoD uses two prioritization tools to determine the risk posed by each site relative to other sites in its inventory to enable funding to be allocated for greatest risk reduction. The Relative-Risk Site Evaluation (RRSE) is used to prioritize IRP sites, and the Munitions Response Site Prioritization Protocol (MRSPP) is used for MMRP sites.

Relative-Risk Site Evaluation

The RRSE framework is a methodology used across DoD to evaluate the relative risk posed by a site in relation to other sites. DoD uses RRSE to prioritize IRP sites into three categories—high, medium, or low relative risk—based on the nature and extent of the site’s contamination, the likelihood that contaminants will migrate, and potential impacts on populations and ecosystems. Sites lacking sufficient information to complete an RRSE are designated as “Not Evaluated.” RRSEs are “Not Required” for sites classified as having all remedies in place (RIP), even those in the remedial action operation phase, or that have achieved response complete (RC) although they may be in the long-term management (LTM) phase. The RRSE framework is intended only for IRP sites and does not extend to the sites solely under the MMRP or BD/DR program, or to potentially responsible party or compliance activities. In prioritizing sites for cleanup, DoD also considers factors such as installation cleanup strategy, progress toward program goals, and stakeholder concerns. At BRAC installations, DoD considers the RRSE framework when determining site prioritization—but reuse needs and priorities, as well as property transfer and redevelopment plans, are also important factors in sequencing cleanup activity.

Munitions Response Site Prioritization Protocol

DoD developed the MRSPP to assign a relative priority to each MRS, based on potential hazards and site conditions, to accurately rank all sites for remediation and funding. DoD promulgated the MRSPP in FY2006. The risk posed by potential hazards present at an MRS is captured by three hazard modules that address (1) the hazards of UXO and DMM; (2) the unique, acute physiological effects of chemical warfare materiel; and (3) chronic health and environmental hazards posed by MC and any incidental environmental contaminants.

DoD’s approach is to evaluate each MRS based on the greatest potential hazards posed by UXO, DMM, or MC, and to consider the three module ratings as a group to determine an MRS’s relative priority. The relative priority assigned to each MRS will serve as the primary factor for sequencing response actions. However, DoD recognizes that other factors, including economic, programmatic, and stakeholder concerns, may impact sequencing decisions. Components were required submit the ratings of each hazard module along with the relative priority for each MRS in the inventory to DoD beginning in FY2007.

With FY2007 serving serving a transition year, Components had the opportunity to report MRS priorities for sites prioritized under the MRSPP or (considered inclusive within DoD) Risk Assessment Code (RAC) scores for those sites awaiting prioritization in accordance with the new requirements. In cases where sites were reported with both scores, the MRS priorities took precedent over the RAC scores for those sites.

Beginning in FY2008, the Components will report MRS priorities for all MRSs.

Restoration Goals and Metrics

DoD has developed comprehensive program goals and performance metrics to measure DERP progress and success under the IRP and MMRP. The Components use these goals to guide investment decisions and set restoration targets during the fiscal year. Progress in the restoration program is measured using several milestones, most notably RIP—meaning that construction of the final remedy at a site has been completed and the remedy is functioning properly and performing as designed—and RC, meaning that all restoration objectives have been met at that particular site. DoD plans to achieve these goals by leveraging regulatory partnerships and planning, managing, and budgeting to ensure the availability of sufficient funding to support restoration plans.

IRP Performance Goals

Performance metrics and comprehensive goals have been developed by DoD to assess progress toward IRP goals. These metrics include phase progress at the site level, progress toward achieving RIP/RC status at the installation level, and progress in achieving overall relative-risk reduction. DoD examines both progress-to-date and projections of future progress when evaluating these performance metrics. Goals focus on completing required cleanup activities at the highest risk sites first, and include:

- ▶ Have sites cleaned up to a lower relative-risk category or achieve RIP/RC at 100 percent of high relative-risk IRP sites at active installations and FUDS properties by the end of FY2007
- ▶ Have sites cleaned up to a lower relative-risk category or achieve RIP/RC at 100 percent of medium relative-risk IRP sites at active installations and FUDS properties by the end of FY2011
- ▶ Achieve RIP/RC at 100 percent of low relative-risk IRP sites at active installations by the end of FY2014
- ▶ Achieve RIP/RC at 100 percent of low relative-risk IRP sites at FUDS properties by the end of FY2020.

DoD was able to achieve RIP/RC for 91 percent of high relative-risk sites at active installations, and reached its projected completed percentage at FUDS sites at the end of FY2007. BRAC installation goals have the added objective of preparing property to be environmentally suitable for transfer and reuse in accordance with CERCLA requirements. DoD has achieved RIP/RC status at 75 percent of its BRAC installations, and expects to achieve RIP/RC status at remaining installations from the first four BRAC rounds and ready them for transfer by FY2019. DoD is currently developing environmental remediation goals for IRP sites identified during the 2005 BRAC round.

MMRP Performance Goals

DoD has developed and implemented program goals and performance metrics to measure MMRP progress. As with the IRP, DoD has developed goals for the MMRP to first address sites with the greatest risk and facilitate their advancement through the phases of the program. Risk-based goals are addressed based on prioritization of sites under the MRSP. Program progress/performance goals have included:

- ▶ Completing preliminary assessments for all MRSs at active installations and FUDS properties by the end of FY2007
- ▶ Completing site inspections for all MRSs at active installations and FUDS properties by the end of FY2010
- ▶ Achieving RIP/RC at all MRSs identified in the first four BRAC rounds by the end of FY2009.

DoD is currently developing RIP/RC goals for all MRSs identified at active installations, FUDS properties, and installations closed or realigned by the 2005 BRAC round, and reached its projected goal of completing preliminary assessments for 96 percent of MMRP sites by the end of FY2007.

Restoration Progress

DoD tracks DERP progress by environmental restoration phase (e.g., investigation, cleanup, and RC) and risk category, demonstrating program progress as sites move from investigation through the cleanup phases to completion of all restoration requirements. Figures 15, 16, and 17 illustrate overall DERP site status at active and BRAC installations and FUDS properties. Through FY2007, DoD has achieved RIP/RC at 79 percent of all DERP sites, which include all IRP, MMRP, and BD/DR sites. Only 17 percent of DERP sites are in the investigation phases, and 4 percent are in the cleanup phases, but have not achieved RIP/RC.

Figure 15 Active Installations
DERP Site Status*

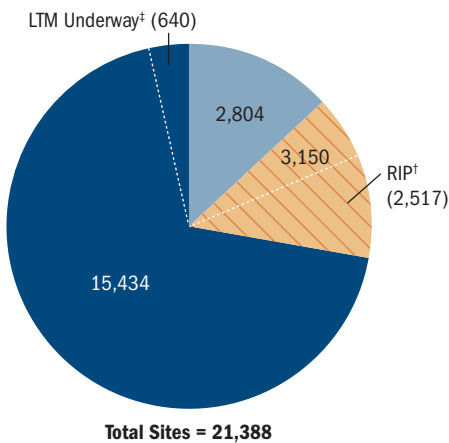


Figure 16 BRAC Installations
DERP Site Status*

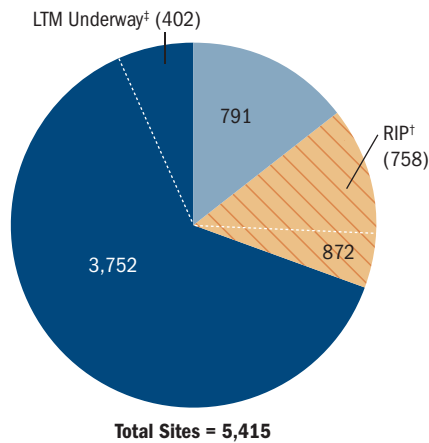
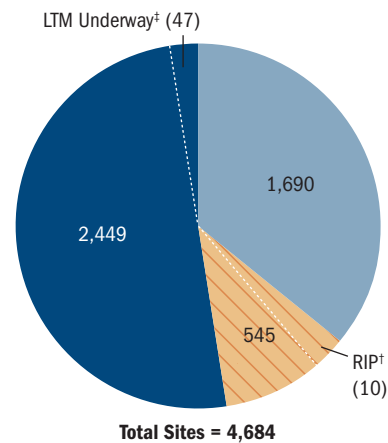


Figure 17 FUDS Properties
DERP Site Status*



■ Response Complete ■ Investigation Planned or Underway ■ Cleanup Planned or Underway

Figure 18 Active Installations
IRP Site Status[§]

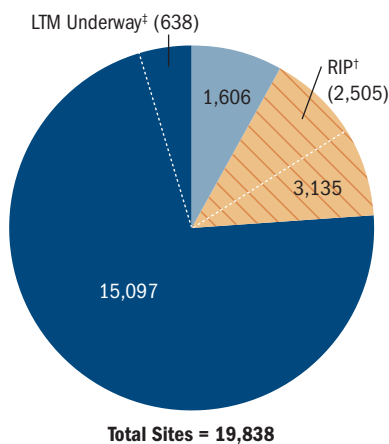


Figure 19 BRAC Installations
IRP Site Status[§]

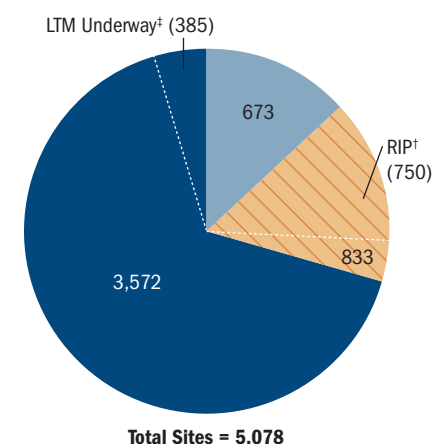
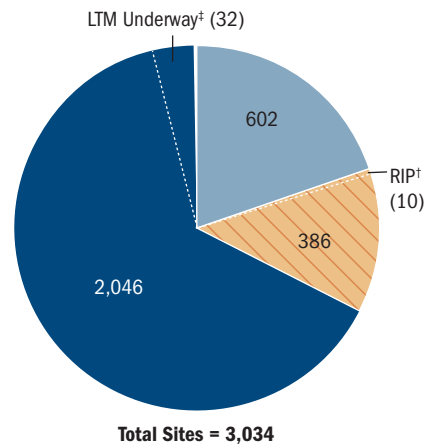


Figure 20 FUDS Properties
IRP Site Status[§]



* Includes IRP, MMRP, and BD/BR sites.
 † RIP is a subset of Cleanup Planned or Underway.
 ‡ LTM is a subset of Response Complete.
 § Includes BD/BR sites.

IRP Site Status and Progress

Progress toward IRP goals is evaluated by reviewing both progress-to-date and anticipated future progress. By examining these performance metrics, DoD is able to identify and address programmatic areas for improvements.

IRP Site Progress by Phase

The majority of DoD's sites in the IRP have advanced from the investigation and study phases toward completing response actions. DoD has achieved RIP/RC status at 86 percent of all IRP sites. Figures 18, 19, and 20 illustrate the status of IRP sites at active and BRAC installations and FUDS properties as of the end of FY2007. These figures show that DoD has achieved RIP/RC status at 89 percent of active IRP sites, 85 percent of BRAC IRP sites, and 68 percent of FUDS properties.

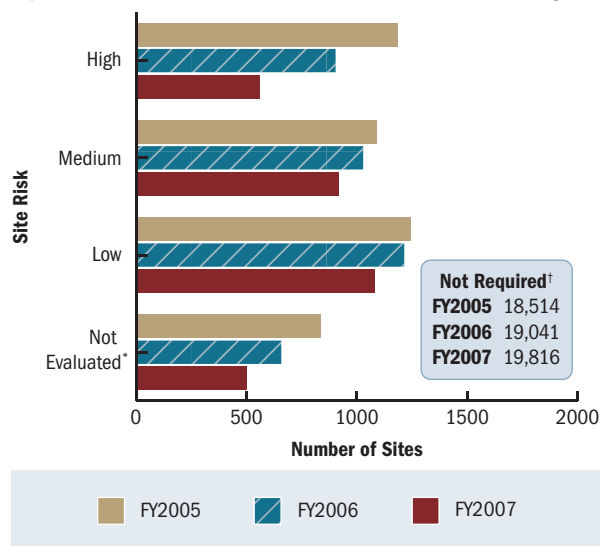
IRP Installation Progress

Achievement of RIP/RC status at the installation and project levels is another performance measure used by DoD to gauge progress, and is reached when all sites at an installation or project have achieved RIP/RC. By the end of FY2007, DoD achieved RIP/RC status at 70 percent of its active and BRAC installations and FUDS properties—representing 81 percent of active installations, 75 percent of BRAC installations, and 59 percent of FUDS properties. Figure 21 shows expected RIP/RC status completion trends. DoD anticipates achieving RIP/RC at active installations by FY2014, BRAC installations by FY2019, and FUDS properties by FY2060.

IRP Relative-Risk Reduction

The number of sites in each relative-risk category is reviewed to evaluate progress towards DoD's goals for active installations and FUDS. The Department exceeded its FY2002 goal of achieving RIP/RC status at 50 percent of high-risk sites and continues to make progress in reducing the number of sites in each relative risk category—particularly the high-risk category, as illustrated in Figure 22.

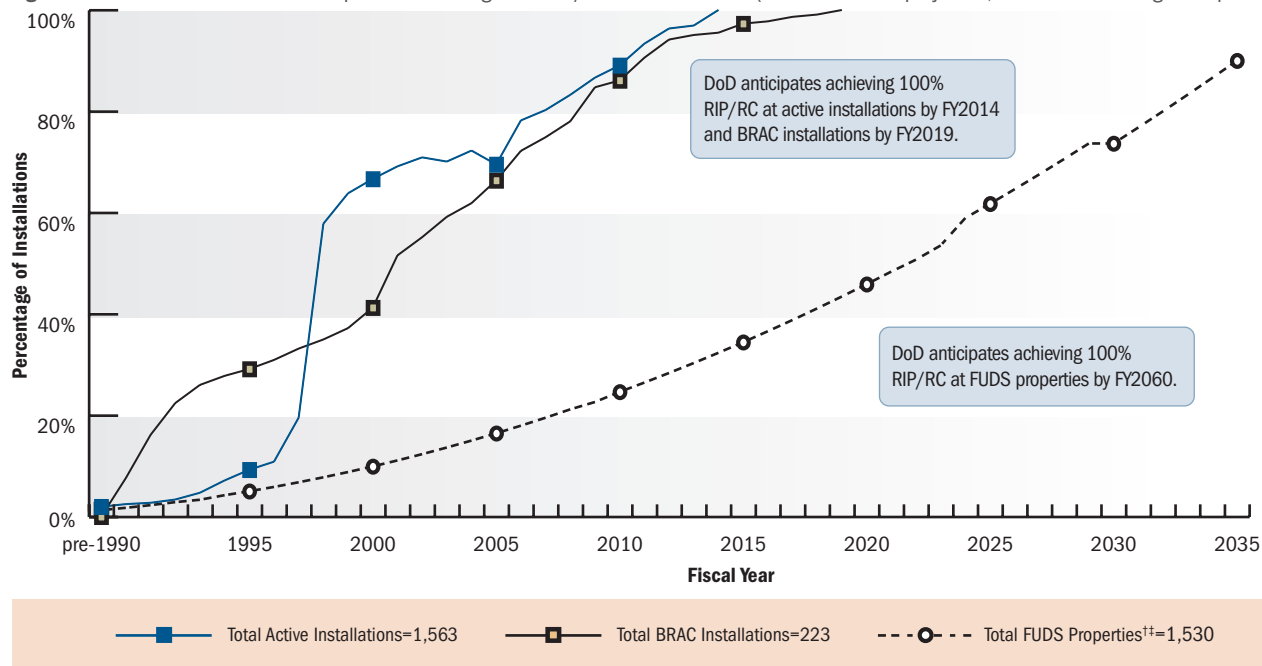
Figure 22 Active Installations and FUDS Properties RRSE Progress



* The "Not Evaluated" category includes a large number of FUDS projects that are exclusively associated with above ground and underground storage tanks; sites requiring RRSE will be determined after tank removal.

† The "Not Required" category includes sites that have already achieved RIP/RC, as well as IRP sites requiring BD/DR, or PRP actions. MRSs are excluded from the chart.

Figure 21 Installations and FUDS Properties Achieving Final RIP/RC at all IRP Sites* (Cumulative and projected, Pre-FY1990 through completion)



* Does not include MMRP or BD/DR sites.

† This graph does not show FUDS properties reaching 100 percent RIP/RC because completion dates have not been determined for some properties. This graph does not include MMRP, BD/DR, PRP, or No DoD Action Indicated properties or projects.

‡ Excludes locations without environmental restoration sites and locations with only MMRP contamination.

In addition, DoD has been successful in reducing its medium and low relative-risk sites. Figure 22 shows that DoD has lowered the number of medium relative-risk sites from 1,029 in FY2006 to 918 in FY2007. DoD continues to make progress in achieving RIP/RC status at all medium relative-risk sites by FY2011 and at all remaining relative-risk sites at active installations by FY2014.

MMRP Status and Progress

DoD continues to build the MMRP and is making progress on all key program elements, including the establishment of program progress goals. The MRS inventory is updated annually, and is released in conjunction with the Defense Environmental Programs Annual Report to Congress. Since the initial reconciliation is between lists maintained by DoD and other government agencies, inventory changes do not necessarily reflect newly discovered MRSs but rather a division of large munitions response areas into multiple discrete MRSs. The current inventory is publicly available at <http://deparc.xservices.com/do/mmrp>.

MMRP Progress by Phase

By the end of FY2007, DoD had identified 3,537 MRSs, an increase of 221 sites from FY2006. Similar to IRP sites, MRSs are categorized according to phase status in the response process. Figures 23, 24, and 25 show the status of MRSs at active and BRAC installations and FUDS properties. Munitions response actions at BRAC installations and FUDS properties have been a part of the DERP for several years, providing DoD with solid experience in addressing environmental and safety hazards associated with the past use of military munitions. As a result, DoD has achieved RC status for 180 MRSs at BRAC installations and 403 MRSs at FUDS properties.

While MMRP performance goals are being finalized, DoD has already begun completing response actions at MRSs and has achieved RC status for:

- ▶ Twenty-two percent of sites at active installations
- ▶ Fifty-three percent of sites at BRAC installations
- ▶ Twenty-four percent of sites at FUDS properties.

Figure 23 Active Installations

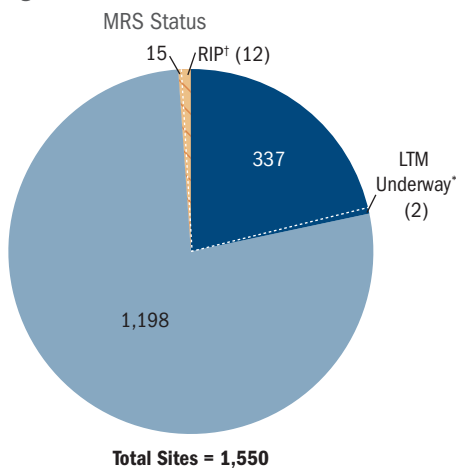


Figure 24 BRAC Installations

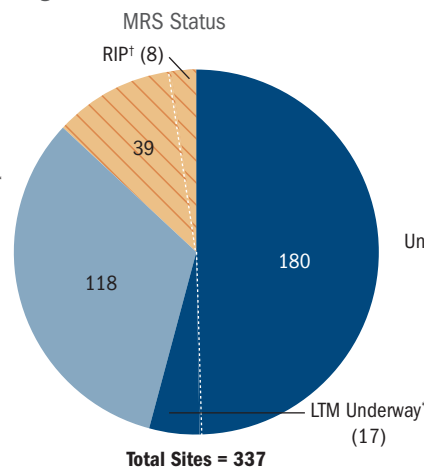
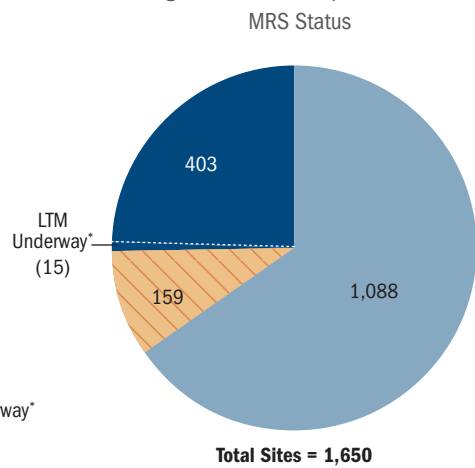


Figure 25 FUDS Properties



Response Complete
 Investigation Planned or Underway
 Cleanup Planned or Underway

*LTM is a subset of Response Complete.
 †RIP is a subset of Cleanup Planned or Underway



Compliance

The Department of Defense (DoD) must protect and sustain environmental resources needed to support military operations. DoD's Compliance Program requires the Department to manage environmental protection, including the protection and management of air, water, and waste disposal, through compliance with environmental regulations. The program is structured so that DoD facilities meet federal, state, and local environmental laws and regulations while continually improving environmental stewardship of natural and cultural resources. The Department hosts periodic reviews to measure DoD's progress toward meeting compliance requirements while providing the Components with guidance and subsequent procedures for meeting regulatory standards.

DoD's compliance activities encompass planning, programming, and budgeting to achieve, maintain, and monitor compliance with applicable environmental requirements. The Department actively develops plans and programs for enhancing environmental quality and uses commercially proven or innovative solutions to meet and exceed compliance requirements. DoD conducts internal and external compliance self-assessments at installations; reports all information required by applicable statutes, regulations, permits, orders, and agreements; promptly corrects any environmental violations discovered; and appropriately remedies any harm done. The Department also uses supplemental environmental projects to improve compliance and strives to reduce compliance costs through pollution prevention activities.

DoD's performance metrics for Clean Air Act (CAA), Clean Water Act (CWA), and Safe Drinking Water Act (SDWA) requirements, as well as enforcement actions and any associated fines and penalties, are further detailed in this section.

Air Quality

Air pollutant emissions are managed by DoD for the purposes of meeting national clean air standards, maximizing operational flexibility, and protecting public health. Requirements established in the CAA and its amendments are the central drivers behind air pollution compliance programs.

Additional information on DoD's effort to protect air quality is located in Appendix S: Air Quality.

Clean Air Act Requirements

Everyday DoD operations generate air pollutants which can cause property damage, injury to human health, and negative impact on the environment. Air pollutant emissions are regulated by the CAA from area, stationary, and mobile sources. DoD Instruction (DoDI) 4715.6, "Environmental Compliance," establishes a framework for measuring DoD's compliance with the CAA.

DoD's Compliance Program helps the Department manage air pollutant emissions, make appropriate investments to promote the attainment of National Ambient Air Quality Standards (NAAQS), and enhance training and operational flexibility by maximizing the use of air resources, while leveraging energy conservation opportunities. DoD tracks emissions for both criteria air pollutants and total hazardous air pollutants (HAPs). The six principal pollutants that have NAAQS are identified as criteria air pollutants and include: ozone (O₃), nitrogen oxides (NO_x), inhalable coarse and fine particulate matter (PM₁₀ and PM_{2.5}, respectively), sulfur dioxide (SO₂), carbon monoxide (CO), and lead (Pb). Volatile organic compounds (VOCs) are reported with the criteria pollutants because VOCs and NO_x are precursors to O₃, which is not directly reported. Under the CAA, Congress identified nearly 200 HAPs known to have harmful human health effects. Although most of the HAPs are organic compounds, some are toxic metals and subsequent compounds. Figure 26 details the Department's CAA emissions in Calendar Year (CY) 2007.

Annual metric reporting is conducted by the Department to ensure that DoD activities are aligned with protecting air resources. To minimize impacts on air resources, DoD collects information on the quantity of regulated air pollutant emissions laws and regulations of the U.S. or host nation as identified in the Final Governing Standards. The Final Governing Standards reduce overall energy use while managing costs associated with air pollution.

Figure 26 CY2006 Air Emissions (tons/year)

Air Pollutants	Total
HAPs	1,912.49
VOCs	10,840.94
NO _x	16,376.10
PM ₁₀	47,424.82
PM _{2.5}	849.74
SO ₂	1,5192.39
CO	10,917.88
Lead	79.23

Water Quality

The success of DoD's mission and the quality of life for DoD personnel, their families, and nearby communities relies directly on protecting and preserving natural resources. DoD strives to comply with U.S. Environmental Protection Agency (EPA) and state water quality and drinking water standards to protect water assets. These standards describe protective water quality criteria and allowable uses for bodies of water.

Additional information on DoD's efforts to protect water quality is located in Appendix U: Water Quality.

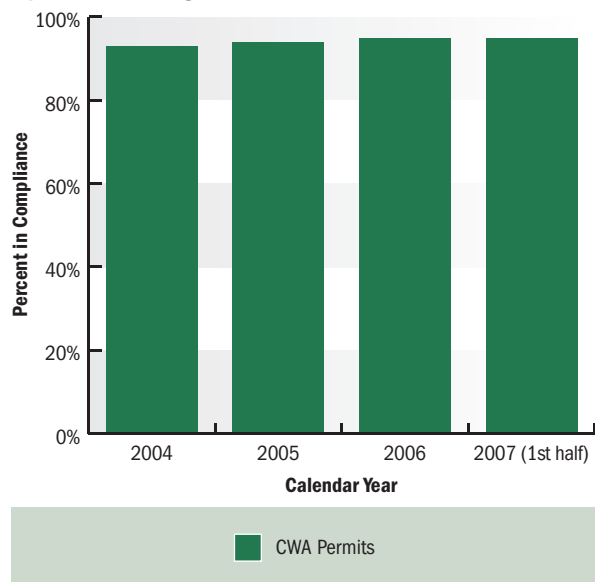
Clean Water Act Requirements

All national facilities that discharge wastewater, including federal facilities, are required under the CWA to hold permits that establish pollution limits and specify monitoring and reporting requirements. National Pollutant Discharge Elimination System (NPDES) permits, issued by either EPA or by a state with permitting authority from the EPA, regulate pollutants discharged into surface waters by industrial, municipal, and other facilities. A framework for measuring DoD's compliance with NPDES permits in accordance with the CWA is outlined in DoDI 4715.6, "Environmental Compliance."

DoD effectively manages domestic and industrial wastewater and stormwater to protect public health; meet clean water standards; maximize operational flexibility; protect watersheds and ensure availability of discharge capacity to support the mission; and leverage water conservation opportunities. To measure success, DoD collects information on the number of water pollution control permits and the number of permits that are in compliance.

DoD's compliance rate has increased over the last few years, with 95 percent of DoD's water pollution control permits in compliance for the first half of CY2007, as

Figure 27 CWA Progress



reported in Figure 27. EPA measures only the compliance of DoD's major NPDES permitted facilities, while DoD measures the compliance of all DoD NPDES permits. Therefore, the compliance rate reported here may differ from EPA's report of DoD's compliance rate.

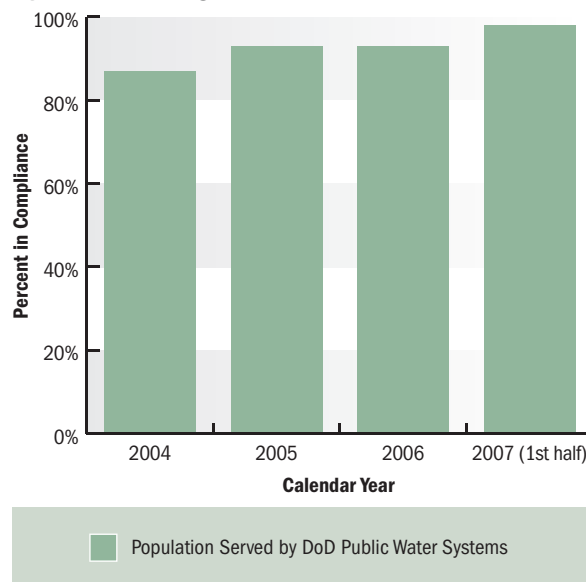
Safe Drinking Water Act Requirements

The SDWA authorizes EPA to monitor the quality of the nation's drinking water supply by protecting against naturally occurring and man-made contaminants, both potentially found in drinking water. These drinking water standards apply to all public water systems (PWSs), including DoD's drinking water systems.

DoD strives to consistently provide safe drinking water to protect the health of people living and working on DoD installations; protect, restore, and sustain water resources to ensure long-term capability at installations; and support readiness by conserving resources through efficient management of drinking water assets. To ensure these goals are met, the Department annually collects information on the percentage of the DoD population served by DoD PWSs that meet established drinking water requirements and the annual cost of managing drinking water.

During the first half of CY2007, approximately 98 percent of this population received drinking water that met all established drinking water requirements. DoD frequently tests all supplied water, and if a PWS does not meet standards, DoD notifies its customers. Only 2 percent of this population received at least one public notification of a drinking water violation in the first half of CY2007, as shown in Figure 28. DoD continuously makes active efforts to correct any exceedance.

Figure 28 SDWA Progress



Enforcement Actions and Fines

Compliance activities are managed by DoD to ensure full and sustained compliance with U.S. environmental laws and overseas environmental obligations. By doing this the Department maintains robust self-audit and corrective action programs and is able to identify and correct noncompliance in a timely manner. Despite best efforts, occasional instances of noncompliance arise and, as a result, DoD is subject to enforcement actions and the associated fines and penalties. Concerted efforts are made to reduce enforcement actions because they negatively impact human health, the environment, and the mission by diverting resources away from other activities.

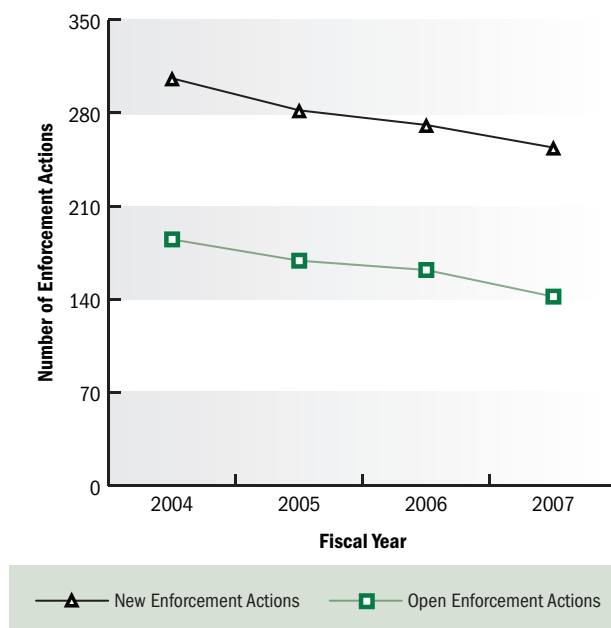
Additional information on Fiscal Year (FY) 2007 enforcement actions is located in Appendix V: Enforcement and Fines.

Enforcement Actions

Open compliance enforcement actions, both domestic and overseas, decreased from 163 in FY2006 to 142 in FY2007. Once open, legal issues, such as whether the federal government has waived its sovereign immunity and can pay penalties to state or local regulators, make enforcement actions difficult to close. Despite the difficulties, the number of open enforcement actions decreased from 163 in FY2006 to 142 in FY2007, as illustrated in Figure 29.

Periodic assessments and audits are performed by DoD to identify and correct areas of possible noncompliance before regulatory inspections occur. The number of new enforcement actions has decreased from 272 actions in FY2006 to 254 new enforcement actions in FY2007, as shown in Figure 29.

Figure 29 Compliance Enforcement Actions

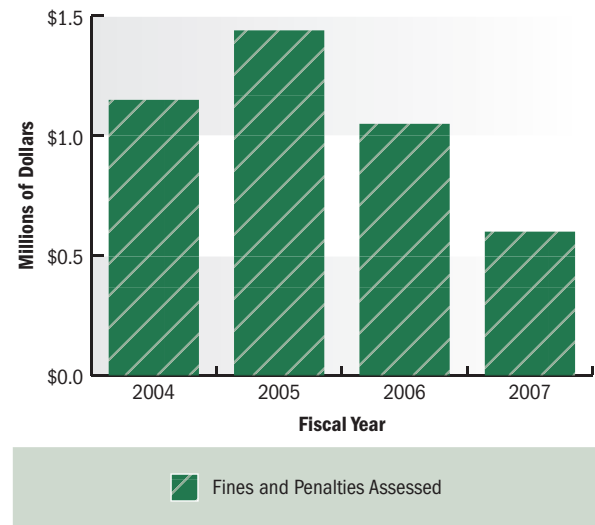


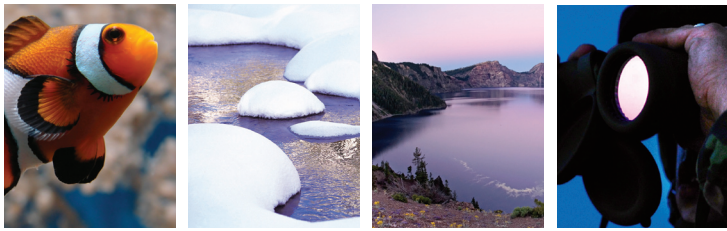
Fines and Penalties

DoD facilities may be subject to fines and penalties if they are found to be in noncompliance with federal, state, or local environmental laws and regulations. This can result in fines and penalties that may have a negative impact on DoD's mission by limiting the ability to test new equipment and train personnel or by preventing the use of noncompliant facilities and equipment.

Figure 30 shows the trends in fines and penalties assessed from FY2004 through FY2007. In FY2007, the amount of fines assessed significantly decreased from \$1.2 million in FY2006 to \$566,545.

Figure 30 Fines and Penalties Assessed



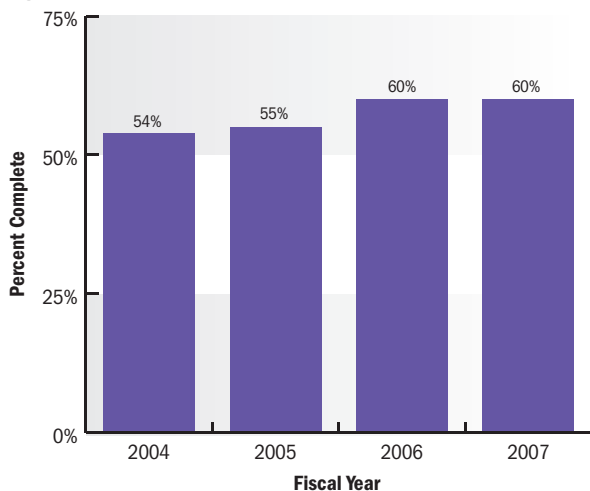


Pollution Prevention

Pollution prevention is the Department of Defense's (DoD's) preferred approach to environmental management. Integrating this approach into day-to-day mission activities can help protect DoD personnel and surrounding communities, the property DoD holds in public trust, and facilities that support military readiness. DoD's Pollution Prevention Program includes recycling, reducing use of hazardous materials and developing safer alternatives, purchasing environmentally preferable products, reducing toxic chemical releases, and eliminating the use of ozone-depleting substances (ODSs).

On January 24, 2007, Executive Order (E.O.) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management," was signed by the President. E.O. 13423 contains several provisions related to pollution prevention activities, including the reduction of hazardous and toxic chemicals and the purchase and use of environmentally preferable products. These new requirements will help ensure that DoD sets proper goals to reduce the quantity of toxic and hazardous chemicals and materials it acquires, uses, or disposes of, and maintains cost-effective waste prevention and recycling programs at its facilities.

Figure 31 DoD Solid Waste Diversion



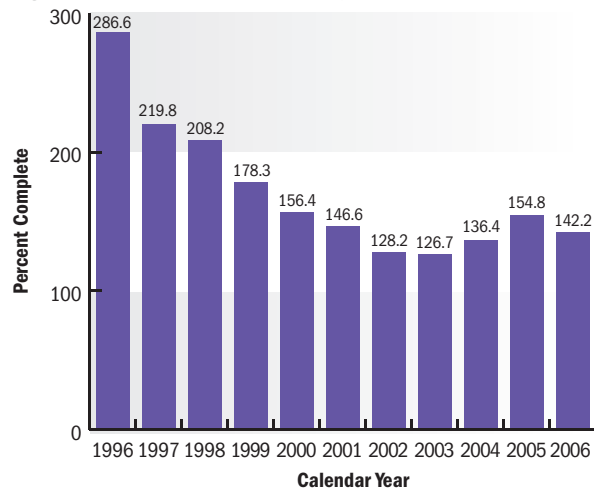
Throughout Fiscal Year (FY) 2007, DoD has continued to reduce pollution—exceeding its 40 percent diversion rate goal for non-hazardous solid waste, and achieving an overall diversion rate of 60 percent. In addition, DoD received a Best-of-the-Best Stratospheric Ozone Protection Award from the U.S. Environmental Protection Agency (EPA) during the 20th anniversary celebration of the Montreal Protocol. DoD was presented with the award for its leadership in military ozone layer protection and developing and deploying ozone-friendly policies and technologies.

Solid and Hazardous Waste Management

DoD is committed to reducing solid and hazardous waste through a strong emphasis on pollution prevention, and uses integrated solutions to reduce waste generation and increase the diversion of materials from the waste stream. DoD increased its diversion of non-hazardous solid wastes in 1998, by setting a solid waste diversion rate goal of 40 percent or greater by the end of Calendar Year (CY) 2005. This goal was met in FY2001, when DoD's diversion rate reached 45 percent. In FY2005, DoD revised its solid waste reporting metric to identify construction and demolition (C&D) debris and municipal solid waste diversion rates.

In FY2007, DoD generated 5.8 million tons of solid waste—3.4 million tons of C&D debris and 2.5 million tons of non-hazardous municipal solid waste. This generation of municipal solid waste equated to 3.6 pounds per person per day. DoD's overall FY2007 diversion rate was 60 percent, as illustrated in Figure 31. This included a 73 percent C&D debris diversion rate and a 40 percent diversion rate for non-hazardous municipal solid waste. The solid waste program produced a cost savings of \$180 million in FY2007 through the use of integrated solid waste management practices.

Figure 32 DoD Hazardous Waste Disposal



Between CY1996 and CY2006, the total amount of hazardous waste disposed of declined by 50 percent. In CY2006, DoD's hazardous waste efforts kept over 142 million pounds of hazardous waste from being disposed of into the environment, as shown in Figure 32. This reduction is largely due to DoD identifying opportunities to reduce this type of waste generation.

Additional information on solid and hazardous waste management is located in Appendix W: Solid and Hazardous Waste.

Green Procurement Program

DoD is the largest purchasing entity in the federal government, and spends more than \$300 billion on goods and services each year. Since FY2004, DoD has jointly managed a formal procurement program to assist Military Components with purchasing environmentally preferable products. DoD's Green Procurement Program (GPP) is focused on enhancing and sustaining mission readiness through cost-effective acquisitions that reduce resource consumption and solid and hazardous waste generation while enabling DoD to remain in compliance with federal laws and regulations. DoD's GPP applies to all acquisitions—from major systems programs to individual unit supply and service requisitions—and considers factors such as energy use, resource conservation, price, and safety.

DoD's GPP has achieved much over the past few years. In FY2005, DoD was one of 12 federal agencies to sign a Federal Electronics Challenge Memorandum of Understanding that promoted the implementation of environmentally preferable, energy-efficient, and cost-effective practices when buying, using, and managing the life cycle of electronic assets. In FY2006, DoD issued a memorandum supporting U.S. Department of Agriculture efforts to promote the use of biobased products, to encourage and reemphasize the importance of using biobased products in DoD operations and applications wherever feasible. In FY2006, DoD hosted a biobased products showcase and educational event to facilitate information sharing among the biobased product industry and individuals who specify, buy, and use commercial or industrial products in DoD operations. With these accomplishments, DoD will continue to place emphasis on green purchasing and strive to ensure that every procurement meets applicable federal requirements.

Additional information on DoD's GPP is located in Appendix X: Green Procurement.

Toxics Release Inventory

DoD is diligent about complying with the Toxics Release Inventory (TRI) reporting requirements and reducing releases of toxic chemicals from DoD facilities. In FY2000, E.O. 13148, entitled "Greening the Government Through Leadership in Environmental Management," required federal agencies to reduce their reported TRI releases and off-site transfers of toxic chemicals for treatment and disposal by

10 percent annually or 40 percent overall by December 31, 2006. Based on a CY2001 baseline year, this 40 percent goal is in addition to the 50 percent reduction DoD had achieved between CY1994 and CY1999 in compliance with E.O. 12856, entitled "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements."

Many TRI-reported releases from DoD facilities occur as by-products of critical DoD manufacturing and utilities processes (e.g., nitrate compounds from wastewater treatment, hydrochloric acid from coal-fired heating plants). These and other mission-related releases have risen as a result of the increased training and operational requirements needed to support the warfighter. To further reduce its TRI releases, DoD would require significant resource investment and the development of new technologies to enable substitution while maintaining mission capability. Because of these challenges, DoD did not meet the goal of a 40 percent reduction in TRI releases by the end of CY2006, but DoD will continue to examine efforts to reduce TRI releases under E.O. 13423.

Ozone-Depleting Substances

DoD is a leader in ODS reduction, and was one of the first organizations to commit to reducing the use of ODSs after the signing of the Montreal Protocol. Each Military Component has taken its own approach to reducing ODSs based on specific mission requirements. For example, the Army instituted an aggressive ODS elimination policy targeting its legacy weapon systems. The Navy developed a comprehensive four-pronged approach to eliminate the use of Class I ODSs at facilities and in mission-critical weapon systems. The Marine Corps has completed implementation of installation-level ODS elimination initiatives at all but two of its facilities, and is also implementing a transition plan to upgrade its Light Armored Vehicle fire suppression systems to non-ODS technology. The Air Force adopted a centralized ODS management program to ensure appropriate emphasis on eliminating ODS usage as technically and economically feasible alternatives become available. Lastly, the Defense Logistics Agency supports warfighting readiness and preparedness through its management of the DoD ODS Reserve, the only available source within DoD of Class I ODSs.

These and related DoD efforts have yielded very positive results. In addition to the DoD Best-of-the-Best Stratospheric Ozone Protection Award, the Navy received six awards for its ongoing efforts to eliminate ODSs—and the Air Force received two awards, one for the overall Air Force ODS management program, and the other for work on aviation halon replacement.

Additional information on ODSs is located in Appendix Z: Ozone-Depleting Substances.



The 2007 DISP also intends to protect DoD's capabilities through informed risk decisions. One of the plan's objectives in this area is to restore contaminated property impacted by past Defense activities to a level protective of human health and the environment. The Defense Environmental Restoration Program addresses over 30,000 sites at active military installations, locations slated for closure, and formerly used defense sites throughout the U.S. and its territories. Restoring these properties protects both military personnel and the public from potential environmental health and safety hazards.

Following another successful year in environmental management, DoD will make further improvements to its strategies to preserve, restore, and manage its abundant land, air, and water resources. Successful implementation of E.O. 13423 and exercise of the 2007 DISP are expected to foster a more secure and sustainable future—one that will continue to contribute to the strength of our armed forces, our environment, and our Nation.

Looking Forward

The Department of Defense (DoD) faces many security challenges in the 21st century, requiring responses able to adapt to any possible threat. The environment is an integral part of our Nation's force capabilities, and DoD is proud to preserve and protect the lands with which it has been entrusted—not only to maintain readiness, but to ensure the security of our future generations.

To meet these complex challenges, the President signed Executive Order (E.O.) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management," in January 2007. E.O. 13423 consolidates and enhances previous orders into a cohesive set of goals to promote sustainable practices across the public sector, including DoD. The Order will promote leadership within the federal government in the areas of energy security and environmental performance.

Compliance with E.O. 13423 and other federal, state, and local environmental laws and regulations will help DoD to avoid what are often costly litigation fees—enabling the Department to focus financial resources on the Defense mission and protection of its air and water assets. DoD will provide Components with guidance and procedures for meeting E.O. 13423 standards, and host periodic reviews to measure progress toward meeting these requirements.

In the coming year, DoD will evaluate its current measures of progress for programs covered under the Order. For example, within the Pollution Prevention Program DoD will review plans to reduce the quantity of toxic and hazardous chemicals purchased, used, or disposed of, and increase its diversion of solid waste. The Department will also monitor the effectiveness of its waste prevention, acquisition, and recycling programs.

Strategies and desired outcomes of E.O. 13423 are included in the 2007 Defense Installations Strategic Plan (DISP). This plan also outlines measures to manage natural and cultural assets in support of the military mission. The Department will continue to partner with state and federal agencies to conserve open spaces surrounding its installations, protect and restore the habitats of threatened and endangered species, and preserve water resources through reduced consumption.