



INTRODUCTION

The Department of Defense (DoD) manages environmental assets comprised of more than 30 million acres of land with attendant air and water assets, and thousands of military facilities and former defense properties throughout the United States and abroad in support of its national security mission. This built and natural infrastructure provides the capability to organize, train, and equip the nation's military to perform its mission. In cooperation with communities and regulators, the Department's environmental programs sustain, restore, and modernize its environmental assets to maintain readiness and protect human health.

- Through the Conservation program, DoD manages natural and cultural assets. The Department maintains and preserves these valuable assets, including threatened and endangered species, archaeological and historical sites, wetlands and rare ecosystems, and Native American sites. These activities sustain capability for defense personnel to test equipment and train in realistic environments and preserve these assets for current and future generations.
- The Defense Environmental Restoration Program addresses hazardous substances, pollutants, contaminants, and, in some cases, military munitions remaining from past operations at military installations and formerly used defense sites. The Department restores contaminated assets to protect military personnel, their families, and the public, and to effectively reuse brownfield-like properties instead of greenfield conversion, a term which refers to the development of open space.
- Through the Compliance program, DoD participates in the development of new laws and regulations, provides guidance and procedures for installations to meet regulatory requirements, and measures the Department's compliance progress. DoD builds sustainable operations in compliance with all environmental requirements in conjunction with operational requirements for infrastructure.
- The Pollution Prevention program promotes sustainment by minimizing the asset footprint required to manage hazardous materials over the operational lifecycles of weapon systems. The Department's initiatives within this program reduce the use of hazardous materials and strive to limit the generation of solid and hazardous wastes.

This report describes DoD's efforts through these mutually reinforcing environmental programs to ensure the safe and effective use, protection, restoration, and preservation of the Department's natural infrastructure.



DEFENSE ENVIRONMENTAL FUNDING

The Department of Defense (DoD) sustains, restores, and modernizes its environmental assets at ranges and installations, at home and abroad, with effective program planning, funding, management, and execution. The budget process ensures that the DoD Components—the Army, Navy, Air Force, and Defense Logistics Agency—identify and request adequate funding to meet mission, legal, and regulatory environmental requirements.

The budget cycle for each fiscal year (FY) begins years in advance, requiring DoD to anticipate and plan for future environmental activities. DoD Components build their environmental budgets from the installation-level up. These installation-level estimates are the basis for Component environmental budget submissions to the Secretary of Defense. The Secretary includes these requirements as part of the overall Defense budget that the President submits to Congress. Subsequently, Congress authorizes DoD’s activities through the National Defense Authorizations Act and provides funds through the Defense Appropriation Act for each fiscal year.

Many factors influence DoD’s environmental funding levels, including environmental laws and regulations, departmental and congressional priorities, progress toward program goals, emerging environmental challenges, and new requirements. While many important programs require federal funds, the Department believes it is critical that Components receive adequate funding to meet their infrastructure capability requirements and to ensure the protection of human health and the environment. Congress provides various appropriations based upon the specific needs and requirements of each environmental program.

The bulk of the funding for the Conservation, Compliance, and Pollution Prevention programs comes from Operations and Maintenance appropriations. The Components also use funding from Military Construction appropriations within these programs to build necessary facilities, such as wastewater treatment plants. In addition, these programs receive support from various Procurement appropriations to buy needed equipment and from Military Personnel funds to pay the salaries of the military people assigned to these programs. The Defense Working Capital Fund and Family Housing appropriations also fund portions of these programs. The Compliance program (and to a lesser degree, the Conservation and Pollution Prevention programs) includes funding for infrastructure sustainment activities at overseas installations, including those activities necessary to sustain infrastructure capability to meet the military mission and to comply with environmental requirements under standing treaties, laws, contracts, or other agreements and environmental restoration requirements.

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 United States and its territories. These funds are further divided into five Component-specific ER accounts. A separate account structure funds environmental restoration activities at BRAC installations, which also addresses closure-related environmental compliance and environmental planning activities. Environmental restoration at overseas installations is funded through the Compliance program.

Defense Environmental Funding Trends

Over the past 10 years DoD has dedicated an investment of almost \$43.4 billion to ensure the success of its environmental programs. In FY2004 alone, DoD obligated approximately \$3.9 billion for these environmental activities—\$0.1 billion for conservation, \$1.3 billion for environmental restoration at active installations and FUDS, \$0.4 billion for BRAC environmental requirements, \$1.7 billion for compliance, \$0.1 billion for pollution prevention, and \$0.3 billion for environmental technology. While all of DoD’s environmental programs work toward the same goal—maintaining readiness and protecting human health and the environment—each program has a unique focus, and thus different funding needs. Figure 1 illustrates how the funding trends for these programs differ.

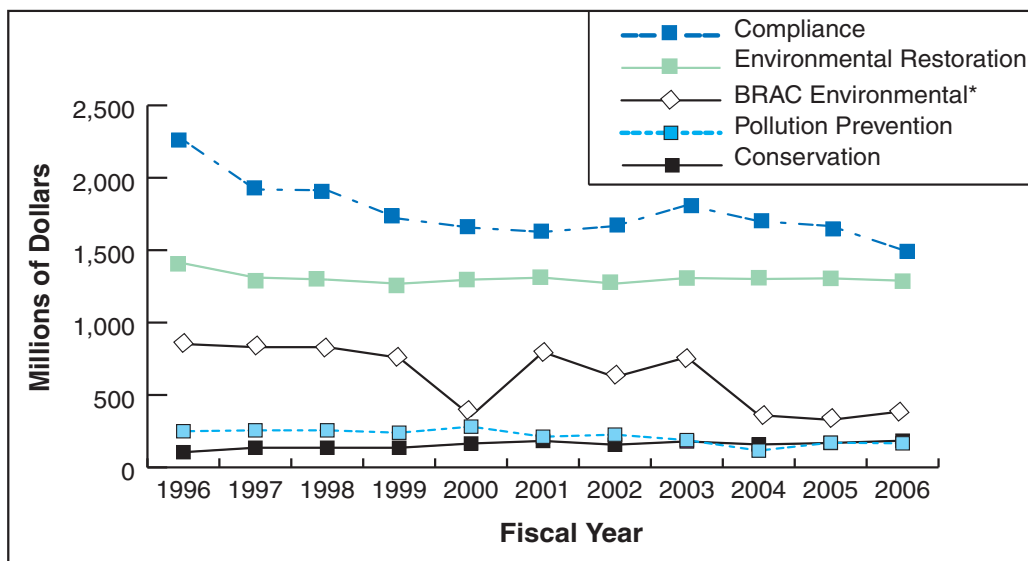
Funding for the Conservation program has remained relatively constant over the past 10 years. Funding for this program increased slightly in FY2004 to execute projects that were identified as new requirements in revised Integrated Natural Resource Management Plans (INRMPs).

DoD has received stable funding in the ER account over the past 10 years, while environmental funding for the BRAC account has fluctuated. Funding for BRAC environmental activities declines as DoD completes environmental restoration requirements at BRAC installations and increases when DoD identifies new cleanup requirements, such as the requirement to address munitions response actions in FY2001.

Compliance funding decreases as the Department completes requirements from prior environmental legislation, as DoD incorporates sustainable practices and more effective environmental processes into Defense activities, and as the defense infrastructure is reduced. Funding requirements may fluctuate in the future as DoD completes large military construction projects as older facilities are renovated or rebuilt.

DoD’s Overseas Activities funding establishes environmental programs that closely resemble similar programs inside the United States at military installations overseas. Funding in this program fluctuates due to completion of pollution prevention and compliance projects.

Figure 1
Defense Environmental Funding Trends



* Includes BRAC environmental restoration, compliance, and planning.

By allocating funding for pollution prevention activities, the Department continues to reduce its use of hazardous material and generation of hazardous and solid wastes, thereby protecting human health and the environment. Pollution Prevention funding decreased in FY2004 due to the completion of several one-time projects and competing funding demands.

The Department's environmental technology strategy is to more efficiently and effectively address environmental needs through investments in new environmental technology, including new or improved methods, equipment, materials, and protocols. Environmental technology funding fluctuates as Congressionally mandated one-time projects are completed and new ones are initiated.

DoD expects that overall funding needs will decrease in future years as defense activities become more sustainable, technological advances make environmental activities more efficient and cost-effective, and environmental restoration requirements reach or near completion.

Conservation

DoD invests in protecting the natural, historical, and cultural assets located on and near its installations. The Department funds these efforts through its Conservation program. Under the Conservation program, DoD provides policy and funding to address:

- Cultural Assets - historic buildings on bases, relics of prior civilizations that are on bases and ranges, and recovered artifacts like the *USS Monitor* and other national historic treasures
- Natural Assets - plant and animal life, rivers, and wetlands on the installations where the warfighter trains, lives, and works.

The costs to conserve the Department's cultural and natural assets are either recurring or nonrecurring. Recurring conservation costs are those relatively constant activities that an installation must complete to support the Defense mission through asset sustainment, which encompasses maintaining compliance with environmental regulations and permits. Recurring conservation activities include preparing and updating Integrated Natural and Cultural Resource Management Plans, coordinating with conservation regulatory agencies, and conducting other management activities (e.g., continued protection of an archaeological site). Nonrecurring activities are one-time efforts to address unique or changing requirements, such as consultation activities under the Endangered Species Act, infrastructure to reduce soil erosion, or reforestation of ranges.

Conservation funding decreased significantly from FY2003 to FY2004 because DoD completed many of the major efforts to develop and implement INRMPs. The anticipated increases in the FY2005 and FY2006 Conservation program funding reflect DoD's new initiative to fund conservation easements to prevent encroachment on training bases. In addition, many of the older INRMPs are due for updates in the 2006 timeframe. Figure 2 shows executed, appropriated, and requested funds for recurring and nonrecurring Conservation program activities.

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

Figure 2
Conservation Funding (Current \$000)

	FY2003 Funds Executed	FY2004 Funds Executed	FY2005 Funds Appropriated	FY2006 Budget Request
Recurring	\$ 66,289	\$ 39,713	\$ 39,681	\$ 42,591
Nonrecurring	\$112,803	\$117,865	\$135,715	\$162,391
Total	\$179,092	\$157,578	\$175,396	\$204,982

Restoration

Over the past 10 years DoD has invested approximately \$20 billion in environmental restoration through the DERP, including the ER and BRAC accounts. For FY2004 alone, Congress appropriated approximately \$1.3 billion in ER account funding for environmental restoration activities at active installations and FUDS properties. Congress appropriated an additional \$361 million for environmental activities at BRAC installations, including compliance and planning, as well as environmental restoration.

ER Account Funding

ER funding supports environmental restoration at active installations and former DoD sites. Congress has provided stable ER funding since FY1996, as illustrated in Figure 1. In FY2004, DoD spent a total of \$1.3 billion in ER funding, with \$1.2 billion spent on the Installation Restoration Program (IRP) and \$101.2 million spent on the Military Munitions Response Program (MMRP). DoD expects that ER funding for DERP activities will remain relatively constant in future years, with approximately \$1.3 billion appropriated for FY2005 and requested for FY2006. Figure 3 shows executed, appropriated, and requested ER funding with breakouts by program category.

The budget process is closely tied to environmental restoration program goals and progress. Since the IRP goals for active installations and FUDS properties are based on risk reduction, the Department allocates funds based on the relative risk posed by each site. As such, the Department currently spends the greatest portion of funding on the remaining high relative-risk sites, continuing its commitment to address all of these sites by FY2007. The amount of funding required for high relative-risk sites decreases as DoD nears this goal. Greater funding amounts will then be used to address medium relative-risk sites, commensurate with meeting the Department's FY2011 goal for completing environmental restoration at these sites. As the MMRP matures, DoD plans to allocate MMRP funding to further investigate and prioritize MMRP sites and to implement cleanup remedies in support of MMRP goals.

Despite continuing advances in technology, streamlining, and performance-based restoration, factors such as increasing public expectations, more stringent regulations, and escalating requirements to manage perchlorate, naphthalene, 1,4 dioxane, RDX, and other contaminants of concern drive expectations that the cost-to-complete will not decrease significantly in future years. Rather, as the cleanup of sites identified during the past 20 years are successfully restored to beneficial reuse, they will be replaced with new and different requirements. While the Department has adopted methods to address these challenges using the best available science and the best practices available, predicting funding for future fiscal years is necessary to buy out existing requirements and meet those new challenges.

Further information about ER funding by DoD Component is located in Appendix B: Environmental Management Funding Summary, Appendix C: Component Environmental Funding Overview, and Appendix E: Restoration Budget Summary. In addition, ER funding information is broken out by program category in Appendix K: IRP Status Tables and Appendix L: MMRP Status Tables.

Figure 3
Environmental Restoration Funding (in Current \$000)

	FY2003 Funds Executed	FY2004 Funds Executed	FY2005 Funds Appropriated	FY2006 Budget Request
IRP	\$1,212,166	\$1,236,791	\$1,257,754	\$1,223,492
MMRP	\$ 95,773	\$ 101,243	\$ 94,225	\$ 146,197
Total	\$1,307,939	\$1,338,034	\$1,351,979	\$1,369,689

BRAC Environmental Funding

The BRAC account provides funding for environmental restoration, environmental compliance, and environmental planning activities at closing or realigning military installations in the United States and its territories. Over the past 10 years, Congress has appropriated \$6.7 billion for environmental activities at BRAC installations. In FY2004 alone, DoD spent \$361.3 million on BRAC environmental activities, with \$322.1 million spent on the IRP, \$36.8 million spent on the MMRP, and \$2.4 million spent on Compliance activities. Figure 4 shows executed, appropriated, and requested BRAC environmental funding broken out by environmental restoration program category.

Because the Department has completed the majority of closure and realignment activities associated with previous BRAC rounds, Congress allocates the majority of BRAC environmental funding, over 90 percent, for environmental cleanup and property disposal costs. BRAC environmental funding requirements for installations in the past four BRAC rounds will further decrease as DoD completes environmental restoration requirements and transfers this land to neighboring communities. The Components, most notably the Navy, also use land sale revenue to fund cleanup activities at other BRAC installations, which offsets the amount needed from Congress, as it has in FY2004 and FY2005. The fluctuations in BRAC environmental funding are shown in Figure 4 with \$328.2 million in FY2005 appropriated funding and an increase in FY2006 requested funding to \$449.1 million.

Additional information about BRAC environmental funding by DoD Component is located in Appendix B: Environmental Management Funding Summary, Appendix C: Component Environmental Funding Overview, and Appendix E: Restoration Budget Summary. BRAC environmental funding information is also broken out by program category in Appendix K: IRP Status Tables and Appendix L: MMRP Status Tables.

Figure 4
BRAC Environmental Funding (Current \$000)

	FY2003 Funds Executed	FY2004 Funds Executed	FY2005 Funds Appropriated*	FY2006 Budget Request
IRP	\$673,257	\$322,129	\$302,420	\$399,897
MMRP	\$ 44,363	\$ 36,778	\$ 24,094	\$ 42,435
Compliance	\$ 43,103	\$ 2,405	\$ 1,637	\$ 6,770
Total	\$760,723	\$361,312	\$328,151	\$449,102

* Includes Defense Logistics Agency prior year unobligated balance available for execution in FY2005.

Compliance

Compliance funding supports sustainment of lifecycle operations of the defense mission meeting all applicable federal, state, and local environmental laws and regulations. During FY2004, DoD invested \$1.7 billion in compliance activities. Of this amount, DoD invested \$939.7 million in recurring compliance costs, excluding manpower, education, and training. Recurring compliance costs are those relatively constant activities that an installation must complete to support the mission and maintain compliance with environmental regulations and permit requirements. Recurring activities include routine sampling and analysis of discharges to air and water and hazardous waste disposal. Other recurring costs include managing National Pollutant Discharge Elimination System permits and Clean Air Act inventories and conducting self-assessments. Of the remaining recurring investments, manpower is the single largest cost. Manpower, education, and training costs, totaling \$540.8 million, addresses personnel requirements and education and training for Pollution Prevention, Compliance, and Conservation programs.

DoD invested 43 percent, or \$715.2 million, of FY2004 Compliance program funds in nonrecurring projects, or one-time events, such as projects to upgrade wastewater treatment facilities or install air pollution controls to meet current standards. The largest nonrecurring investment each year is compliance with Clean Water Act (CWA) regulations, which requires substantial infrastructure investment in wastewater treatment plants and storm water management. Figure 5 shows funds executed, appropriated, and requested for recurring and nonrecurring compliance activities.

The FY2005 Compliance program budget, as appropriated by Congress, totals approximately \$1.7 billion. About 58 percent of the \$1.7 billion is for recurring costs. The two largest recurring costs are for personnel and other recurring costs, including preparing and updating management plans and implementing Final Governing Standards at installations outside the United States. The nonrecurring portion of the FY2005 Compliance program budget is \$697.1 million, approximately 42 percent. The largest amount of funding is for CWA-related efforts such as repairing wastewater treatment facilities.

The FY2006 Compliance program budget request of \$1.6 billion is \$105.6 million less than the FY2005 budget as appropriated by Congress. These yearly variations in Compliance funding are due largely to fluctuations in the number of one-time projects in the CWA area.

Additional information about Compliance funding by DoD Component is located in Appendix B: Environmental Management Funding Summary, Appendix C: Component Environmental Funding Overview, and Appendix F: Compliance Budget Summary.

Figure 5
Compliance Funding (Current \$000)

	FY2003 Funds Executed	FY2004 Funds Executed	FY2005 Funds Appropriated	FY2006 Budget Request
Recurring	\$ 895,250	\$ 939,702	\$ 968,938	\$ 968,546
Nonrecurring	\$ 915,737	\$ 715,177	\$ 697,099	\$ 592,644
Total	\$1,810,987	\$1,654,879	\$1,666,742	\$1,561,190

Overseas Activities

Subparagraph (2)(F) of subsection 2706(b) in Title 10, United States Code, requires DoD to report on overseas environmental investments. These investments are necessary to sustain use of and access to the natural resources to meet military mission needs and to comply with environmental requirements under existing treaties, laws, contracts, or other agreements. Final Governing Standards establish the environmental provisions and investment requirements for overseas military installations, which closely resemble similar programs inside the United States.

The Department includes funds for cleanup activities in the overseas compliance activities budget because ER funds are only appropriated for use inside the United States and its territories. DoD funds the overseas budget from the Pollution Prevention, Compliance, and Conservation budgets, and includes funding for cleaning up past contamination. These amounts are included in the Compliance, Conservation, and Pollution Prevention budgets discussed in those respective sections in this chapter, but are broken out here to identify overseas investments. Figure 6 illustrates the amount invested in each of those areas.

Funding used for cleanup and conservation for overseas environmental activities remained relatively constant from FY2003 to FY2006, reflecting DoD's continued dedication to addressing requirements in the Final Governing Standards. Compliance funding increased in FY2005 due to a large one-time Navy CWA project requirement. The overseas Compliance funding fluctuations are a result of the completion or initiation of major compliance and pollution prevention projects.

Figure 6
Overseas Environmental Funding (Current \$000)

	FY2003 Funds Executed	FY2004 Funds Executed	FY2005 Funds Appropriated	FY2006 Budget Request
Cleanup	\$ 18,982	\$ 24,134	\$ 22,916	\$ 26,966
Compliance	\$141,310	\$129,414	\$150,323	\$136,443
Pollution Prevention	\$ 13,394	\$ 11,770	\$ 16,818	\$ 16,090
Conservation	\$ 3,628	\$ 4,719	\$ 5,694	\$ 6,967
Total	\$177,314	\$170,037	\$195,751	\$186,466

Pollution Prevention

The Department employs pollution prevention efforts at military installations to reduce health and safety risks to DoD personnel and nearby communities and to reduce environmental compliance, restoration, and conservation costs. By preventing pollution, such as reducing or eliminating the use of hazardous materials, DoD decreases health risks to personnel and reduces the number of accidents that can occur when using these materials and associated cleanup costs. The program promotes sustainment by minimizing the asset footprint required to manage hazardous materials over the operational lifecycles of weapons systems. Pollution prevention projects that eliminate the use of a hazardous material also reduce the generation of water pollution, air pollution, and hazardous wastes. As a result, DoD potentially reduces compliance costs in all three areas. In addition, the projects eliminate the costs to buy, store, and deliver the hazardous material.

Recurring Pollution Prevention investments include supplies, travel, data management, and Toxic Release Inventory and other reporting. Hazardous material reduction and CWA requirements are the areas of greatest emphasis within the nonrecurring pollution prevention budget. These nonrecurring Pollution Prevention projects are the largest drivers in reducing compliance costs. DoD also funds efforts to prepare source reduction plans through the Pollution Prevention program. The large funding drop from FY2003 to FY2006 for nonrecurring pollution prevention projects reflects the completion of several one-time efforts and the demand for funds in other areas of environment and elsewhere within the Military Departments. Figure 7 illustrates this trend.

Additional information about Pollution Prevention funding by DoD Component is located in Appendix B: Environmental Management Funding Summary, Appendix C: Component Environmental Funding Overview, and Appendix G: Pollution Prevention Budget Summary.

Figure 7
Pollution Prevention Funding (Current \$000)

	FY2003 Funds Executed	FY2004 Funds Executed	FY2005 Funds Appropriated	FY2006 Budget Request
Recurring	\$69,651	\$ 52,332	\$ 53,396	\$ 56,246
Nonrecurring	\$118,633	\$ 63,761	\$ 88,203	\$ 87,055
Total	\$188,284	\$116,093	\$141,599	\$143,301

Environmental Technology

DoD's environmental technology programs provide new and improved methods, equipment, materials, and protocols to reduce the total cost of DoD operations and improve military readiness by eliminating or minimizing the consumption of natural asset capability. These programs cover the entire lifecycle of traditional defense weapon systems, from research, development, test and evaluation, to disposal. The environmental technology programs respond to high priority DoD needs; develop, demonstrate, and validate alternatives to meet those needs; and implement proven technology in DoD operations and weapon systems. There is a separate report on environmental technology that covers this area in more detail and fulfills Congressional reporting requirements. Environmental technology is included in this report exclusively in this budget section to ensure completeness of the environmental budget discussion.

The Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP) are run by the office of the Director of Defense Research and Engineering and the Deputy Under Secretary of Defense for Installations and Environment, respectively. SERDP and ESTCP, in full coordination and cooperation with the Environmental Technology programs of the DoD Components, focus on the highest priority environmental technology needs of the Components. Environmental technology funding for FY2003 through FY2006 is shown in Figure 8.

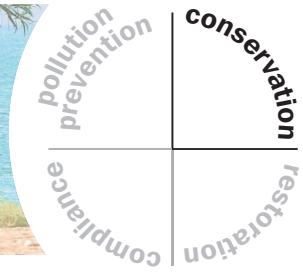
During FY2004, DoD invested \$102.5 million in pollution prevention technology, \$65.0 million in technology directed at the cleanup activity, \$58.4 million to address compliance technology, \$21.1 million for addressing unexploded ordnance (UXO) technology, and \$15.3 million for conservation-related efforts. Additionally, the Department invested \$4.9 million in Defense Warfighter Protection (DWFP).

The FY2005 Environmental Technology program budget, as appropriated by Congress, will provide \$99.0 million for pollution prevention technology, \$64.4 million for cleanup-related technology efforts, \$60.0 million to address compliance issues, \$28.0 million to address UXO technology, and \$17.3 million for conservation-related efforts. In addition, the \$4.9 million effort for DWFP continues in FY2005.

The FY2006 budget request of \$206.1 million is \$67.5 million less than the amount Congress appropriated for FY2005. This reflects the discontinuance of several one-time efforts directed by Congress in the FY2005 program. The request continues to provide the largest amount for pollution prevention efforts at \$67.6 million, or 33 percent of the total \$206.1 million request. The program provides \$43.1 million for cleanup technology, which is about 21 percent of the request. Similarly, the program provides \$43.1 million, or 21 percent, to the Compliance program. UXO technology, at \$27.2 million, receives about 13 percent and the \$20.1 million for Conservation is about 10 percent of the request. The DWFP will receive \$5.0 million, or 2.5 percent, in FY2006.

Figure 8
Environmental Technology Funding (Current \$000)

	FY2003 Funds Executed	FY2004 Funds Executed	FY2005 Funds Appropriated	FY2006 Budget Request
Army	\$ 83,419	\$102,890	\$ 95,033	\$ 45,508
Navy	\$ 69,560	\$ 62,104	\$ 51,800	\$ 36,725
Air Force	-	\$ 13,830	\$ 23,188	\$ 24,097
SERDP	\$ 50,938	\$ 49,002	\$ 56,597	\$ 64,101
ESTCP	\$ 20,091	\$ 34,465	\$ 43,046	\$ 30,632
DWFP	-	\$ 4,900	\$ 4,900	\$ 5,000
Total	\$224,008	\$267,191	\$273,564	\$206,063



Department of Defense (DoD) installations are often rich in natural and cultural assets, in part because of DoD’s past conservation initiatives. These assets include wetlands, marine mammals, rare ecosystems and flora, more than 320 threatened and endangered species, archaeological and historical sites, Native American burial and sacred sites, and historic buildings. Conserving these valuable assets sustains their capability to meet current and future operations and preserves them for current and future generations. The Department’s conservation efforts focus on sustainable use, management, and asset protection, as well as achieving full and sustained compliance with all Federal, state, and local environmental laws and regulations. The Conservation program supports the military mission by providing for the responsible use of its land, sea, and air assets, while promoting compatible multiple uses of those assets. DoD partners with other agencies and interested stakeholders to improve the efficiency of conservation efforts and to ensure that asset protection is adequately maintained.

DoD uses natural and cultural resource management plans to identify and manage natural and cultural assets on its installations. The Department analyzes inventory information to determine management needs, characteristics of the assets, and constraints related to military training and testing activities. Integrated planning encourages the sustained use of assets for mission purposes, while protecting these assets for the future.

A critical element of natural asset management is the protection of threatened and endangered species. DoD monitors threatened and endangered species and takes action to protect these species on its land, conducts migratory bird studies, and implements ecosystem and land management initiatives. Through the Legacy Program, DoD works in partnership with other organizations to explore new ideas and innovative technologies for natural and cultural asset management. Through DoD’s conservation efforts, the Department preserves the land, water, and airspace needed for military readiness while maximizing critical environmental protection.

Natural and Cultural Resource Planning

DoD uses natural and cultural resource or asset planning to support the sustained use and access to these assets to meet operational requirements while minimizing harmful effects of mission activities on the these assets. Because DoD recognizes that installations are part of larger regional ecosystems, the Department’s planning efforts include not only impacts on installations, but also issues within the ecosystem as a whole.

DoD installations inventory natural and cultural assets and develop plans to manage these assets. DoD uses asset management plans to establish procedures and set priorities for asset protection, while coordinating with state and Federal agencies and stakeholders. DoD’s analyses of natural and cultural assets provide a scientific basis for decisions affecting military readiness and asset management.

Through the inventory process, installations identify potential habitats of threatened or endangered species; areas likely to contain archaeological sites; and locations likely to contain historical buildings, objects, or structures that require protection. Investments in asset conservation help avoid costs associated with repairs to damaged soil, vegetation, wildlife habitats, archaeological sites, and historic objects.

Natural Asset Inventories

To properly manage natural assets, DoD conducts inventory assessments of natural resources to identify the full suite of resources at an installation, enabling asset managers to develop plans that adequately protect the biological and wetland assets at DoD installations.

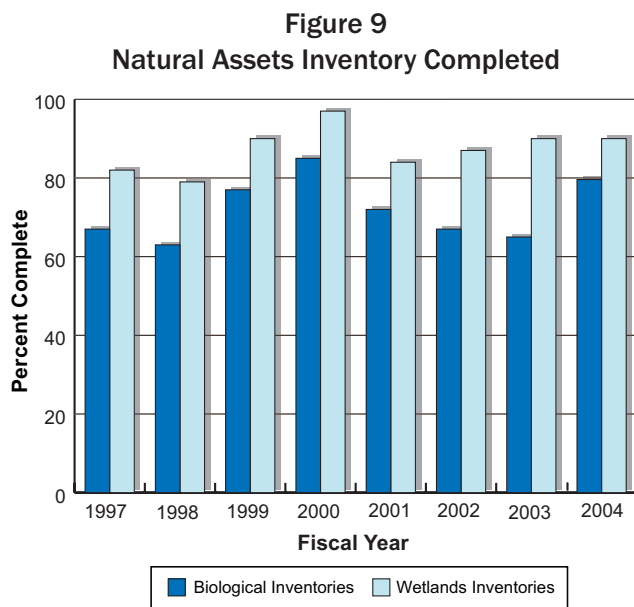


Figure 9 illustrates the progress DoD installations made in the last eight years toward completing natural asset inventories. In Fiscal Year (FY) 2004, DoD completed approximately 80 percent of biological asset inventories, and almost 90 percent of wetlands inventories. DoD will continue to make progress towards the completion of their biological and wetlands inventories. The number of installations required to perform an inventory vary from year to year because the condition, legislative, or regulatory status of the facility’s assets may change.

Installations update their inventories frequently to ensure that information is current. DoD also reevaluates installation asset management methods periodically, regardless of any actual changes to existing assets.

Sikes Act Requirements and INRMPs

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

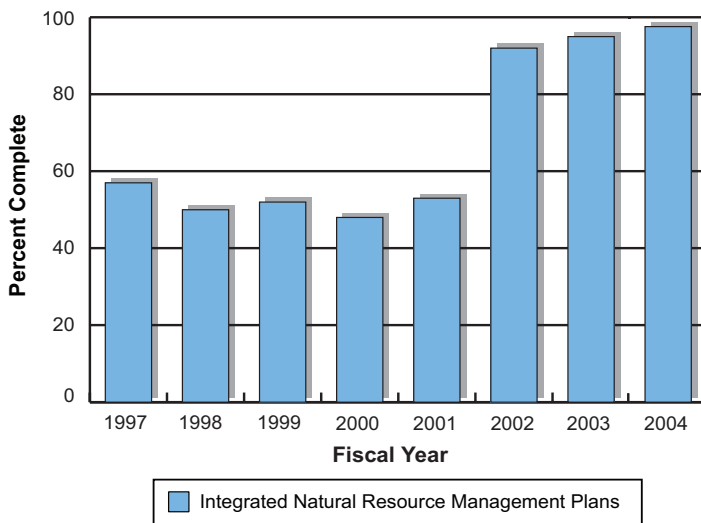
An INRMP provides management guidance and sets priorities for natural resource protection, improvement, and restoration. Installations use INRMPs to manage and maintain natural resources, fish and wildlife conservation, forestry, land management, outdoor recreation, and mission needs. An INRMP should:

- Integrate military operations and conservation activities
- Reflect cooperation between the United States Fish and Wildlife Service (FWS), the state, and the installation

- Document requirements for the natural asset 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 assets on lands and waters under DoD control
- Balance the management of natural assets unique to each installation with mission requirements and other land use activities
- Identify and prioritize actions required to implement conservation goals and objectives

In preparing an INRMP, each installation provides an opportunity for public comment and cooperates with FWS and appropriate state fish and wildlife agencies. DoD policy further requires that INRMPs be coordinated with military trainers and operators and other stakeholders. Each plan must also ensure that the natural asset management activities at the installation guarantee “no net loss” of resources to the military mission. A further explanation of the Sikes Act and DoD’s progress in developing INRMPs is located in Appendix H: Fiscal Year 2004 Sikes Act Reporting Data.

Figure 10
INRMP Progress



The Sikes Act requires that INRMPs be reviewed by the installation, the FWS, and the state fish and wildlife agency on a regular basis, but no less than every five years. INRMPs should be revised when there are significant changes to the military mission or affected assets. Figure 10 illustrates the progress that installations have made toward meeting the goals of the Sikes Act Amendments. By the end of FY2004, DoD completed revising 98 percent of its INRMPs, an increase of three percent from FY2003. The remaining plans are in coordination with the FWS or state fish and wildlife officials.

Threatened and Endangered Species

Congress passed the Endangered Species Act (ESA) in 1973 to protect plant and animal species at risk of extinction. As defined by the ESA, a species classified as endangered is in danger of extinction throughout all or a significant portion of its range, while a species classified as threatened is likely to become endangered. As of November 1, 2004, there were 1,823 species listed by the FWS as either threatened or endangered within the United States, 320 of which inhabit DoD lands.

DoD spends more than \$41 million dollars each year to protect threatened and endangered species. Like all landowners, DoD is required to protect these species by preserving the habitat that is crucial to their survival. Under the ESA, any area that is essential to the conservation of a species can be classified as critical habitat. The FY2004 National Defense Authorization Act modified the critical

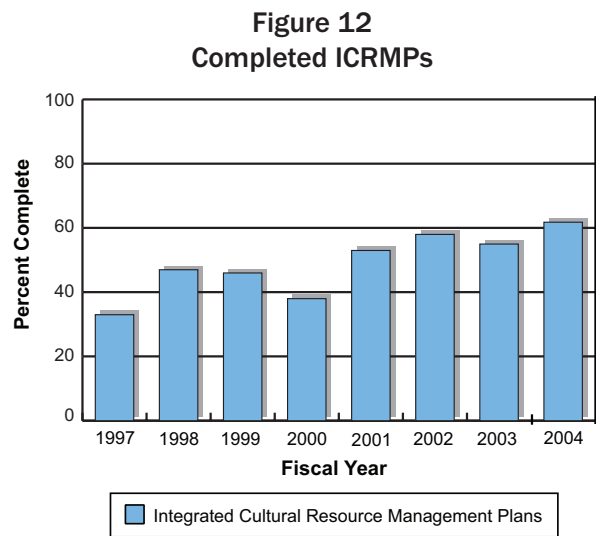
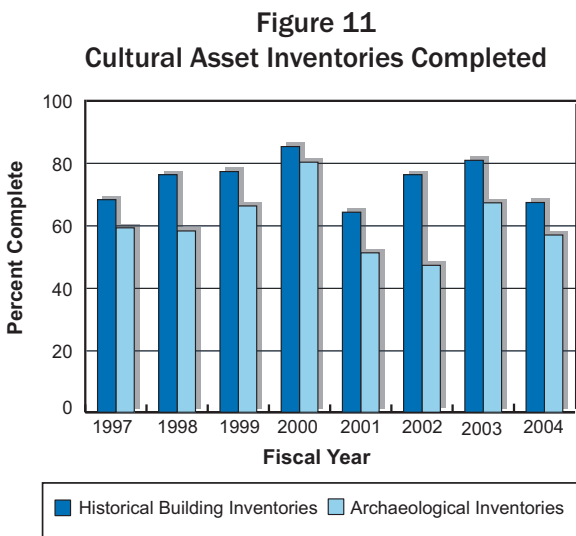
habitat provision in the ESA to allow an approved INRMP to be used by the Department of the Interior in lieu of a critical habitat designation. INRMPs can be more effective than the critical habitat designation because they provide a more holistic approach to species conservation and provide greater flexibility for installations to manage their lands and assets while maintaining coordination with the FWS and stakeholders.

Cultural Asset Management

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

To effectively manage cultural assets, DoD personnel must understand the historical and cultural significance of these assets. Each DoD installation conducts surveys and maintains an inventory of cultural assets located in a specific area. These inventories help installations manage their assets and protect important national treasures. Figure 11 illustrates DoD’s progress in completing cultural asset inventories. Archaeological inventories are 57 percent complete, and 67 percent of the historic building inventories are complete.

Installations prepare Integrated Cultural Resource Management Plans (ICRMPs) to manage historical sites and archaeological artifacts in an area. An ICRMP is a five-year planning document used to implement an installation’s cultural assets management program. ICRMPs provide a valuable tool for monitoring the status of cultural assets on a DoD installation and integrating preservation initiatives with ongoing mission activities. Installations often use ICRMPs in conjunction with INRMPs to effectively manage installation assets. DoD Instruction 4715.3 “Environmental Conservation Program,” requires each installation within the United States with significant cultural assets to prepare an ICRMP. DoD installations must review their ICRMPs at least once every year and update the plans every five years. In FY2004, 62 percent of ICRMPs were completed, an increase of seven percent from the previous year, as shown in Figure 12.



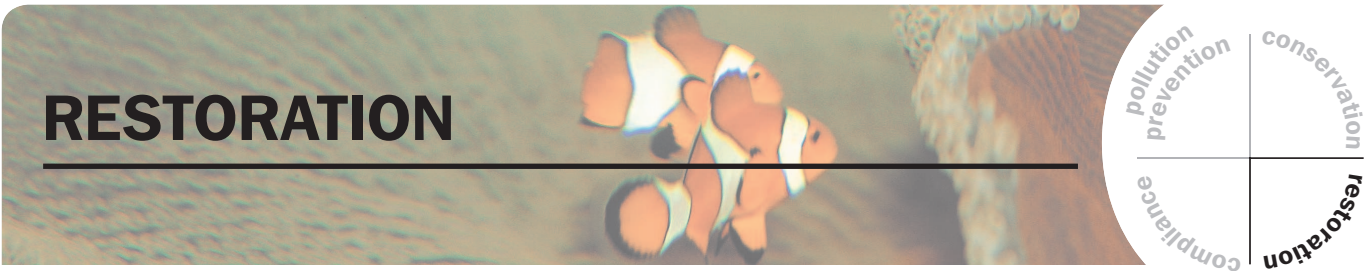
DoD uses ICRMPs to comply with laws such as the National Historic Preservation Act of 1966, the Native American Graves Protection and Repatriation Act, and the Archaeological Resources Protection Act. The Department also works cooperatively with Native American Tribes on various cultural asset initiatives. Details on DoD's American Indian and Alaska Natives partnerships and projects are located in Appendix R: American Indian and Alaska Natives.

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 testing and training mission while meeting conservation objectives. The Legacy Program funds projects that emphasize leadership in exploring new ideas and implementing innovative technologies for natural and cultural resource management. Under the program, DoD also works in partnership with other organizations to conserve natural and cultural assets in a cost-effective and technically sound manner.

In FY2004, the Legacy Resource Management Program funded 55 projects and invested a total of \$7.4 million. The projects focus on several areas, including cultural resource management, invasive species control, monitoring and predicting migratory patterns of birds, and range sustainment. The Legacy Resource Management Program also facilitates partnerships with Federal, state, and local agencies and private groups to cost-effectively manage natural and cultural assets.

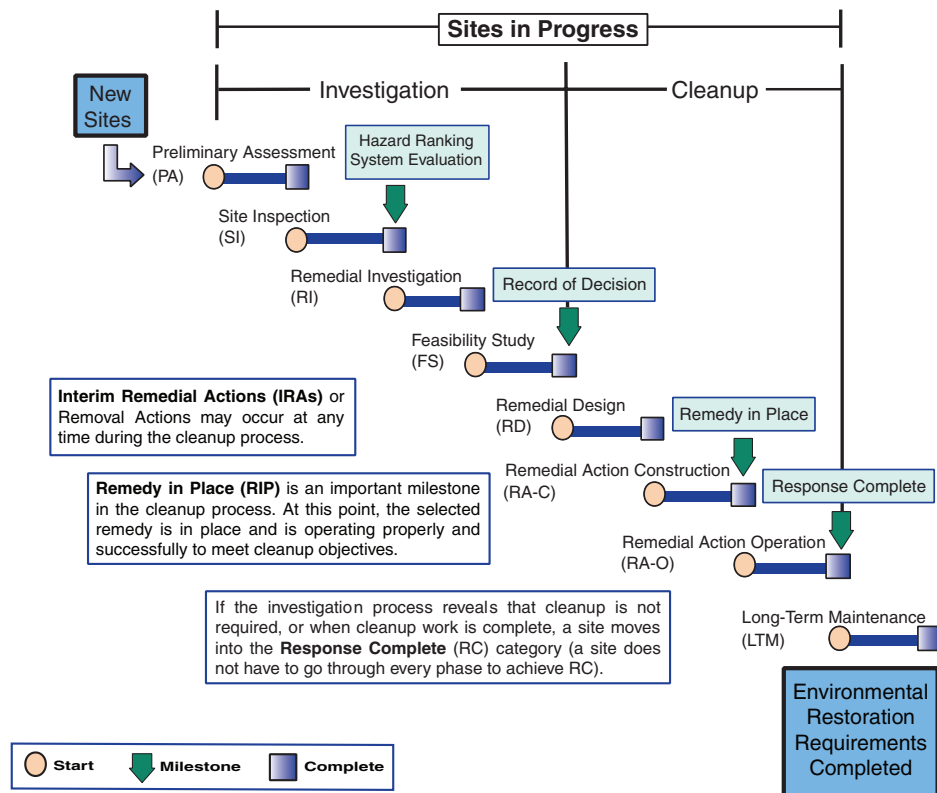
DoD's conservation efforts are critical to sustaining realistic testing and training facilities. The Department continues to make progress in inventorying natural resources, implementing INRMPs and ICRMPs, protecting natural and cultural assets for current and future generations, and meeting its conservation goals. DoD's conservation initiatives ensure that meeting these goals is a top priority and that the Department remains in compliance with all environmental laws and regulations. DoD will continue to invest in conservation and asset management initiatives to ensure that America's natural and cultural heritage is preserved for years to come.



The Department of Defense (DoD), through the Defense Environmental Response Program (DERP), restores property that was environmentally impacted by past defense activities. The DERP addresses environmental restoration at active military installations, as well as formerly used defense sites (FUDS), across the nation and the U.S. territories. Through the DERP, DoD also addresses contamination at installations in the base realignment and closure (BRAC) program to ensure that property being transferred is safe for reuse. Cleaning up contamination from past activities protects both military personnel and the public from environmental health and safety hazards and preserves the ability of U.S. forces to train effectively.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), passed by Congress in 1980, established a requirement and a framework for the identification, investigation, and cleanup of hazardous substances resulting from past practices. The CERCLA environmental restoration process consists of several phases, which are illustrated in Figure 13. The Department uses this environmental restoration process for all DERP sites. While some phases may overlap or occur concurrently, environmental response activities at DoD sites are generally conducted in the order shown.

Figure 13
CERCLA Environmental Restoration Process Phases and Milestones



To effectively address the different kinds of contaminants, the Department organized the DERP into three program categories:

- Installation Restoration Program (IRP) – to address releases of hazardous substances, pollutants, or contaminants that pose environmental health and safety risks. Currently, there are a total of 27,189 sites at 3,366 active and BRAC installations and FUDS properties in the IRP.
- Military Munitions Response Program (MMRP) – to address environmental health and safety hazards from unexploded ordnance (UXO), discarded military munitions, and munitions constituents at sites or locations other than operational ranges that may require a military munitions response. DoD created the MMRP category in fiscal year (FY) 2001. Currently there are 3,398 sites at 2,046 active and BRAC installations and FUDS properties in the MMRP.
- Building Demolition and Debris Removal (BD/DR) – to provide for the demolition and removal of unsafe buildings or structures. DoD conducts BD/DR activities at 483 sites on 451 installations and FUDS properties.

DoD built and maintains a successful environmental restoration program by focusing on reducing the health and safety risks posed by historical contamination. The Department employs a risk-based management strategy and cleanup approach for the DERP with three main elements: implementing a systematic process for prioritizing sites for execution; developing program goals and performance metrics to drive environmental restoration activities, to secure funding, and to track program progress; and working with regulators and communities to address stakeholder concerns.

Prioritization

DoD uses prioritization tools to determine the risk posed by each site relative to other sites in the inventory so that funding can be allocated to achieve the greatest risk reduction. DoD developed and implements the Relative-Risk Site Evaluation (RRSE) framework to prioritize sites in the IRP and is developing a prioritization protocol for MMRP sites.

Using the RRSE framework, DoD systematically prioritizes IRP sites as high, medium, or low relative-risk based on the nature and extent of contamination at a site, the potential for contaminants to migrate, and the potential impacts on populations and ecosystems. Sites also can be designated as Not Evaluated or Not Required. The Not Evaluated designation is for sites that have not been investigated thoroughly enough to determine a relative-risk ranking. The Not Required category includes sites that have already achieved remedy in place (RIP) or response complete (RC), as well as IRP sites requiring only military munitions response, BD/DR, or actions where a party other than DoD is responsible for cleanup. In prioritizing sites for cleanup, the Department also considers other 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; however, reuse needs and priorities, as well as property transfer and redevelopment plans, are also major drivers in sequencing cleanup activity.

To fulfill statutory requirements established by the National Defense Authorization Act for FY2002, DoD developed the Munitions Response Site Prioritization Protocol to assign a relative priority to

each MMRP site based primarily on an evaluation of three types of hazards—explosive hazards posed by UXO and discarded military munitions, hazards associated with the effects of chemical warfare materiel, and chronic health and environmental hazards posed by munitions constituents or other chemical constituents. DoD also considers economic, programmatic, and stakeholder concerns when making sequencing decisions. Upon finalization and publication in the Federal Register, DoD plans to apply the prioritization protocol to all sites listed in the Department’s MMRP site inventory and will use it as the basis for DoD’s MMRP risk management strategy.

Restoration Goals and Metrics

DoD has developed comprehensive program goals and performance metrics to measure DERP progress. The Components use these program goals to guide investment decisions and set targets for planning and executing environmental restoration activities.

IRP Performance Goals

At active installations with IRP sites, DoD’s goal is to achieve RIP or RC (RIP/RC) at all high relative-risk sites by the end of FY2007, all medium relative-risk sites by the end of FY2011, and all remaining sites by the end of FY2014. Properties in the FUDS program expect to achieve the same goals for high and medium relative-risk sites, but all low relative-risk sites at FUDS properties should be completed by FY2020.

The Department’s BRAC installation IRP goals have the added objective of supporting reuse by making property environmentally suitable for transfer in accordance with CERCLA requirements. BRAC IRP site cleanup focuses on putting remedies in place and completing all response actions so that property is ready for transfer and reuse. To this end, DoD is working to achieve RIP/RC at 100 percent of currently identified BRAC sites and installations by the end of FY2005. In addition, DoD aims to have 100 percent of BRAC acreage ready for transfer, as defined by CERCLA requirements, by FY2005.

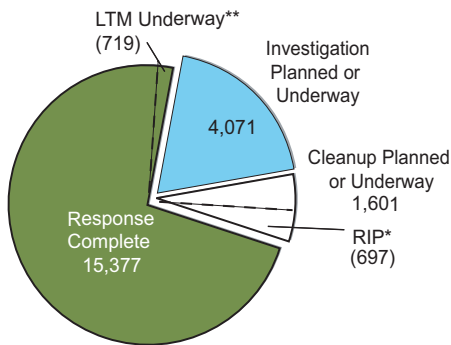
MMRP Performance Goals

DoD has developed several near-term MMRP performance goals. First, DoD aims to complete preliminary assessments for all MMRP sites at active installations and FUDS properties by the end of FY2007 and finalize site inspections by the end of FY2010. Second, the Department goal is to achieve RIP/RC at all MMRP sites at installations currently in the BRAC program by the end of FY2009. After the prioritization protocol is finalized and applied to MMRP sites, DoD will further develop and implement program goals and performance metrics to move MMRP cleanup forward.

Restoration Progress

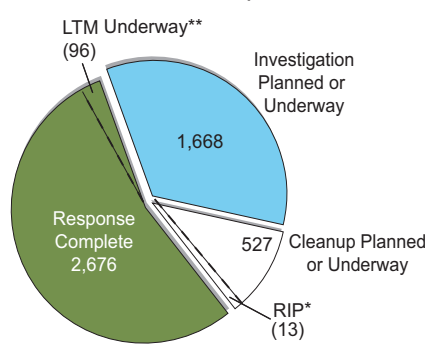
The Department tracks DERP progress by environmental restoration phase (e.g., investigation, cleanup, long-term maintenance) and risk category. DoD demonstrates program progress as sites move from investigation through the cleanup phases to complete all environmental restoration requirements. Figures 14, 15, and 16 illustrate overall DERP site status at active installations, FUDS, and BRAC installations, respectively. DoD continues to make significant progress in increasing the number of sites that have achieved RC. As shown in these figures, DoD has reached

Figure 14
Active Installation FY2004
Site Status†



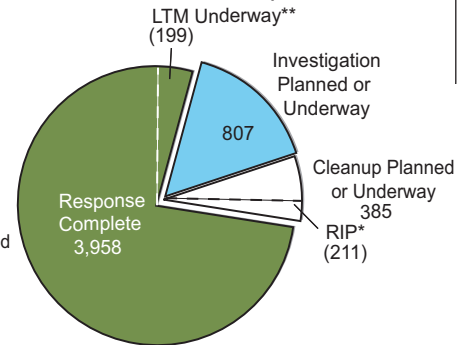
Total Sites = 21,049

Figure 15
FUDS FY2004
Site Status†



Total Sites = 4, 871

Figure 16
BRAC Installation FY2004
Site Status†



Total Sites = 5,150

† Includes IRP, MMRP, and BD/DR sites as of September 30, 2004.

* Remedy in place (RIP) includes sites where remedial action operations are underway. RIP is a subset of Cleanup Planned or Underway.

** Long-term maintenance (LTM) occurs at a subset of the sites that have achieved response complete.

RC at over 70 percent of all DERP sites, with only 21 percent of DERP sites in the investigation phases and eight percent in the cleanup phases. Each year new sites may be added to the DERP as the Department is better able to identify discrete areas of contamination and define specific sites within large areas, which enables environmental restoration activities to be more exact and targeted, and thus more efficient. This is particularly true in the MMRP, for which DoD is refining its site-level inventory.

IRP Site Status and Progress

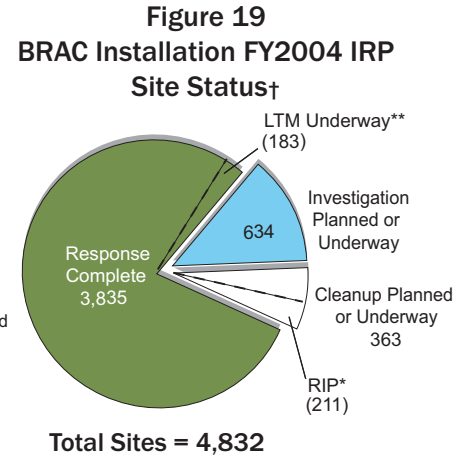
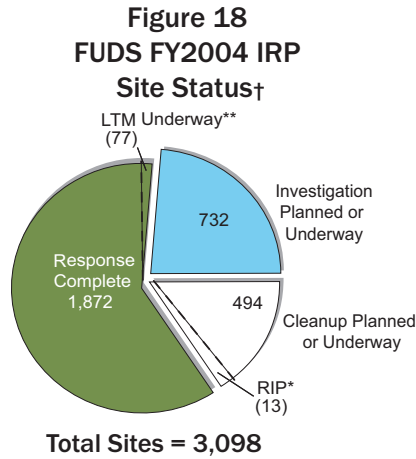
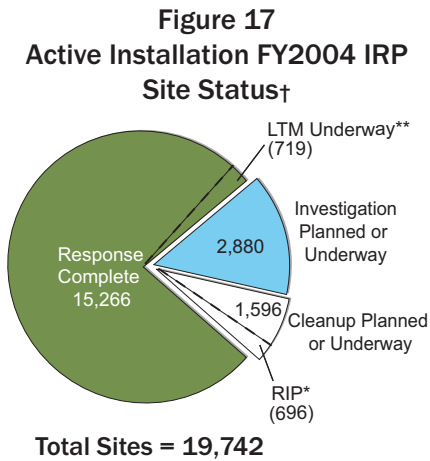
DoD uses performance metrics to assess progress toward IRP goals. These performance metrics include phase progress at the site level, progress toward achieving RIP and RC at the installation level, and progress in overall relative-risk reduction. DoD examines both progress to date and the projection of future progress.

IRP Site Progress by Phase

DoD has moved the majority of sites in the IRP from the investigation and study phases toward completion of the response action. Figures 17, 18, and 19 highlight the status of IRP sites at active installations, FUDS, and BRAC installations, respectively, as of the end of FY2004. These figures show that by the end of FY2004, DoD achieved RC at 77 percent of active IRP sites, 60 percent of FUDS projects, and 79 percent of BRAC IRP sites, and that the Department is steadily moving forward in its commitment to complete environmental restoration actions. In total, DoD has achieved RC at 75 percent of all IRP sites, an increase of one percent from FY2003. During FY2004 alone, DoD achieved RC at 711 IRP sites, including 524 at active installations, 81 at FUDS properties, and 106 at BRAC installations.

IRP Installation Progress

Another performance measure DoD uses to gauge progress is the achievement of RIP/RC at the installation and property level, which is reached when all sites at the installation or property have remedies in place or have reached response complete status. This metric is the basis for environmental restoration goals at BRAC installations.



† Includes incidental munitions work (i.e. non-MMRP) and BD/DR as of September 30, 2004.
 * Remedy in place (RIP) includes sites where remedial action operations are underway. RIP is a subset of Cleanup Planned or Underway.
 ** Long-term maintenance (LTM) occurs at a subset of the sites that have achieved response complete.

By the end of FY2004, DoD achieved RIP/RC at 61 percent of its installations and properties. This represents 73 percent of active installations, 49 percent of FUDS properties, and 68 percent of BRAC installations. Figures 20, 21, and 22 display DoD's expected RIP/RC completion trends for active installations, FUDS, and BRAC installations. DoD does not anticipate meeting its goal of achieving RIP/RC at 100 percent of BRAC installations by FY2005. DoD does, however, expect to have achieved RIP/RC at 83 percent of BRAC IRP sites. DoD projects that those installations not achieving RIP/RC by 2005 will only have one or two sites without remedies in place or completed response actions.

IRP Relative-Risk Reduction

DoD also reviews the number of sites in each relative-risk category, which are the basis of DoD's goals for active installations and FUDS properties. The Department exceeded the FY2002 goal of achieving RIP/RC at 50 percent of high-risk sites, reducing its inventory of high relative-risk sites by 58 percent as of FY2002. DoD continues this progress in reducing the number of sites in

Figure 20
Active Installations Achieving Final RIP/RC at All IRP Sites
(Cumulative and projected, FY1990 through completion)

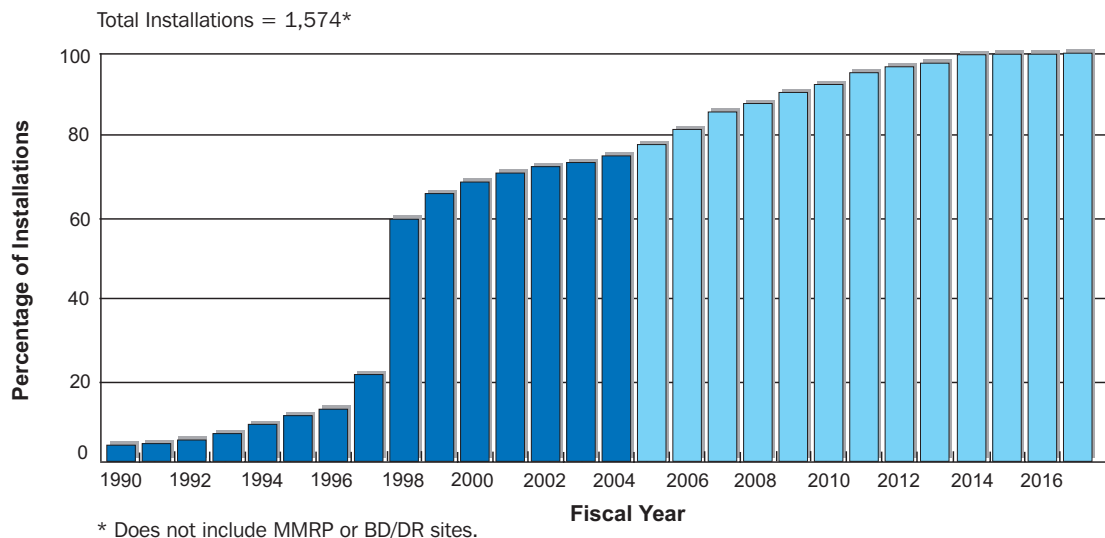
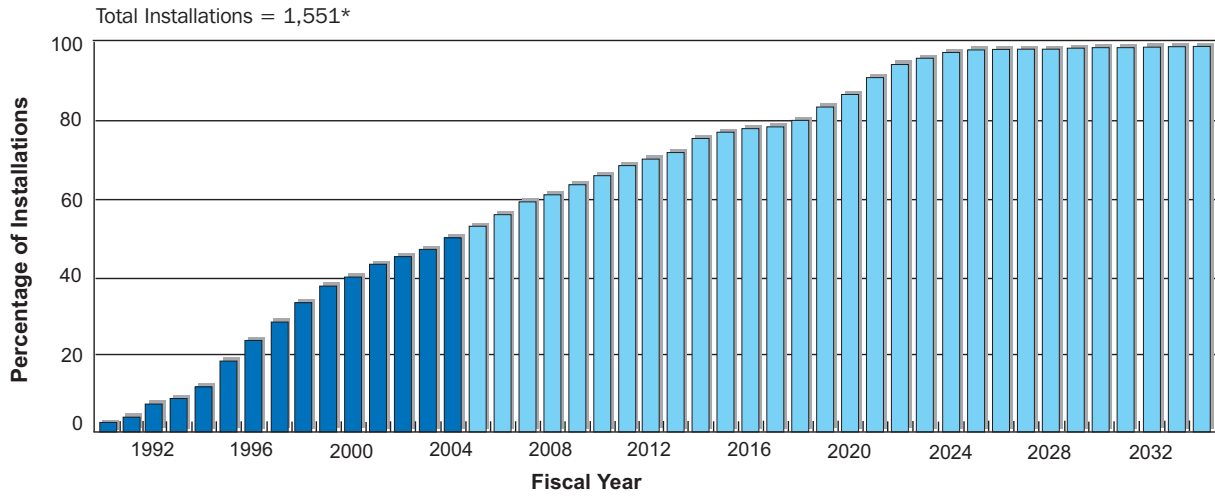


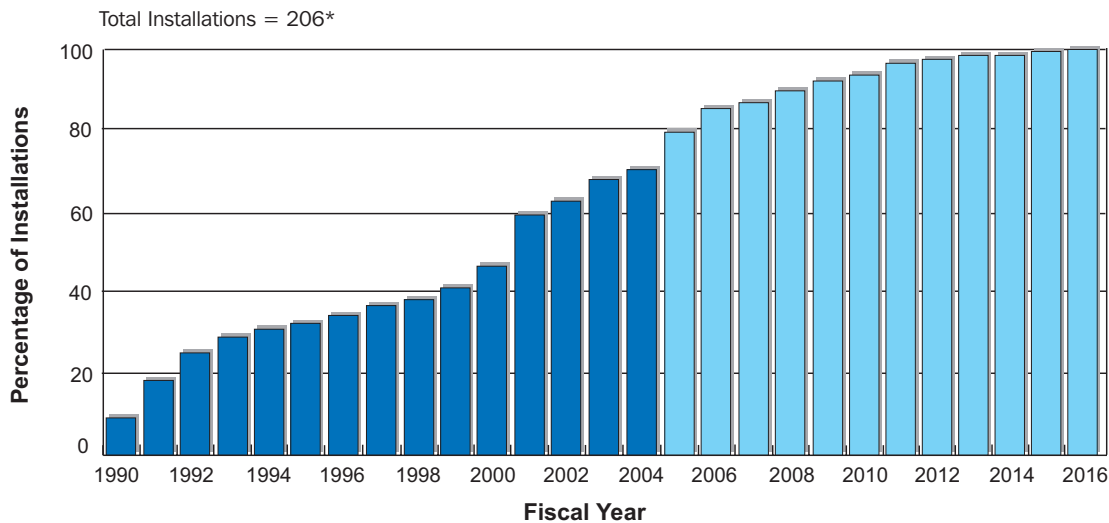
Figure 21
FUDS Achieving Final RIP/RC at All IRP Sites†
 (Cumulative and projected, FY1990 through completion)



* 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, potentially responsible party, or No DoD Action Indicated properties or projects.

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

Figure 22
BRAC Installations Achieving Final RIP/RC at All IRP Sites
 (Cumulative and projected, FY1990 through completion)

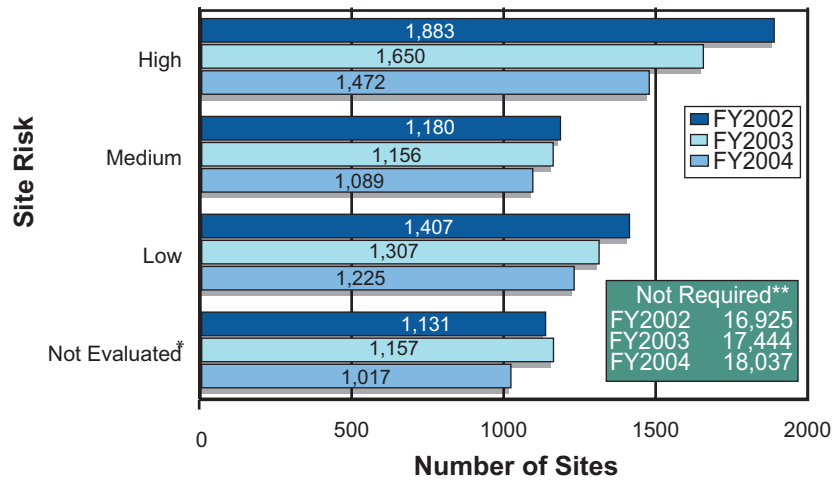


* Does not include MMRP sites.

each relative-risk category, particularly the high-risk category, as illustrated in Figure 23. As of FY2004 DoD achieved RIP/RC at 64 percent of high relative-risk sites, showing that DoD is making progress toward its FY2007 goal of achieving RIP/RC at all high relative-risk sites.

In addition to reducing the number of high relative-risk sites, DoD has been successful in reducing the number of medium and low relative-risk sites. DoD is on track to achieve RIP/RC at all medium relative-risk sites by FY2011 and to reach RIP/RC at all remaining relative-risk sites at active installations by FY2014. The Department is also making progress toward achieving RIP/RC at all remaining FUDS property sites by FY2020.

Figure 23
Active Installation and FUDS Property Relative-Risk Site Evaluation Progress



* The "Not Evaluated" category includes a large number of FUDS sites that are exclusively associated with aboveground and underground storage tanks; sites requiring Relative-Risk Site Evaluation will be determined after tank removal.

** The "Not Required" category includes sites that have already achieved RIP or RC, as well as IRP sites requiring building demolition and debris removal, or potentially responsible party actions. MMRP sites are excluded from the chart.

MMRP Site Status and Progress

DoD continues to build the MMRP and is making progress on all the key program elements, including setting program progress goals. DoD has developed near-term MMRP goals and is in the process of establishing long-term goals and metrics. DoD completed the initial MMRP site inventory in FY2002 and updates the inventory annually.

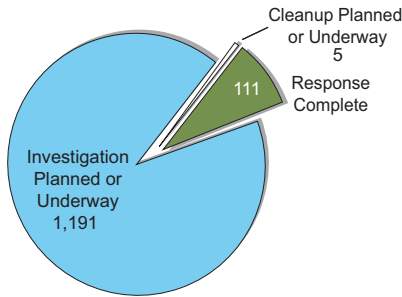
MMRP Site Progress by Phase

By the end of FY2004, DoD identified 3,398 MMRP sites, an increase of 581 sites from FY2003. DoD anticipated this site increase as part of the MMRP development process.

MMRP sites are categorized according to phase status in the response process. Since the MMRP is in the early stages of development, the majority of sites are still in the investigation stage. Figures 24, 25, and 26 show the status of MMRP sites at active installations, FUDS, and BRAC installations, respectively.

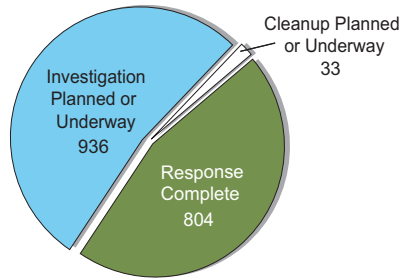
Munitions response actions have been a part of the DERP for several years, primarily at BRAC installations and FUDS, equipping DoD with a solid experience base for addressing the environmental and safety hazards associated with the past use of military munitions and munitions constituents. As a result, DoD has already achieved RC at some MMRP sites at FUDS properties and BRAC installations.

Figure 24
Active Installation
MMRP Site Status



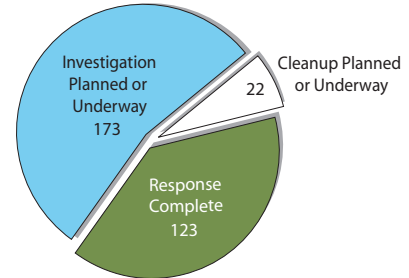
Total Sites = 1,307

Figure 25
FUDS MMRP
Site Status



Total Sites = 1,773

Figure 26
BRAC Installation
MMRP Site Status



Total Sites = 318

DoD demonstrates its commitment to environmental restoration by consistently making measurable progress through the DERP. In FY2004, the Department conducted environmental restoration activities at 31,070 sites on 1,817 installations and 2,943 FUDS properties. DoD has completed all response actions at 22,011, or approximately 70 percent, of these sites and is making progress toward achieving its environmental restoration goals. Cleaning up contamination from past activities protects both military personnel and the public from environmental health and safety hazards, and sustaining the land DoD holds in the public trust preserves our ability to train the military forces effectively.

COMPLIANCE



The Department of Defense (DoD) remains committed to protecting human health and the environment by achieving full and sustained compliance with all Federal, state, and local environmental laws and regulations. DoD works with regulatory agencies during the development of new environmental laws and regulations to make sure that such requirements are achievable while maintaining mission readiness. DoD ensures that regulators understand the implications of their decisions on mission readiness, cost effectiveness, and training. To maintain efficient and effective compliance with these laws, the Department provides the Components with guidance and procedures for meeting regulatory requirements and hosts periodic reviews to measure DoD's progress towards meeting compliance requirements.

DoD's Compliance program encompasses several performance metrics which are further detailed in this section, including water quality initiatives, Clean Water Act (CWA) and National Pollutant Discharge Elimination System (NPDES) permits, and Safe Drinking Water Act (SDWA) requirements, compliance enforcement actions, and fines and penalties. In addition to these metrics, the program also includes ensuring compliance with Clean Air Act (CAA), Toxic Substances Control Act, Medical Waste Tracking Act, and Resource Conservation and Recovery Act requirements; underground storage tank regulations; and all relevant Federal, state, and local laws and regulations. The Department uses regular self assessments to make sure DoD facilities are in compliance with all relevant laws, regulation, and permits. DoD also develops supplemental environmental projects to improve compliance and better protect natural assets. DoD is proud of its accomplishments in complying with environmental laws and regulations and continues to place a high priority on protecting human health and the environment.

Water Quality

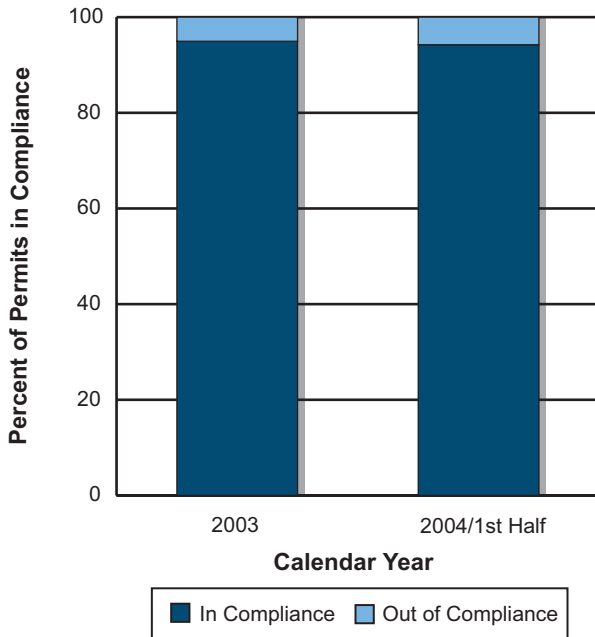
Water quality plays an integral role in the success of DoD's mission and the quality of life for DoD personnel, their families, and nearby communities. Maintaining high water quality standards ensures that personnel and neighboring communities are not adversely impacted by DoD activities.

For state water assets, each state adopts water quality standards approved by the United States Environmental Protection Agency (EPA). The standards describe the way a particular body of water may be used and establish the water quality criteria required to protect it. Drinking water standards are also set by EPA and adopted by the states. DoD is part of an effort to develop uniform national discharge standards for controlling discharges from Armed Forces vessels. DoD strives to comply with stringent drinking water standards and all water quality regulations.

Compliance with Clean Water Act Permitted Systems

The CWA requires all facilities that discharge wastewater in the United States, including Federal facilities, to have permits that establish pollution limits and specify monitoring and reporting

Figure 27
CWA Permit Compliance



requirements. NPDES permits, which are issued either by the EPA or by a state having permitting authority from the EPA, regulate pollutants discharged into surface waters by industrial, municipal, and other facilities. DoD Instruction 4715.6, “Environmental Compliance,” establishes a framework for measuring DoD’s compliance with its NPDES permits in accordance with the CWA.

DoD aims to comply with the CWA, NPDES permit regulatory requirements. DoD currently holds 1,789 NPDES permits, including discharges to domestic and industrial wastewater treatment facilities, publicly owned treatment works, and storm water systems. In the first half of Calendar Year (CY) 2004, 94 percent of DoD’s NPDES permitted facilities were in compliance as reported in Figure 27. DoD’s compliance rate is different than EPA’s report of DoD’s compliance

rate. EPA only measures compliance of DoD’s major NPDES permitted facilities, while DoD measures compliance of all DoD’s NPDES permits. In 2003, DoD began tracking NPDES permits instead of systems associated with NPDES permits to simplify reporting requirements.

Uniform National Discharge Standards

Section 312 of the CWA regulates vessel sewage discharge. Enacted in 1972, Section 312 requires EPA to set national standards of performance for marine sanitation devices (MSDs) used to prevent the discharge of untreated or inadequately treated sewage. In the case of DoD vessels, the Secretary of Defense must develop regulations for the design, construction, installation, and operation of MSDs that will meet EPA standards.

The Uniform National Discharge Standards (UNDS) law regulates non-sewage liquid discharges from Armed Forces vessels. The UNDS law, codified in Section 312(n) of the CWA, extended Section 312 to include liquid discharges other than sewage. Section 312(n) mandates joint rulemaking by the Secretary of Defense and the EPA Administrator. The Secretary of Defense delegated his authority under Section 312(n) to the Secretary of the Navy.

One of the purposes of UNDS is to “enhance the operational flexibility of vessels of the Armed Forces...” UNDS will relieve ship Commanding Officers from having to interpret different discharge rules for each port. UNDS also reduces potential liability because states will not be able to separately regulate vessel discharges. The UNDS law establishes a complex rulemaking process to address 25 discharges for 7,000 Armed Forces vessels across seven factors.

Because of the complexity of the rulemaking process, the Navy and EPA use a phased approach to implement the UNDS requirements. During Phase I, completed in 1999, the Navy and EPA

analyzed discharges and determined which were of sufficient environmental consequences that the use of a marine pollution control device (MPCD) might be warranted.

During Phase II, the Navy and EPA will develop Federal MPCD performance standards for each discharge requiring a control from Phase I. The Navy and EPA identified numerous potential MPCDs for evaluation during Phase I and will evaluate each MPCD to determine whether it is sufficiently proven in the marine environment. MPCDs that pass the screening process will then undergo feasibility and environmental analyses on vessels that represent the range of different vessel types generating the discharges. The Navy will use the information from these analyses as the basis for developing performance standards.

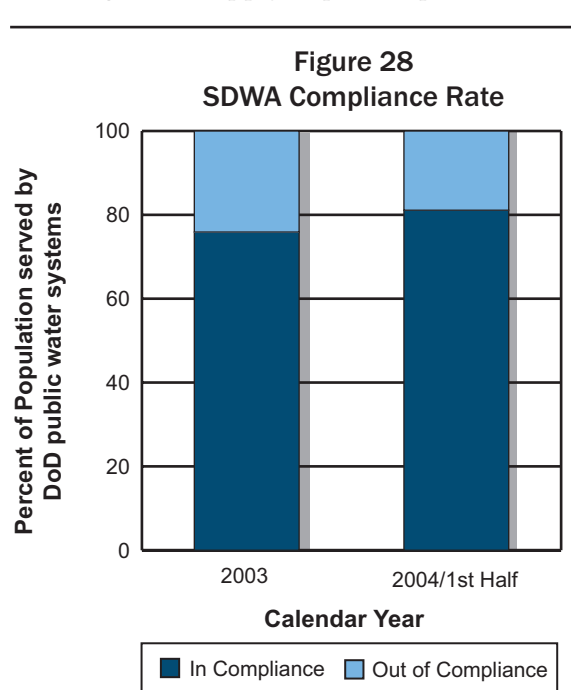
Phase III, the final phase of the UNDS rulemaking process, will include creating rules governing the design, construction, installation, and use of the MPCDs established in Phase II.

Conducting analyses for all 25 discharges at the same time is not practical, so EPA and Navy have agreed to analyze the discharges in smaller, more manageable batches. The first batch of Phase II discharges to be analyzed are chain locker effluent, weather deck runoff, elevator pit effluent, hull coating leachate, photographic laboratory drains, surface vessel bilgewater, and underwater ship husbandry.

In Fiscal Year (FY) 2004, the Navy and EPA completed technical analysis for all seven Batch One discharges and began the technical analysis of the four discharges in Batch Two (compensated fuel ballast, graywater, aqueous film forming foam, and seawater piping biofouling prevention). Immediately following conclusion of the Batch One technical analyses, regulatory process work for the Batch One discharges started in the 4th quarter of FY2004. The Navy and EPA plan to publish the Batch One proposed rule in early 2005 and the final Batch One rule in late 2005.

Compliance with Safe Drinking Water Act Requirements

The SDWA establishes a Federal program to monitor and increase the quality of the nation's drinking water supply to protect public health. EPA set national drinking water standards for all



public water systems, including DoD's drinking water systems. In CY2004, 99 percent of DoD community water systems met the 2004 SDWA compliance deadlines to conduct water system vulnerability assessments and revise emergency response plans accordingly.

The SDWA requires any operator of a community water system, including DoD, to publish annual Consumer Confidence Reports by July 1 of each year, detailing the drinking water quality during the previous calendar year. During the first half of CY2004, DoD provided drinking water to more than 2.2 million people in the United States and U.S. territories (Figure 28). Approximately 81 percent of this population

received drinking water that consistently met all established drinking water requirements. The remaining 19 percent received at least one public notification of drinking water violation in the first half of CY2004.

The challenge to maintain safe drinking water grows as treatment and delivery water systems age and deteriorate. DoD is developing long-term plans and projects to ensure that drinking water remains safe and systems remain in compliance.

Compliance Enforcement Actions

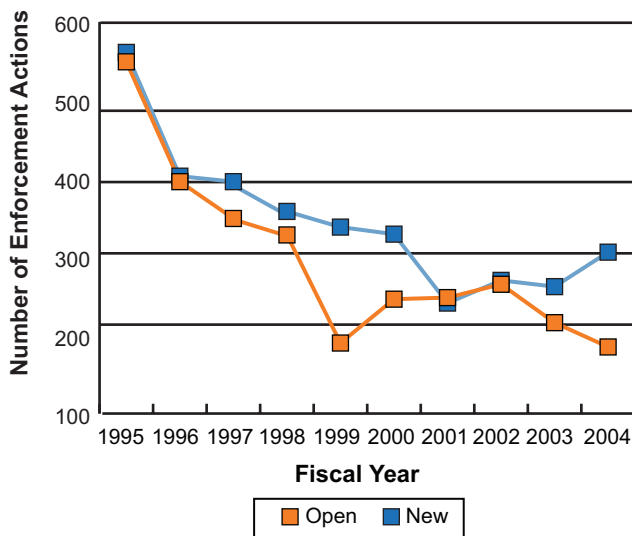
Failure to comply with environmental laws and regulations can result in fines and penalties that have a negative impact on DoD’s mission. Regulatory agencies can impact DoD’s ability to test new equipment and train by limiting or preventing the use of non-compliant facilities and equipment.

Since FY1995, open enforcement actions have declined 66 percent and new enforcement actions have declined 45 percent. The number of open compliance enforcement actions decreased from 216 in 2003 to 185 in 2004, a decline of 14 percent, as seen in Figure 29. The number of new

compliance enforcement actions increased in the past fiscal year. In FY2004, 306 new enforcement actions were initiated against DoD, compared with 262 in 2003. The majority of open enforcement actions, 71 percent, are administrative actions rather than project-related actions.

DoD uses periodic self-auditing and assessments to identify and correct areas of noncompliance before inspections occur. Enforcement actions may remain open due to legal issues, such as whether the Federal government has waived its sovereign immunity and can pay penalties to state or local regulators.

Figure 29
Compliance Enforcement Actions

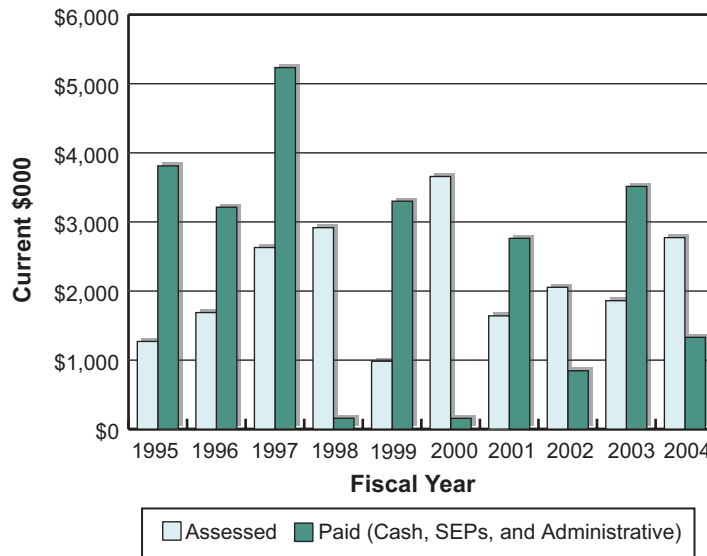


Fines and Penalties

DoD facilities may be subject to fines and penalties if they are found to be in non-compliance with Federal, state, and local environmental laws and regulations. DoD strives to maintain compliance, including participating in incentive-based compliance programs and developing compliance assessment systems. DoD pays fines either in cash or by funding supplemental environmental projects (SEPs). A SEP is an environmental project carried out in lieu of paying a fine. The project must improve, protect, or reduce risks to public health or the environment.

Figure 30 shows the trends in fines and penalties assessed and paid from FY1995 through FY2004. The amount of fines and penalties paid during FY2004 totaled \$1.3 million, a decrease from \$3.6

Figure 30
Fines and Penalties



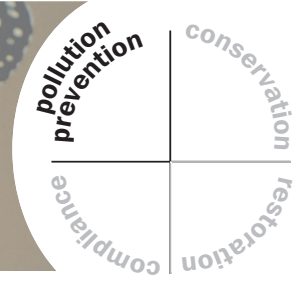
million in FY2003. Of the \$1.3 million, DoD paid \$838,975 in cash and \$500,250 in SEPs. The majority of the fines and penalties paid in FY2004 were originally assessed in prior fiscal years. A fine assessed in one year might not be paid until a later fiscal year. Therefore, the amounts paid are linked to the amount assessed in the original fine, regardless of the fiscal year assessed. The decrease between FY2003 and FY2004 is due to the large number of Clean Air Act related fines closed out in 2003.

In May 2002, DoD in consultation with the Department of Justice, authorized a more flexible settlement policy in appropriate CAA penalty cases. Recent court rulings against the government, especially in California, led to the change in policy pending the outcome of ongoing litigation in Florida. This policy shift facilitated the closeout of some longstanding, as well as more recent, Notices of Violation in settlements that allowed for payment but did not admit to liability nor to a waiver of sovereign immunity. Therefore, in FY2003, the Military Components closed out a significant number of CAA related fines and the associated open enforcement actions, increasing the number of fines paid and the total amount paid for that year.

Appendix T: Compliance Fines and Penalties Assessed and Paid provides a list of the fines and penalties data and highlights trends over the past five years.

DoD is committed to protecting human health and the environment by complying with all relevant environmental laws and regulations. DoD will continue to invest in assessments, management techniques, and supplemental projects that improve compliance. By maintaining compliance, DoD saves mission-critical funds, enhances protection of the land it holds in the public trust, and ensures that DoD personnel and that those that live in neighboring communities are not adversely impacted by DoD activities.

POLLUTION PREVENTION



The Department of Defense (DoD) is committed to protecting human health and the environment by making pollution prevention an integral part of day-to-day mission activities. The Department invests in pollution prevention technologies and strategies because controlling existing pollution and reversing the effects of pollution is costly, both financially and in impacts on the environment. Pollution can adversely affect the Department’s mission by harming DoD personnel and surrounding communities, property DoD holds in the public trust, and the facilities required to maintain military readiness.

DoD’s pollution prevention approach includes recycling, reducing the use of hazardous materials and developing safer alternatives, purchasing environmentally preferable products, reducing all sources of pollution (air, water, and waste), eliminating the use of ozone-depleting substances, and ensuring that the Department’s activities do not adversely impact the nation’s air, water, and land assets.

In Fiscal Year (FY) 2004, DoD continued to meet and surpass its pollution prevention goals and objectives. The Department implemented a formal procurement program to assist the Components with purchasing environmentally safer products. DoD continued to reduce its disposal of hazardous wastes and exceed goals for solid waste diversion and recycling. DoD employs pollution prevention as the primary means to achieve and maintain compliance at all DoD installations.

Green Procurement

Across the government, environmentally sound purchasing practices are known by a variety of titles, including Affirmative Procurement, Green Procurement, and Environmentally Preferable Purchasing. Affirmative Procurement is the purchase of materials containing at least a minimum amount of recycled content. Green Procurement or Environmentally Preferable Purchasing is the purchase of products or services in accordance with one or more “green” guidelines, such as energy use, conservation of assets, price, and safety, for preference determinations.

In FY2004, DoD implemented a formal Green Procurement Program (GPP), incorporating Resource Conservation and Recovery Act (RCRA) Section 6002 and other Federally-mandated procurement program requirements. The GPP includes policy, metrics, and a strategy for Department-wide implementation. The purpose of the GPP is to enhance and sustain mission readiness through cost-effective acquisition that achieves compliance and reduces asset consumption and solid and hazardous waste generation. DoD’s GPP includes buying recycled content, energy and water efficient, and bio-based products; using renewable energy; reducing the use and purchase of priority chemicals; and buying and using environmentally-benign adhesives. The GPP applies to all acquisitions, from major systems programs to individual unit supply and service requisitions. DoD and the Components continue to improve management of the various

Federal environmental procurement preference programs (affirmative procurement, bio-based, energy efficiency, etc).

DoD works with other Federal partners in a number of areas to advance the GPP. DoD participated in the White House Electronics Stewardship Summit, which produced the Federal Electronics Challenge (FEC). The FEC encourages agencies to sign a Memorandum of Understanding promoting the implementation of environmentally-preferable, energy-efficient, and cost-effective practices when buying, using, and managing the lifecycle of electronic assets.

DoD's GPP emphasizes the role of the individuals and organizations that originate purchase requests and make purchasing decisions because these parties have the greatest influence over procurement of environmentally-preferable products. This approach, as well as incorporating green procurement into facility-level environmental management systems, will help DoD comply with Federal procurement preference requirements as a routine part of day-to-day purchasing activities.

Affirmative Procurement – RCRA Section 6002

DoD is establishing itself as a leader in developing programs to implement RCRA Section 6002 and Executive Order 13101, "Greening the Government through Waste Prevention, Recycling, and Federal Acquisition," by purchasing products that are recyclable, renewable, reusable and made from recycled materials. DoD's Affirmative Procurement Program specifically focuses on purchasing these types of products and ensuring that personnel at all levels are committed to and trained in procuring and using these products.

DoD evaluates its progress on compliance with RCRA Section 6002 by using the reporting process established by the Office of Federal Procurement Policy, in conjunction with the Office of the Federal Environmental Executive. The Department compiles individual DoD Component data for inclusion in the DoD RCRA 6002 Report.

FY2004 Report on the FY2003 NDAA, Section 314

Section 314 of the FY2003 National Defense Authorization Act (NDAA), "Procurement of Environmentally Preferable Procurement Items," requires the Secretary of Defense to develop and implement a system for tracking Defense Logistics Agency (DLA) procurements of environmentally preferable items, and to report on the results from the tracking system annually from 2004 to 2007. This report addresses the requirements of the FY2003 NDAA, Sections 314(a) and (c), by providing background on the development, capabilities, and limitations of the tracking system along with data on purchase requests (requisitions) made by customers through the DLA supply system. This report covers environmentally-preferable products managed by DLA between FY2003 and FY2004.

Environmental Reporting Logistics System

In November 2003, DLA enhanced an existing system, the Environmental Reporting Logistics System (ERLS), with a web-based Green Procurement Reporting (GPR) tool, to meet the requirements of the FY2003 NDAA, Section 314. During FY2004, the GPR was fully implemented within the ERLS. DLA also improved the system to allow field activity access to green procurement data. DLA promotes the ERLS GPR as a tool for measuring progress towards the DoD green procurement goal in the DoD GPP.

ERLS Green Procurement Reporting

ERLS captures DLA daily requisitions from numerous ordering systems and compiles the requisition records together with the items identified as “green” in the Federal Catalog System, along with their non-green counterparts, to calculate the dollar value of green and non-green requisitions. Figure 31 provides FY2003 and FY2004 dollar amounts for DoD requisitions of DLA-managed green products. The products are organized by environmental attribute.

The “Percent Green” column in Figure 31 reflects overall green procurement performance for the identified DLA-managed products. Accurate interpretation of this data requires several points of clarification:

- All percentage values are based on DLA’s compilation of green and non-green counterpart products.
- Percentage values less than 100 percent do not necessarily indicate that customers are choosing not to purchase a green product. In some cases, use of green products is precluded by mission requirements or lack of readily available green products.
- ERLS data reflects customer demand (requisitions from customers for DLA to purchase products) for DLA-managed items, not the products DLA purchases to meet customer demand, nor what customers purchase through supply sources other than DLA.
- ERLS tracks requisition data rather than actual sales, since requisitions reflect the customers’ intent to purchase green versus non-green products.

Figure 31
Requisition of DLA-Managed National Stock Number Items

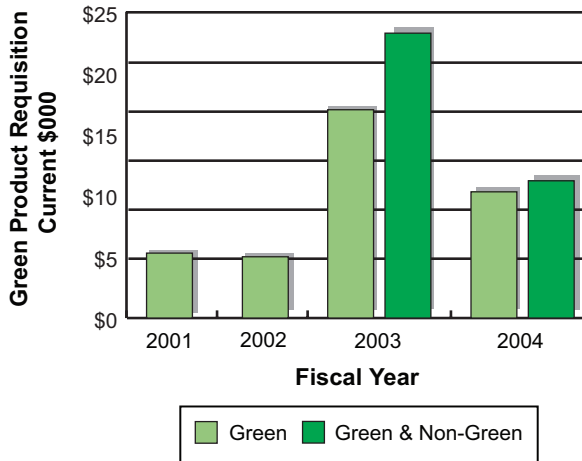
ATTRIBUTE AND PRODUCT TYPE	FY2003 TOTALS & SUBTOTALS			FY2004 TOTALS & SUBTOTALS		
	\$ GREEN	TOTAL \$ GREEN & NON-GREEN	PERCENT GREEN	\$ GREEN	TOTAL \$ GREEN & NON-GREEN	PERCENT GREEN
Comprehensive Procurement Guideline	\$ 16,285,011	\$ 22,635,944	72%	\$ 9,879,749	\$ 11,070,573	89%
Pallets	\$ 15,939	\$ 15,939	100%	\$ 31,219	\$ 31,219	100%
Remanufactured Toner Cartridges*	\$ 445,682	\$ 445,682	100%	\$ 217,523	\$ 217,523	100%
Paper and Paper Products	\$ 94,134	\$ 94,134	100%	\$ 1,375	\$ 1,375	100%
Lubricating Oil Containing Re-refined Oil*	\$ 9,242,879	\$ 15,258,224	61%	\$ 6,294,901	\$ 7,400,231	85%
Reclaimed Engine Coolant*	\$ 6,486,376	\$ 6,821,965	95%	\$ 3,334,731	\$ 3,420,225	98%
Energy Efficient	\$ 636,710	\$ 636,710	100%	\$ 407,589	\$ 409,640	99%
Ice Cube Machines	\$ 54,356	\$ 54,356	**	\$ 47,005	\$ 47,005	**
Exit Signs	\$ 142	\$ 142	**	\$ 3,109	\$ 3,109	**
Fluorescent Ballasts	\$ 179,457	\$ 179,457	100%	\$ 134,753	\$ 135,478	99%
Fluorescent Tube Lamps	\$ 247,510	\$ 247,510	100%	\$ 184,965	\$ 184,965	100%
Room Air Conditioners	\$ 155,245	\$ 155,245	100%	\$ 37,757	\$ 39,083	97%
Low Volatile Organic Compound Products	\$ 5,629	\$ 5,629	100%	\$ 5,889	\$ 5,889	100%
Household Consumer Products	\$ 150	\$ 150	100%	\$ 3,397	\$ 3,397	100%
Cleaning Compound	\$ 5,479	\$ 5,479	100%	\$ 2,492	\$ 2,492	100%
Water Conserving Compound	\$ 58,553	\$ 58,553	**	\$ 106,162	\$ 106,162	**
Urinals	\$ 58,553	\$ 58,553	**	\$ 106,162	\$ 106,162	**
Asbestos Alternative Products				\$ 315	\$ 315	100%
GRAND TOTALS	\$ 16,985,902	\$ 23,336,835	73%	\$ 10,399,703	\$ 11,592,579	90%

* ERLS figures for these green products were adjusted downward for duplicate requisitions.

** Indicates no non-green substitutes have been recorded in ERLS.

The FY2004 green purchasing totals in Figure 32 show a decrease from green purchases made in FY2003. The FY2003 green product requisition totals increased due to changing customer needs. Units deploying to Afghanistan and Iraq and a general increase in operating tempo and training combined to cause the sales spike. Orders increased significantly for re-refined lubricating oil and reclaimed engine coolant, the two products that currently drive the program. The demand for these products dropped off in FY2004 as orders slowed to a sustaining level. The dollar levels for other green products fluctuate due to marketplace effects, such as increased local purchase of toner cartridges or the decreasing cost of compact fluorescent lights.

Figure 32
DLA Requisitions of Environmentally Preferable Products



Product performance also affects these dollar levels. Because DLA supplies longer lasting components, such as energy-efficient lighting or air conditioners, demand frequency is reduced, representing the desired lower life-cycle cost. Figure 31 shows that the overall “percent green” increased 24 percent, from 72 percent in FY2003 to 90 percent in FY2004.

DLA-Managed Green Products

DLA promotes the market for green products through outreach to customer service representatives and others. DLA and the Office of the Secretary of Defense organized the first annual Environmental Expo at DLA headquarters on April 28, 2004. Exhibitors shared information about the products and services they provide that promote environmental

stewardship. The Inter-Service Environmental Education Review Board also approved the DLA Training Center workshop entitled “Buying Green.”

The DLA-chaired Joint Group on Environmental Attributes works to designate items as green based on environmental attributes. The FY2004 list of environmental attributes includes:

- Comprehensive Procurement Guidelines for items with recycled content
- Energy efficient
- Water conserving
- Low volatile organic compounds
- Asbestos alternative
- Low standby power

This set of attributes reflects Federal procurement preference mandates established in statutes, regulations, and Executive Orders. DLA launched several new environmental attributes studies. In addition, DLA continues to test potential bio-based products. Each item determined to conform with one of the environmental attributes is identified in the Federal Catalog System with an Environmental Attribute Code (ENAC). These codes also apply to items in the Federal Catalog that are managed by the General Services Administration, which is a voting member in the Joint

Group on Environmental Attributes. A total of 529 DLA-managed items were identified as green with an ENAC at the end of FY2004, compared to 475 the previous year.

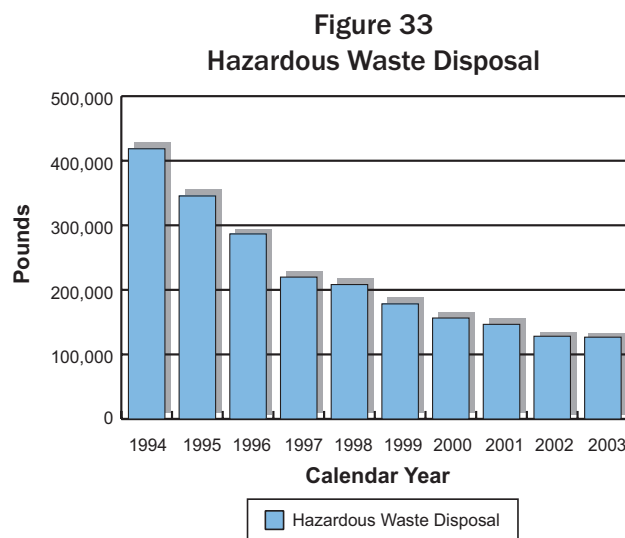
Solid Waste Diversion and Recycling

DoD diverts materials from the waste stream through recycling whenever it is feasible and cost-effective. In 1998, DoD established a solid waste diversion rate measure of merit to calculate the rate at which installations divert nonhazardous solid waste from entering a disposal facility. The Department's goal is to attain a 40 percent diversion rate by the end of 2005.

In Calendar Year (CY) 2004, DoD diverted over 61 percent of its solid waste, exceeding its goal. The percentage of solid waste diverted in a year varies depending on the amount and types of solid waste generated, as well as location, because recycling markets vary around the country. DoD's solid waste diversion also depends on the Department's schedule for demolishing buildings, which produces large quantities of solid waste. In FY2004, DoD avoided spending over \$131.5 million by employing integrated solid waste management practices, including reducing the amount of solid waste entering landfills or incinerators and their associated costs. The total volume of solid waste increased each year between 1998 and 2001, reaching a peak of 6.3 million tons.

Hazardous Waste Reduction and Disposal

DoD is committed to reducing hazardous waste. From CY1993 to CY2003 (the last year for which data are available), the total amount of hazardous waste disposed of declined by 69 percent as seen in Figure 33. DoD personnel continue to identify opportunities for reducing hazardous waste generation.



DoD continues to expand and improve the efficiency of its Pollution Prevention programs. The Department remains committed to using environmentally-preferable products, reducing the use and disposal of hazardous materials, and recycling and reusing materials rather than using traditional methods of disposal. DoD will continue to employ pollution prevention as its primary means of achieving compliance with environmental laws and regulations, thereby saving money and protecting human health and the environment.

STAKEHOLDER INVOLVEMENT

The Department of Defense (DoD) believes that stakeholder involvement is essential to the success of each of its environmental programs and relies on partnerships with stakeholders to gain valuable insight into environmental concerns and facilitate the implementation of DoD's environmental programs. Partnering with stakeholders enhances cooperation, increases communication, and improves decision making within the environmental community. DoD relies on partnerships with communities, state and federal agencies, foreign militaries, and tribal governments to learn about the issues and concerns directly facing stakeholders and integrate these views into the Conservation, Environmental Restoration, Compliance, and Pollution Prevention programs.

DoD understands that activities on military installations can affect the surrounding community, and works to actively engage the community and other stakeholders in identifying and addressing environmental concerns. The Department works through informal outreach activities to give stakeholders a better understanding of each of the Department's environmental programs. DoD also uses formal mechanisms to promote community understanding of, and participation in, the environmental processes, such as Restoration Advisory Boards (RABs) and technical assistance for public participation (TAPP) contracts, which DoD uses in the Environmental Restoration program. For more information on RABs and TAPP please reference Appendix P.

DoD partners with states to streamline environmental processes and improve decision-making. When states support DoD's decisions, the Department's environmental programs are most cost-effective and decisions can be implemented expeditiously. By maintaining open communication with states, DoD is better able to understand state-specific issues and ensure consistency of environmental decisions within a state. DoD establishes partnerships with individual states through venues such as the Defense and State Memorandum of Agreement (DSMOA) program to address the specific concerns and objectives of each state. In addition, DoD partners with many state-led organizations, including the Interstate Technology Regulatory Council, the Environmental Council of States, and the Association of State and Territorial Solid Waste Management Officials, to advance DoD's environmental programs in a wide range of subject areas. Additional information on the DSMOA program and other state partnerships is located in Appendix M.

The Department has established working relationships with many other federal agencies that continue to be crucial to the success of DoD's environmental programs. These partnerships support efficient cleanup by expediting reviews of technical documents and helping DoD apply sound and innovative approaches to environmental processes. In addition, the partnerships formed with federal agencies assist DoD in mitigating interagency conflicts that could be potentially harmful to environmental program progress. DoD partners with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to protect endangered and threatened

species and marine mammals. Two agencies that DoD partners with prominently in the Environmental Restoration program are the Agency for Toxic Substances and Disease Registry and the U.S. Environmental Protection Agency, which are described in further detail in Appendix M.

The United States partners with foreign militaries to better understand how to evaluate, prioritize, and more effectively meet military environmental needs; reduce potential U.S. liability; and promote compliance with international environmental treaty obligations. The Defense Environmental International Cooperation (DEIC) contributes to these activities by working to maintain access to resources including air, land, and sea, for training and readiness; contributing to interoperability; and fostering a global military environmental ethic. Appendix Q contains additional information about DEIC.

DoD builds collaborative relationships with Native American tribes that are crucial to managing environmental impacts on tribal lands. To ensure operational readiness, DoD engages in operations, training, and testing throughout the United States. Inevitably, some of these activities impact tribal lands. In 2004, approximately 80 participants from all DoD Components attended the DoD American Indian Cultural Communications Course that facilitated greater understanding of tribal culture and highlighted the requirements of DoD's American Indian and Alaska Native Policy and relevant laws affecting the Department's relationships with tribes. In addition, the DoD Native American Lands Environmental Mitigation Program uses cooperative agreements to address environmental issues attributable to past DoD activities. These agreements incorporate traditional ecological knowledge into remedial design, directly involve the tribe in project decision-making, develop tribal capacity regarding environmental services, and allow DoD to assist tribes in acquiring technical remediation skills. More information about DoD's environmental partnerships with tribes is located in Appendix R.

Each stakeholder plays an important role in promoting efficient environmental activities and upholding the shared charge of maintaining sustainable natural assets and supporting the military mission. It is the Department's hope that with the help of initiatives like those described above, installations, regulators, and stakeholders will continue to collaborate to ensure the continued success of DoD's environmental programs.



LOOKING FORWARD

The Department of Defense (DoD) is committed to sustaining, restoring, and maintaining the natural infrastructure—the land, air, and water assets—to support the readiness of U.S. military forces and to ensure their families and the surrounding communities have a safe and healthy environment. As the Department transforms its structure and prepares to face defense mission challenges, so too must DoD’s environmental programs transform. Sound stewardship and sustainability will continue to be the primary program drivers. The Department is focused on increased efficiency and success in DoD’s environmental programs by implementing performance based management, continuing to collaborate with stakeholders, and incorporating innovative technologies to improve environmental programs.

The Department will continue to focus on the issue of encroachment that affects our ability to train the warfighter. DoD is broadening the focus of the Department’s environmental programs by evaluating the capabilities of existing natural infrastructure (e.g., air, land, water, and frequency spectrum) to support installation and overall DoD mission. By evaluating natural infrastructure capability at the installation level, DoD will better assess the potential of future encroachment activities to impact the mission and more effectively manage existing natural infrastructure for long-term environmental stewardship.

To remain successful, the Department’s environmental programs will continue to transform in response to emerging environmental challenges, while integrating environmental activities with other aspects of the Defense mission to sustainably enhance overall support of the military mission and preserve natural and manmade Defense assets.