

Introduction

DEFENSE ENVIRONMENTAL PROGRAMS

The Department of Defense's (DoD's) primary mission is to protect and defend the United States, today and into the future. Sustaining the natural and built infrastructure required to support military readiness is integral to that mission. DoD's natural infrastructure includes approximately 30 million acres of land with accompanying air and water resources, while DoD's built infrastructure provides the military with the space and capability to organize, train, and equip its men and women to perform to the best of their ability.

The Department's environmental programs and related efforts maintain, restore, and improve DoD's natural and built infrastructure, while preserving the environment and protecting nearby communities. These programs are organized under four pillars: the Conservation program, the Defense Environmental Restoration Program, the Pollution Prevention program, and the Compliance program.

- Through the Conservation program, DoD maintains and preserves valuable natural and cultural assets, including threatened and endangered species, archaeological and historic sites, wetlands and rare ecosystems, and Native American sites.
- Through the Defense Environmental Restoration Program, DoD addresses hazardous substances, pollutants, contaminants, and military munitions remaining from past operations at military installations and formerly used defense sites.
- Through the Pollution Prevention program, DoD promotes the integration of sustainability and conservation of natural assets into all activities, from redesigning weapons systems to improving the management of hazardous materials and solid waste at installations.

- Through the Compliance program, DoD provides guidance and procedures to assist installations in meeting regulatory requirements and goals. This program also measures DoD's compliance progress.

This report provides information on DoD's activities under each of these programs and describes progress made towards achieving sustainability of its natural infrastructure.

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Introduction

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

Funding

The budget cycle for each fiscal year (FY) begins years in advance, requiring DoD to anticipate and plan for future environmental activities. The 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 each fiscal year, Congress authorizes DoD's activities through the National Defense Authorization Act and provides funds through the Defense Appropriations Act and the Military Construction Appropriations Act.

Conservation

Restoration

Compliance

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. Small funding amounts are also provided in the Military Personnel, Procurement, Research, Development, Test and Evaluation appropriations, and the Defense Working Capital Fund.

Pollution Prevention

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 comply with environmental requirements determined after a review of existing treaties, laws, and other agreements.

Looking Forward

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 appropriation 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

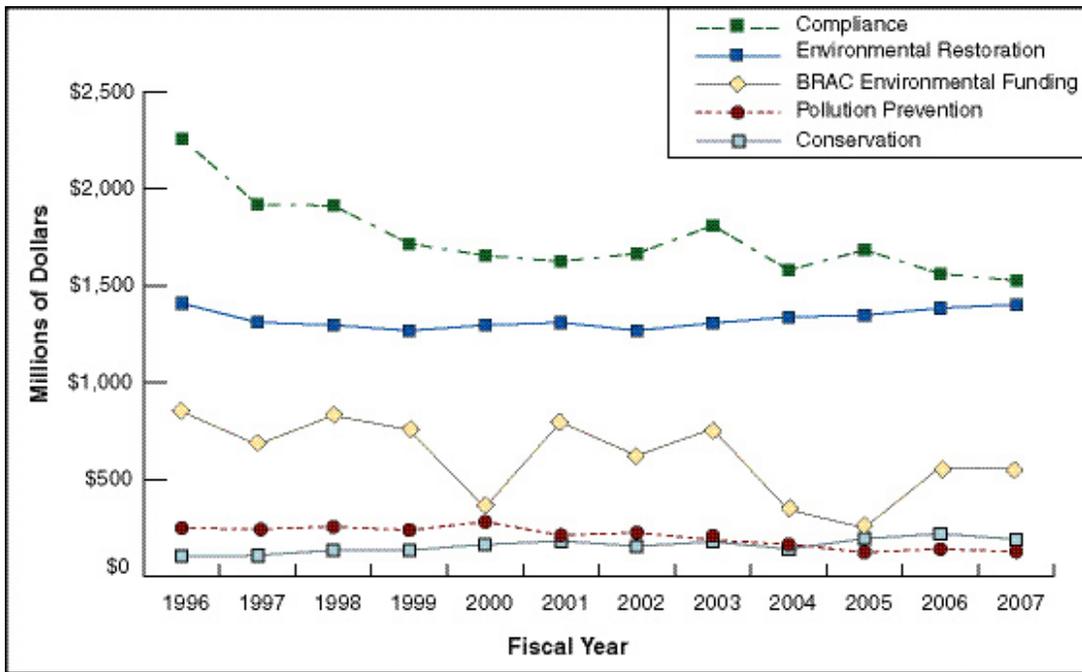
Over the past 10 years, DoD invested almost \$43.4 billion to ensure the success of its environmental programs. In FY2005 alone, DoD obligated approximately \$3.9 billion for environmental activities—\$187.9 million for conservation; \$1.3 billion for environmental restoration at active installations and FUDS; \$250.3 million for BRAC environmental requirements; \$1.7 billion for compliance; \$124.8 million for pollution prevention; and \$256.3 million for environmental technology. While all of DoD's environmental programs work toward the same goal—maintaining readiness while protecting human health and the environment—each program has a unique focus, and thus different funding needs. Figure 1 illustrates how the funding priorities differ for each program.

Conservation

The Department invests in protecting the natural, historical, and cultural assets located on and near DoD installations through the Conservation program. DoD provides policy and funding to manage and protect:

- Natural Assets - flora and fauna, rivers, and wetlands

Figure 1
Defense Environmental Funding Trends (Current in thousands)



- Cultural Assets - historic buildings, relics of prior civilizations, recovered artifacts, and other national historic treasures.

The Components obligated \$187.9 million in FY2005 for conservation efforts. Conservation funding in FY2006 and FY2007 reflect DoD's commitment to limiting further external development that inhibits training and adversely affects mission accomplishment. Figure 2 shows actual, appropriated, and requested funds for recurring and nonrecurring Conservation program activities.

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

Restoration

For FY2005, the Components obligated approximately \$1.3 billion in ER account funding for environmental restoration activities at active

installations and FUDS properties. Of this amount, \$1.2 billion was for the Installation Restoration Program (IRP) and \$151.4 million was used for the Military Munitions Response Program (MMRP). The Components obligated an additional \$250.3 million for environmental activities at BRAC installations, including compliance and planning, as well as environmental restoration. Figure 3 shows actual, appropriated, and requested ER funding and Figure 4 shows actual and programmed BRAC funding with breakouts by program category.

ER Account Funding

The Department currently invests the greatest portion of funding on its remaining high relative-risk sites, continuing its commitment to complete restoration at all of these sites by FY2007. The amount of funding required for high relative-risk sites decreases as DoD nears this goal. Funding priorities will then shift to medium relative-risk sites, to meet the Department's FY2011 goal for completing environmental restoration at these sites. As the MMRP matures,

Figure 2
Conservation Funding (Current in thousands)

	FY2004 Funds Actual	FY2005 Funds Actual	FY2006 Funds Appropriated	FY2007 Budget Request
Recurring	\$ 39,713	\$ 54,234	\$ 50,886	\$ 51,524
Nonrecurring	\$117,865	\$133,698	\$169,266	\$ 143,429
Total	\$157,578	\$187,932	\$220,152	\$ 194,953

Figure 3
Environmental Restoration Funding (Current in thousands)

	FY2004 Funds Actual	FY2005 Funds Actual	FY2006 Funds Appropriated	FY2007 Budget Request
IRP	\$1,236,791	\$1,196,860	\$1,211,259	\$1,207,122
MMRP	\$ 101,243	\$ 151,357	\$ 176,065	\$ 196,173
Total	\$1,338,034	\$1,348,217	\$1,387,324	\$1,403,295

Introduction

DoD will allocate MMRP funding to further investigate and prioritize MMRP sites and to implement cleanup remedies in support of MMRP goals. Funding amounts for FY2006 and FY2007 also reflect the transfer of funds from the ER account to provide BRAC funding for the 2005 round of closures.

Funding

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

Conservation

Further information about ER funding by DoD Component is located in Appendix C: Environmental Management Funding Summary and Appendix E: Restoration Budget Summary. In addition, ER funding information is broken out by program category in Appendix J: Installation Restoration Program and Military Munitions Response Program Status Tables.

Restoration

BRAC Environmental Funding

The BRAC account provides funding for environmental restoration, environmental compliance, and environmental planning activities at closing or realigned 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

Compliance

FY2005, DoD obligated \$250.3 million for BRAC environmental activities, with \$183.6 million for the IRP, \$17.5 million for the MMRP, and \$49.2 million for support activities, including management, planning, and compliance. Revenue of \$102.5 million generated from the previous sale of Navy BRAC property was used in lieu of an FY2005 Navy BRAC appropriation.

Figure 4 shows actual and programmed BRAC environmental funding broken out by environmental program category. BRAC environmental funding is shown in Figure 4 with \$563.5 million programmed funding in FY2006 and \$552.7 million programmed funding in FY2007. Both FY2006 and FY2007 BRAC funding reflect planned costs associated with the 2005 BRAC round of closures.

Additional information about BRAC environmental funding by Component is located in Appendix C: Environmental Management Funding Summary and Appendix E: Restoration Budget Summary. BRAC environmental funding information is also broken out by program category in Appendix J: Installation Restoration Program and Military Munitions Response Program Status Tables.

Compliance

Compliance funding ensures DoD compliance with all applicable federal, state, and local environmental

Pollution Prevention

Figure 4
BRAC Environmental Funding (Current in thousands)

	FY2004 Funds Actual	FY2005 Funds Actual*	FY2006 Funds Programmed	FY2007 Funds Programmed
IRP	\$322,129	\$183,587	\$367,988	\$349,210
MMRP	\$ 36,778	\$ 17,523	\$ 32,944	\$ 19,083
BRAC 2005	N/A	N/A	\$ 82,294	\$ 84,131
Support Costs†	\$ 2,405	\$ 49,226	\$ 80,268	\$100,261
Total	\$361,312	\$250,336	\$563,494	\$ 552,685

Looking Forward

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

† Support costs include management, planning, and compliance costs.

laws and regulations. During FY2005, DoD invested \$1.7 billion in compliance activities. Recurring compliance costs are those relatively constant activities that an installation must perform to 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 systems, updating Clean Air Act inventories, and conducting self-assessments. The funding for recurring compliance costs remains stable, reflecting the continuing nature of these costs.

Nonrecurring compliance costs address one-time events, such as projects to upgrade wastewater treatment facilities or install air pollution controls to meet current standards. DoD's largest annual nonrecurring compliance investment results from Clean Water Act (CWA) requirements for infrastructure investment in wastewater treatment plants and storm water management. The nonrecurring portion of the Compliance funding is decreasing as the Department completes projects for infrastructure improvements. Figure 5 shows actual, appropriated, and requested funds for recurring and nonrecurring compliance activities.

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

Pollution Prevention

The Department employs pollution prevention efforts to reduce health and safety risks to DoD personnel and nearby communities and to reduce environmental compliance, restoration, and conservation costs. The program also promotes sustainment by minimizing the asset footprint required to manage hazardous materials over the operational life cycles of weapons systems. As a result, DoD's pollution prevention investments have the potential to reduce costs in all three areas.

Recurring pollution prevention investments include supplies, travel, data management, and Toxic Release Inventory and other reporting activities. Hazardous material reduction and CWA requirements are the priorities within the nonrecurring budget. These nonrecurring projects are the significant drivers in reducing compliance costs, as shown in Figure 6. Additional information about Pollution Prevention funding by Component is located in Appendix C: Environmental Management Funding Summary and Appendix G: Pollution Prevention Budget Summary.

Overseas Activities

The Department complies with environmental requirements overseas using the similar programs to those that are successful domestically. Funding for remediation activities is included in the overseas compliance activities budget. These overseas investments are necessary to sustain use of, and access to, the natural resources needed to meet the military mission and to comply with environmental requirements determined after

Figure 5
Compliance Funding (Current in thousands)

	FY2004 Funds Actual	FY2005 Funds Actual	FY2006 Funds Appropriated	FY2007 Budget Request
Recurring*	\$ 939,702	\$ 989,049	\$ 978,864	\$ 965,121
Nonrecurring	\$ 715,177	\$ 695,858	\$ 582,763	\$ 562,187
Total	\$1,654,879	\$1,684,907	\$1,561,627	\$ 1,527,308

Figure 6
Pollution Prevention Funding (Current in thousands)

	FY2004 Funds Actual	FY2005 Funds Actual	FY2006 Funds Appropriated	FY2007 Budget Request
Recurring	\$ 52,332	\$ 42,005	\$ 46,595	\$ 49,543
Nonrecurring	\$ 63,761	\$ 82,745	\$ 94,416	\$ 78,718
Total	\$116,093	\$124,750	\$141,011	\$128,261

* Recurring Compliance costs include all manpower, education, and training costs for Compliance, Pollution Prevention, and Conservation.

a review of existing treaties, laws, and other agreements. Overseas environmental funding is included in the Compliance, Conservation, and Pollution Prevention funding charts and is provided separately in Figure 7.

Environmental Technology

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

The Office of the Secretary of Defense administers the Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP). SERDP and ESTCP focus on the highest priority environmental technology needs that apply to more than one Component. These programs help avoid duplication of effort among the Components on similar problems. A portion of environmental technology funding is invested in Defense Warfighter Protection (DWFP). Environmental technology funding for FY2004 through FY2007 is shown in Figure 8.

Figure 7
Overseas Environmental Funding (Current in thousands)

	FY2004 Funds Actual	FY2005 Funds Actual	FY2006 Funds Appropriated	FY2007 Budget Request
Cleanup	\$ 24,134	\$ 21,249	\$ 31,318	\$ 32,705
Compliance	\$129,414	\$151,032	\$125,742	\$ 122,648
Pollution Prevention	\$ 11,770	\$ 13,762	\$ 15,401	\$ 13,763
Conservation	\$ 4,719	\$ 14,106	\$ 6,706	\$ 6,360
Total	\$170,037	\$200,149	\$179,167	\$175,476

Figure 8
Environmental Technology Funding (Current in thousands)

	FY2004 Funds Actual	FY2005 Funds Actual	FY2006 Funds Appropriated	FY2007 Budget Request
Army	\$102,890	\$ 87,286	\$ 61,129	\$ 47,341
Navy	\$ 62,104	\$ 57,745	\$ 55,891	\$ 35,917
Air Force	\$ 13,830	\$ 10,130	\$ 17,015	\$ 15,521
SERDP	\$ 49,002	\$ 54,911	\$ 75,129	\$ 67,149
ESTCP	\$ 34,465	\$ 41,325	\$ 36,442	\$ 28,841
DWFP	\$ 4,900	\$ 4,900	\$ 5,000	\$ 5,000
Total	\$267,191	\$256,297	\$250,906	\$199,769



Conservation

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Department of Defense (DoD) installations are often rich in natural and cultural assets, in part because of DoD's conservation initiatives. These assets include wetlands, marine mammals, rare ecosystems and flora, more than 320 threatened and endangered species, archaeological and historic sites and buildings, and Native American burial and sacred sites. By conserving these assets, DoD preserves these valuable resources for current and future generations while meeting compliance requirements that ensure the Department maintains access to land, air, and sea assets needed to meet current and future operational requirements.

DoD's conservation efforts focus on sustainable use, management, and resource protection, as well as achieving full and sustained compliance with all federal, state, and local environmental laws and regulations. DoD partners with other agencies and interested stakeholders to improve the efficiency of conservation efforts and to ensure that resource protection is adequately maintained.

DoD also uses natural and cultural resource management plans to identify and manage natural and cultural assets on its installations. The Department analyzes natural and cultural inventory information to determine management needs, characteristics of the assets, and constraints related to military training and testing activities. DoD engages in integrated planning to encourage the sustained use of these resources. 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 planning to support the sustained use and access to valuable assets. This planning ensures that operational requirements are met, while minimizing harmful effects on these assets. Because the Department

recognizes that installations are part of larger regional ecosystems, DoD's planning efforts include not only identifying impacts on installations, but also issues within the ecosystem as a whole.

DoD installations inventory natural and cultural resources and develop plans to manage these assets. DoD uses resource management plans to establish procedures and set priorities for asset protection and coordinate with state and federal agencies and stakeholders. Through the inventory process, installations identify potential habitats of threatened or endangered species; areas likely to have archaeological sites; and locations likely to contain historic 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.

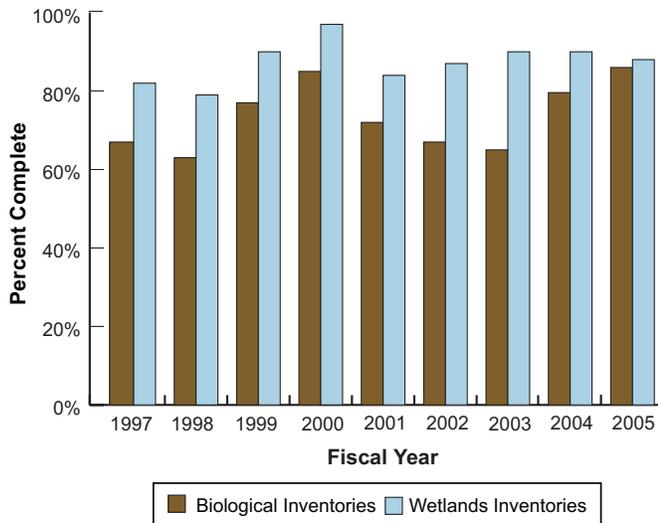
Natural Asset Inventories

To properly manage natural assets, DoD conducts inventory assessments of natural resources at installations, enabling managers to develop plans that adequately protect the natural assets at DoD installations. Figure 9 illustrates the progress DoD installations made in completing inventories of biological resources and wetlands. By the end of Fiscal Year (FY) 2005, DoD completed approximately 86 percent of its biological resource inventories, and nearly 88 percent of its wetlands inventories.

The number of installations required to perform an inventory vary from year to year because the legislative or regulatory status and/or the condition 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 resources.

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Figure 9
Natural Asset Inventories Completed



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 resources, 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 host state, and the installation
- Document requirements for the natural asset budget
- Serve as a principal information source for National Environmental Policy Act documents

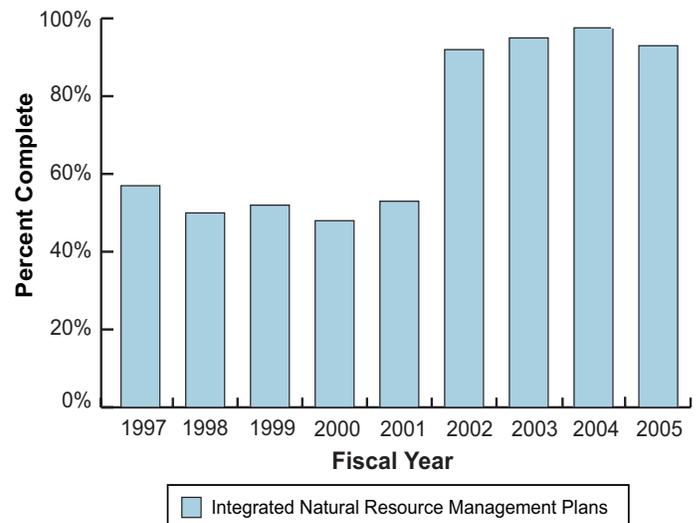
- Guide planners and facility managers in the use and conservation of natural assets on lands and waters under DoD control
- Balance the management of natural assets unique to each installation with mission requirements and other land use activities
- Identify and prioritize actions required to implement conservation goals and objectives.

In preparing an INRMP, each installation provides an opportunity for public comment and cooperates with the FWS, appropriate state fish and wildlife agencies, military trainers, operators, and other stakeholders. Each plan must ensure no net loss in the capability of military installation lands to support the military mission of the installation.

The Sikes Act requires that all 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 FY2005, DoD completed the revision of 93 percent of its INRMPs. The remaining plans are in coordination with the FWS or state fish and wildlife officials.

A further explanation of the Sikes Act and DoD's progress in developing INRMPs is located in Appendix H: Fiscal Year 2005 Sikes Act Reporting Data.

Figure 10
INRMP Progress



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 September 30, 2005, there were 1,269 species listed by the FWS as either threatened or endangered within the United States, 320 of which inhabit DoD lands. DoD installations contain some of the finest remaining examples of such rare native vegetative communities as old-growth forests, tall-grass prairies, and vernal pool wetlands.

DoD spends more than \$40 million each year to protect threatened and endangered species. The Department 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 land and assets.

Cultural Asset Management

Protection of the nation's heritage is an essential part of DoD's mission—defense of the people, territories, institutions, and 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.

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. By the end of FY2005, DoD completed 63 percent of historic and 54 percent of archaeological building inventories.

Installations prepare Integrated Cultural Resource Management Plans (ICRMPs) to manage historic sites and archaeological artifacts in an area. An ICRMP is a five-year planning document used to implement an installation's cultural resources 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 U.S. installation with significant cultural assets to prepare an ICRMP. Since 1996, DoD installations have been required to review their ICRMPs at least

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Figure 11
Cultural Asset Inventories Completed

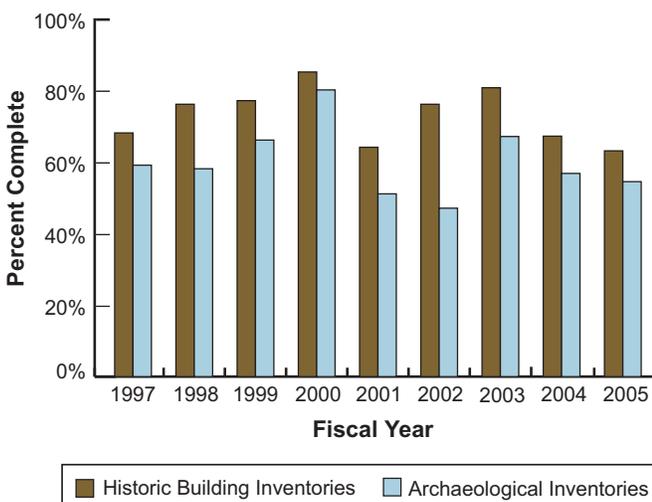
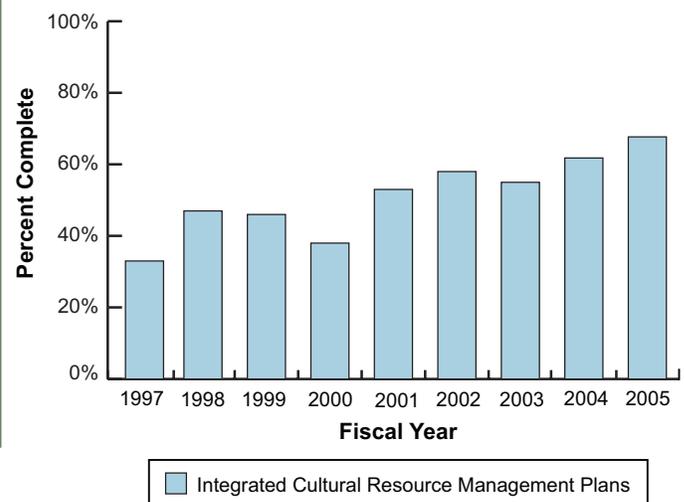


Figure 12
ICRMP Progress



once annually and revise and update their plans at least every five years, according to DoD Instruction 4715.3. By the end of FY2005, 68 percent of ICRMPs were completed, an increase of 6 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 N: 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 Legacy Program funds projects that emphasize leadership in exploring new ideas and implementing innovative technologies for natural and cultural resource management. DoD

also works in partnership with other organizations under the program to conserve natural and cultural assets in a cost-effective and technically sound manner. The Legacy Resource Management Program facilitates partnerships with federal, state, and local agencies and private groups to cost effectively manage natural and cultural assets.

In FY2005, the Legacy Resource Management Program funded 80 projects and invested a total of \$8.6 million. The projects focus on cultural resource management, national and international initiatives, historic preservation, invasive species control, monitoring and predicting migratory patterns of birds, and range sustainment.

Restoration

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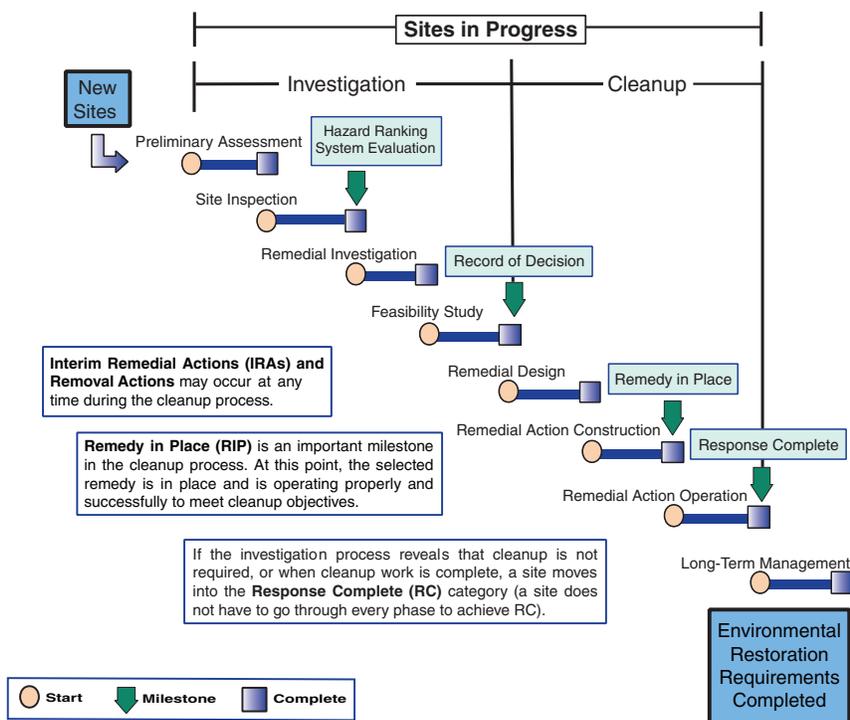
In the 1970s, the Department of Defense (DoD) began to identify, characterize, and clean up environmental contamination that had occurred when hazardous substances and wastes were managed and disposed of using standard practices later found to be detrimental to the environment. Since 1986, DoD has utilized the Defense Environmental Restoration Program (DERP) to restore environmentally impacted property and pursue restoration activities at active installations, Base Realignment and Closure (BRAC) installations, and formerly used defense sites (FUDS) throughout the U.S. and its territories. This effort protects military personnel and communities from environmental health and safety hazards, and preserves public lands, while ensuring that U.S. forces are able to continue to train to protect and defend the nation.

In 1980, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which established a requirement and

framework for the identification, investigation, and cleanup of hazardous substances resulting from past practices. Congress amended CERCLA in 1986 to create the DERP and codify DoD's environmental stewardship responsibilities—establishing standards in restoration for the U.S. and its territories. Since the DERP's inception, the Office of the Secretary of Defense has overseen the program and its implementation by the Military Components—Army, Navy, Air Force, Defense Logistics Agency, and Defense Threat Reduction Agency.

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

Figure 13
DoD CERCLA Environmental Restoration Process Phases and Milestones



To effectively address remediation at active and BRAC installations, and FUDS properties, DoD organized the DERP into three distinct program categories:

- **Installation Restoration Program (IRP)**
The IRP, established in 1985, addresses the releases of hazardous substances, pollutants, or contaminants resulting from past practices that pose environmental health and safety risks. Currently, there are 27,280 sites at 3,332 current and former defense properties in the IRP.
- **Military Munitions Response Program (MMRP)**
The MMRP, initiated in 2001, addresses environmental and health hazards from unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) found at locations other than operational ranges on active and BRAC installations and FUDS projects. There are currently 3,309 sites at 1,895 active and BRAC installations and FUDS projects in the MMRP.
- **Building Demolition/Debris Removal (BD/DR)**
BD/DR provides for the demolition and removal of unsafe buildings or structures that meet specified criteria. Most BD/DR activities take place on FUDS projects. DoD conducts BD/DR activities at 454 sites on 425 active installations and FUDS projects.

Through FY2005, the Department has conducted environmental activities at 31,043 sites on 1,808 installations and 2,808 FUDS properties. DoD has completed all response actions at 22,280, or approximately 72 percent of these sites and is making progress toward achieving its environmental restoration goals.

To reduce health and safety risks posed by historical contamination, DoD employs a risk-based management strategy approach for the DERP comprised of three main elements: a systematic process for prioritizing sites based on risk evaluation; program goals and performance metrics to track progress and fulfill restoration requirements at sites; and an outreach program focused on regulators and stakeholder communities to identify and address concerns.

Prioritization

Careful consideration and planning are required to prioritize sites so DoD resources can be utilized

efficiently to maximize reduction in risk and progress made toward environmental restoration goals. DoD uses prioritization tools to determine the risk posed by each site relative to other sites in its inventory so that funding can be allocated to achieve the greatest risk reduction. The Relative-Risk Site Evaluation (RRSE) framework is used to prioritize sites in the IRP and DoD is also finalizing a prioritization protocol for sequencing MMRP site activities.

DoD uses the RRSE framework to prioritize IRP sites in three categories—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 can also be designated as “Not Evaluated” or “Not Required.” The Not Evaluated designation refers to 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) status, 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 factors in sequencing cleanup activity.

To fulfill statutory requirements established by the National Defense Authorization Act for Fiscal Year (FY) 2002, DoD developed the draft Munitions Response Site Prioritization Protocol (the 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 DMM, hazards associated with the effects of chemical warfare materiel, and acute and chronic health and environmental hazards posed by MC or other chemical constituents. The Department also considers economic, programmatic, and stakeholder concerns when making sequencing decisions. DoD expects to finalize the Protocol in FY2006. Upon publication in the *Federal Register*, DoD plans to apply the 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 and success. The Department plans to achieve these goals by leveraging regulatory partnerships and by planning, managing, and budgeting to ensure sufficient funding is available to support environmental restoration plans and projections. The Components use these goals to guide investment decisions and set restoration targets during the fiscal year.

IRP Performance Goals

IRP performance goals focus on completing required cleanup activities at high relative-risk sites first. DoD's goal is to achieve RIP/RC status 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. DoD established the same goals for high and medium relative-risk sites at properties in the FUDS program. The goal for achieving RIP/RC status at all low relative-risk sites at FUDS properties is FY2020.

BRAC installation IRP goals have the added objective of preparing property to be environmentally suitable for transfer and reuse in accordance with CERCLA requirements. DoD did not reach its goal of RIP/RC status at 100 percent of currently identified BRAC IRP sites and installations by the end of FY2005; however, the Department has achieved RIP/RC status at 75 percent of BRAC installations, approximately 81 percent of BRAC IRP sites. DoD expects to achieve RIP/RC status at the remaining BRAC installations from

the first four BRAC rounds and have them ready for transfer by FY2017.

MMRP Performance Goals

Since the MMRP is a relatively new program, DoD is still establishing performance goals, but 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's goal is to achieve RIP/RC status at all MMRP sites at installations currently in the BRAC program by the end of FY2009. DoD is in the process of evaluating the MMRP inventory to establish performance goals for the completion of the MMRP and plans to have these goals in place by the end of FY2006.

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. DoD has continued to make significant progress in increasing the number of sites that have achieved RC; reaching RC status at 72 percent of all DERP sites, both IRP and MMRP sites. Only 20 percent of DERP sites are in the investigation phases and 8 percent are in the cleanup phases.

Figure 14
Active Installations
FY2005 DERP Site Status†

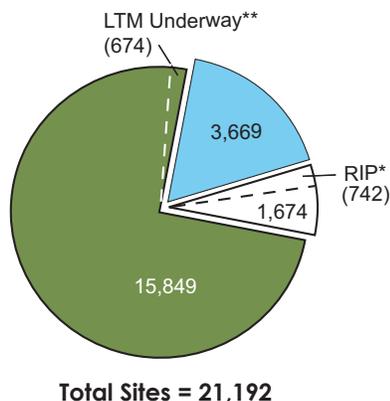


Figure 15
FUDS Properties
FY2005 DERP Site Status†

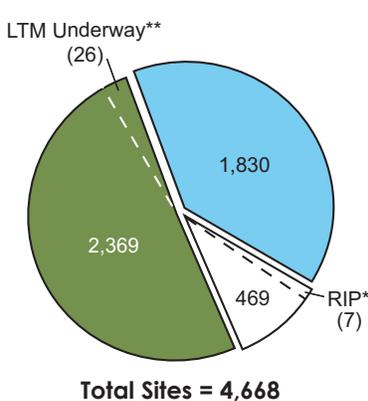
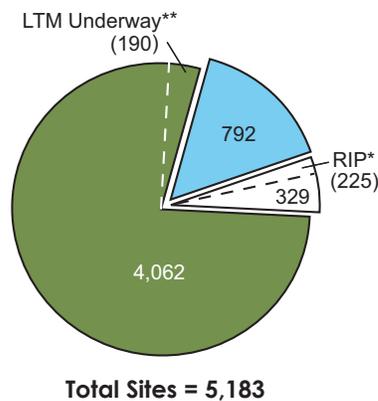


Figure 16
BRAC Installations
FY2005 DERP Site Status†



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

† Includes IRP, MMRP, and BD/DR sites as of September 30, 2005.

* RIP includes sites where remedial action operations are underway. RIP is a subset of Cleanup Planned or Underway.

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

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/RC status at the installation level, and progress in achieving overall relative-risk reduction. When evaluating these performance metrics, DoD examines both progress-to-date and the projection of future progress.

IRP Site Progress by Phase

DoD has advanced the majority of its 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 projects, and BRAC installations as of the end of FY2005. These figures show that DoD has achieved RC status at 79 percent of active IRP sites, 63 percent of FUDS projects, and 81 percent of BRAC IRP sites, and demonstrate that the Department is steadily moving forward in its commitment to complete environmental restoration actions. DoD has achieved RC status at 78 percent of all IRP sites. During FY2005 alone, DoD achieved RC status at 676 IRP sites, including 476 active installation sites, 71 sites at FUDS projects, and 131 BRAC installation sites.

IRP Installation Progress

Another performance measure DoD uses to gauge progress is the achievement of RIP/RC status at the installation and project level, which is reached when all sites at the installation or project have achieved RIP/RC status. By the end of FY2005, DoD achieved

RIP/RC status at 65 percent of its current and former defense properties. This represents 76 percent of active installations, 52 percent of FUDS properties, and 75 percent of BRAC installations. Figure 20 displays DoD's expected RIP/RC status completion trends for active installations, FUDS properties, and BRAC installations. DoD did not meet its goal of achieving RIP/RC status at 100 percent of BRAC installations by FY2005. DoD has achieved RIP/RC status at 81 percent of BRAC IRP sites. The majority of those installations not achieving RIP/RC only have one or two sites without remedies in place or completed response actions. DoD anticipates achieving RIP/RC at FUDS properties by FY2035.

IRP Relative-Risk Reduction

DoD also reviews the number of sites in each relative-risk category as the basis for DoD's goals for active installations and FUDS. The Department exceeded its FY2002 goal of achieving RIP/RC status at 50 percent of high-risk sites and continues this progress in reducing the number of sites in each relative-risk category, particularly the high-risk category, as illustrated in Figure 21. As of FY2005, DoD has achieved RIP/RC status at 72 percent of high-relative risk sites, demonstrating that DoD is making progress toward its FY2007 goal of achieving RIP/RC at all high relative-risk sites.

In addition, DoD has been successful in reducing the number of medium and low relative-risk sites. DoD is on track to achieve RIP/RC status at all medium relative-risk sites by FY2011 and at all remaining relative-risk sites at active installations by FY2014.

Figure 17
Active Installations
FY2005 IRP Site Status†

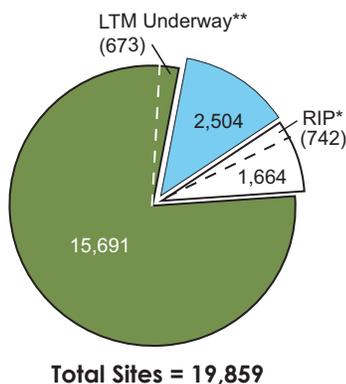


Figure 18
FUDS Properties
FY2005 IRP Site Status†

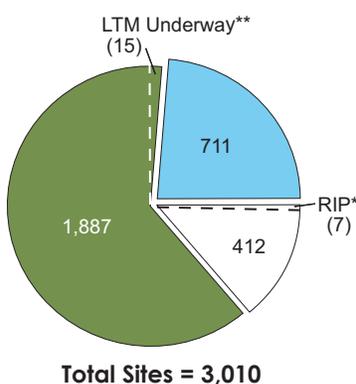
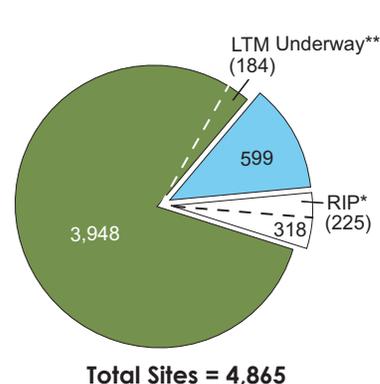


Figure 19
BRAC Installations
FY2005 IRP Site Status†



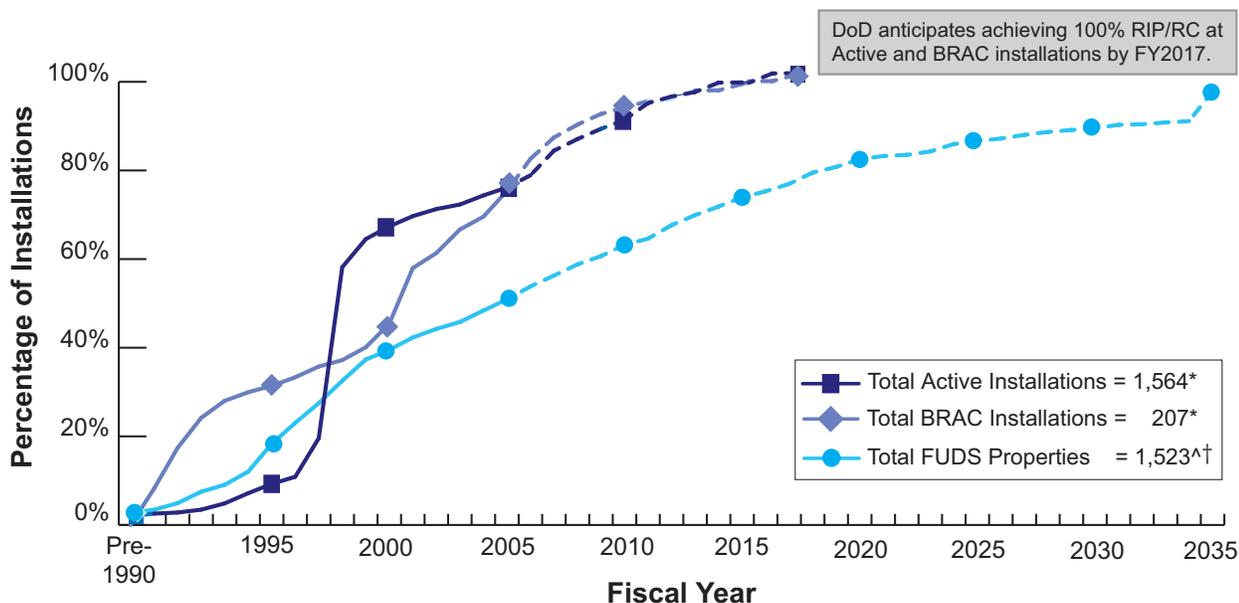
■ Response Complete ■ Investigation Planned or Underway □ Cleanup Planned or Underway

† Includes incidental munitions work (i.e. non-MMRP) and BD/DR as of September 30, 2005.

* RIP includes sites where remedial action operations are underway. RIP is a subset of Cleanup Planned or Underway.

** LTM occurs as a subset of the sites that have achieved response complete.

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

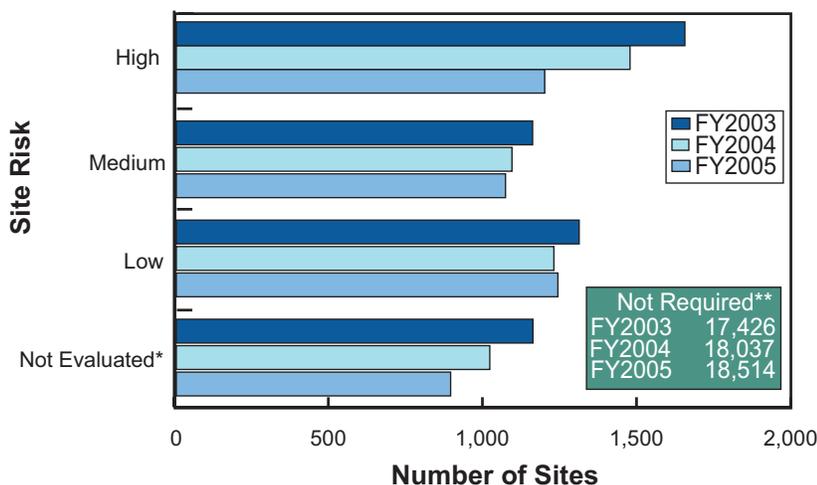


* Does not include MMRP or BD/DR sites.

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

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

Figure 21
Active Installation and FUDS Property Relative-Risk Site Evaluation Progress



* The "Not Evaluated" category includes a large number of FUDS projects that are exclusively associated with aboveground and underground storage tanks; sites requiring RRSE 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.

The Department is also making progress toward achieving RIP/RC status at all remaining FUDS projects by FY2020.

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 FY2005, DoD had identified 3,309 MMRP sites, a decrease of 89 sites from FY2004. The decrease is the result of an administrative reclassification of the FUDS MMRP inventory. 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 22, 23, and 24 show the status of MMRP sites at active installations, FUDS properties, and BRAC installations.

While the MMRP continues to mature, munitions response actions have been a part of the DERP for several years, primarily at BRAC installations and

FUDS, providing DoD with a solid experience base for addressing the environmental and safety hazards associated with the past use of military munitions and MC. As a result, DoD has achieved RC status at 482 MMRP sites at FUDS properties and 114 MMRP sites at BRAC installations.

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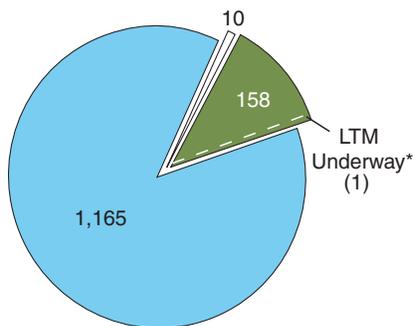
Restoration

Compliance

Pollution Prevention

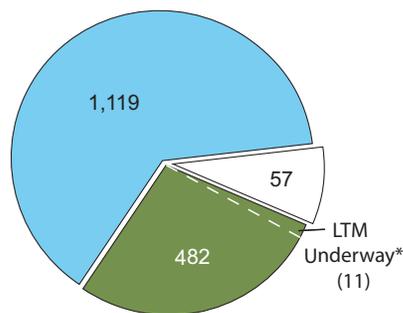
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Figure 22
Active Installations
FY2005 MMRP Site Status



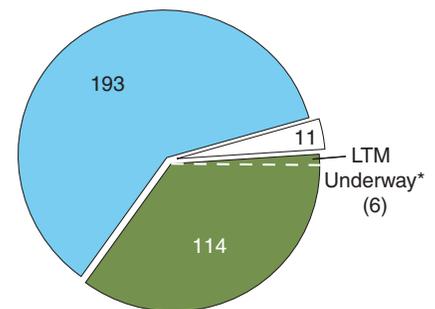
Total Sites = 1,333

Figure 23
FUDS Properties
FY2005 MMRP Site Status



Total Sites = 1,658

Figure 24
BRAC Installations
FY2005 MMRP Site Status



Total Sites = 318

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

* LTM occurs at a subset of the sites that have achieved response complete.



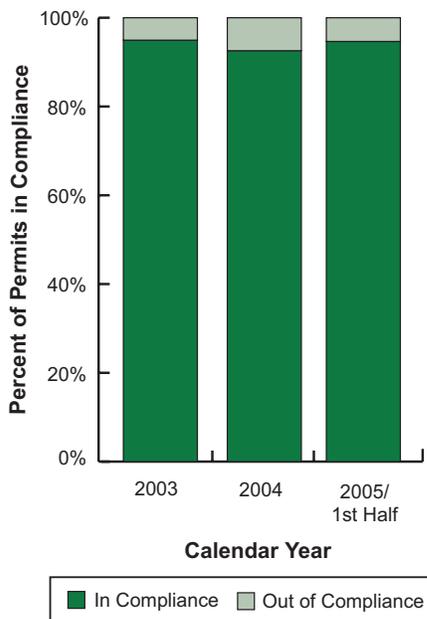
Compliance

DEFENSE ENVIRONMENTAL PROGRAMS

The Department of Defense (DoD) remains committed to protecting human health and the environment by achieving full compliance with all federal, state, and local environmental laws and regulations. To maintain efficient and effective compliance with these laws, the Department provides the DoD 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 performance metrics for the Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permits, Safe Drinking Water Act (SDWA) requirements, compliance enforcement actions, and fines and penalties. In addition to these metrics, the program participates in rulemaking and ensures compliance with CWA, Clean Air Act, Toxic Substances Control Act, Medical Waste Tracking Act, Resource Conservation and Recovery Act requirements, underground storage tank regulations, and all relevant federal, state, and local laws and regulations.

Figure 25
CWA Permit Compliance



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.

To protect water assets, each state adopts water quality and drinking water standards approved by the U.S. Environmental Protection Agency (EPA). The standards establish water quality criteria and drinking water contaminant levels. In addition, DoD is part of an ongoing effort to develop uniform national discharge standards for controlling discharges from vessels of the Armed Forces.

Clean Water Act Permitted Systems

The CWA requires all facilities that discharge wastewater in the United States to have permits that establish pollution limits and specify monitoring and reporting requirements. NPDES permits, which are issued either by EPA or by a state with permitting authority from EPA, regulate pollutants discharged into surface waters by industrial, municipal, and other facilities. DoD Instruction 4715.6, "Environmental Compliance," established a framework for measuring DoD's compliance with the CWA.

DoD currently holds 1,799 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) 2005, 95 percent of DoD's NPDES permitted facilities were in compliance, as shown in Figure 25. DoD's compliance rate is different than EPA's report of DoD's compliance rate because EPA only measures compliance of DoD's major NPDES permitted facilities. In Fiscal Year (FY) 2004, EPA measured 56 permits compared to DoD's 1,799 permits for the first half of CY2005.

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Uniform National Discharge Standards

Congress enacted the Federal Water Pollution Control Act in 1972, commonly known as the Clean Water Act, to regulate the discharge of pollutants into U.S. waters. The National Defense Authorization Act of 1996 amended Section 312 of the CWA to provide DoD and EPA with the authority to jointly establish Uniform National Discharge Standards (UNDS) for incidental liquid discharges from vessels of the Armed Forces. DoD delegated the primary responsibility for coordinating with EPA to develop the standards to the Navy.

The primary purpose of the UNDS program is to provide a comprehensive system for regulating discharges incidental to the normal operation of Armed Forces' vessels. The UNDS program requires a complex rulemaking process to address discharges from more than 6,000 vessels across certain criteria. The Navy and EPA will analyze each discharge and marine pollution control device (MPCD) using certain criteria that include nature of a discharge, environmental effects of a discharge, practicability of an MPCD, operational effects of an MPCD, applicable U.S. law, applicable international standards, and costs of an MPCD's installation and use. Because of the complexity of the process, the Navy and EPA use a three-phase approach to implement UNDS requirements.

Phase I, which was completed in 1999, determined which discharges required control by an MPCD and those discharges that did not require control. The Phase I final rule requires control of 25 discharges from Armed Forces vessels, while exempting 14 discharges.

During Phase II, which is currently underway, the Navy and EPA, in consultation with the U.S. Coast Guard (USCG), the Secretary of State, the Secretary of Commerce, and other interested federal agencies, states, and Native American Tribes, are developing the performance standards for MPCDs that will control the 25 discharges identified in Phase I. To facilitate the rulemaking process, the Phase II standards will be issued in five groups, allowing the Navy and EPA to more efficiently conduct technical analyses and develop discharge standards, rather than conducting analyses and developing standards for all 25 discharges at one time.

In FY2005, the Navy and EPA completed the technical analysis and draft performance standards

for the Phase I, Batch One discharges. Additionally, development of the preamble, technical development document, and the administrative record for the UNDS Batch One proposed rule began. The proposed rule is expected to be published in FY2006. The Navy and EPA also began the technical analyses of Phase I, Batch Two discharges.

In Phase III, DoD, in consultation with EPA and USCG, will establish requirements for the design, installation, and operation of MPCDs to meet Phase II performance standards.

Safe Drinking Water Act Requirements

The SDWA establishes a federal program to monitor and ensure 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 CY2005, 100 percent of DoD community water systems met the December 2004 SDWA compliance deadlines to conduct water system vulnerability assessments and revise emergency response plans accordingly.

During the first half of CY2005, DoD provided drinking water to more than 2.2 million people in the U.S. and its territories. Approximately 93 percent of this population received drinking water that consistently met all established drinking water requirements, as shown in Figure 26. The remaining seven percent received at least one public notification of drinking

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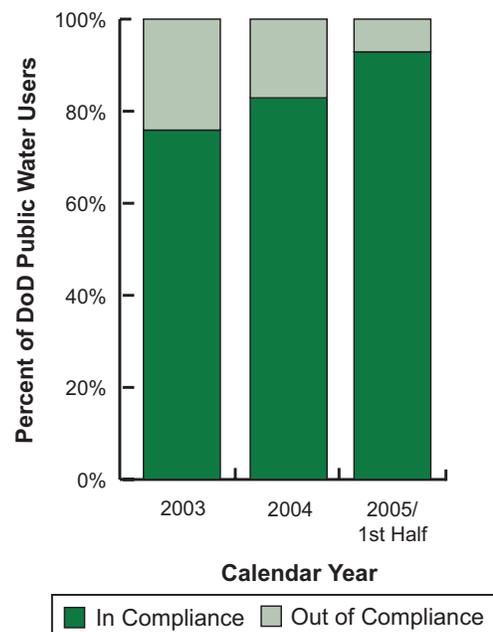
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Figure 26
SDWA Compliance Rate



water violation in the first half of CY2005. The challenge to maintain safe drinking water increases as water systems age. DoD is developing long-term plans and projects to ensure that drinking water remains safe and all community water systems remain in 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 actions 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 69 percent and new enforcement actions have declined 50 percent. The number of open compliance enforcement actions decreased from 185 in FY2004 to 169 in FY2005, a decline of 8.6 percent, as illustrated in Figure 27. The number of new compliance enforcement actions decreased in the past fiscal year. In FY2005, 282 new enforcement actions were initiated against DoD, compared with 307 in 2004. Over 75 percent of the open enforcement actions are administrative actions rather than project-related actions.

DoD uses periodic self-auditing and assessments to identify and correct areas of non-compliance. Enforcement actions may remain open due to delays in regulator sign-off, project delays, or legal issues, such as whether the Federal government has waived its sovereign immunity and can pay penalties to state or local regulators.

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 by participating in incentive-based compliance programs and developing compliance assessment systems.

Figure 28 shows the trends in fines and penalties assessed from FY2001 through FY2005. The amount of fines and penalties assessed during FY2005 totaled \$1.4 million, a decrease of 12 percent from FY2001 totals.

Appendix O: Compliance Fines and Penalties Assessed provides a summary of the Military Components FY2005 fines and penalties data and highlights trends over the past five years.

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Figure 27
Compliance Enforcement Actions

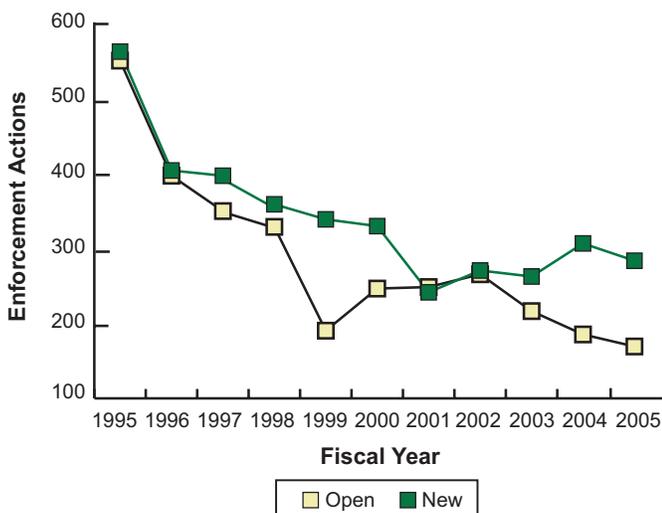
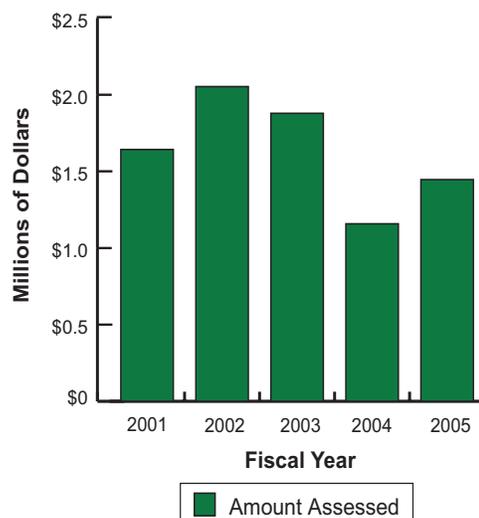


Figure 28
Fines and Penalties Assessed



Pollution Prevention

DEFENSE ENVIRONMENTAL PROGRAMS

Introduction

The Department of Defense (DoD) uses pollution prevention as its preferred approach to environmental management and is committed to making pollution prevention an integral part of day-to-day mission activities. 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 resources.

Funding

Conservation

The Department jointly manages a formal procurement program to assist the Components with purchasing environmentally safer products. DoD continues to reduce its disposal of hazardous wastes and exceed goals for solid waste diversion and recycling.

Restoration

Green Procurement

Across the government, environmentally preferable purchasing practices are known by a variety of titles, including Affirmative Procurement, Green Procurement, and Environmentally Preferable Purchasing. Environmental Preferable Purchasing considers several factors, including energy use, conservation of resources, price, and safety.

Compliance

In Fiscal Year (FY) 2004, DoD established a formal Green Procurement Program (GPP) to assist the Components with purchasing environmentally preferable products. The purpose of the GPP is to enhance and sustain mission readiness through cost-effective acquisition that achieves compliance and reduces resource consumption and solid and hazardous waste generation.

Pollution Prevention

DoD's GPP includes buying products that have recycled content, are energy efficient, are made from bio-based materials, promote renewable energy, reduce the use and purchase of priority chemicals, and use environmentally-benign adhesives. The GPP applies to all acquisitions, from major systems

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programs to individual unit supply and service requisitions. The GPP objectives defined in the GPP Policy are to:

- Educate all appropriate DoD employees on the requirements of federal "green" procurement preference programs, their roles and responsibilities relevant to these programs and the DoD GPP, and the opportunities to purchase green products and services
- Increase purchases of green products and services consistent with the demands of mission, efficiency, and cost-effectiveness, with continual improvement toward federally established procurement goals
- Reduce the amount of solid waste generated
- Reduce consumption of energy and natural resources
- Expand markets for green products and services.

DoD also works with other federal partners in a number of areas to expand the GPP. In FY2005, DoD was one of 12 federal agencies to sign a Federal Electronics Challenge Memorandum of Understanding promoting the implementation of environmentally-preferable, energy-efficient, and cost-effective practices when buying, using, and managing the life cycle of electronic assets.

Green Procurement Program Metrics

GPP metrics have been developed to measure progress toward the DoD goal of 100 percent compliance with federal green procurement goals and will be updated as required to meet federal goals and regulations. The metrics for FY2005 include:

- Percent change in codes from the individual contracting action report (DDForm 350)
- Increase in the percentage of purchases of federally-defined indicator items

- Increase in the percentage of contracting personnel trained in green procurement.

DoD evaluates its progress on compliance with Resource Conservation and Recovery Act 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.

Environmentally Preferable Product Procurement

Section 314 of the FY2003 National Defense Authorization Act, "Procurement of Environmentally Preferable Procurement Items," requires the Department 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 provides background on the development, capabilities, and limitations of the tracking system, Environmental Reporting Logistics System (ERLS), along with data on DLA supply system purchase requests (requisitions) made by customers between FY2003 and FY2005.

Environmental Reporting Logistics System (ERLS)

DLA enhanced ERLS with a web-based tracking tool, the Green Procurement Report (GPR), which became operational in FY2004. This tool allows on-line tracking of green product requisitions through the Federal Catalog System (FCS). 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 FCS, along with their non-green counterparts, to calculate the dollar value of green and non-green requisitions. Figure 29 provides FY2003 through FY2005 dollar amounts for DoD requisitions of DLA-managed green products. The products are organized by environmental attribute.

The "percent green" column in Figure 29 reflects overall green procurement performance for the identified DLA-managed products. Accurate interpretation of these data requires several points of clarification:

Figure 29
Requisition of DLA-Managed National Stock Number Items

ATTRIBUTE AND PRODUCT TYPE	FY2003 TOTALS & SUBTOTALS		FY2004 TOTALS & SUBTOTALS		FY2005 TOTALS & SUBTOTALS		
	\$ GREEN	PERCENT GREEN	\$ GREEN	PERCENT GREEN	\$ GREEN	TOTAL \$ GREEN & NON-GREEN	PERCENT GREEN
Comprehensive Procurement Guideline	\$ 16,285,011	71.94%	\$ 9,879,749	89.24%	\$ 8,387,041	\$ 10,532,024	79.63%
Pallets	\$ 15,939	100.00%	\$ 31,219	100.00%	\$ 16,825	\$ 16,836	99.93%
Remanufactured Toner Cartridges	\$ 445,682	100.00%	\$ 217,523	100.00%	\$ 73,536	\$ 80,296	91.58%
Paper and Paper Products	\$ 94,134	100.00%	\$ 1,375	100.00%	\$ 28	\$ 28	100.00%
Lubricating Oil Containing Re-refined Oil	\$ 9,242,879	60.58%	\$ 6,294,901	85.06%	\$ 6,154,288	\$ 8,231,407	74.77%
Reclaimed Engine Coolant	\$ 6,486,376	95.08%	\$ 3,334,731	97.50%	\$ 2,142,364	\$ 2,203,457	97.23%
Energy Efficient	\$ 636,710	100.00%	\$ 407,589	99.50%	\$ 162,412	\$ 162,412	100.00%
Ice Cube Machines	\$ 54,356	**	\$ 47,005	**	\$ 19,241	\$ 19,241	**
Exit Signs	\$ 142	**	\$ 3,109	**	\$ 2,475	\$ 2,475	**
Fluorescent Ballasts	\$ 179,457	100.00%	\$ 134,753	99.46%	\$ 38,096	\$ 38,096	100.00%
Fluorescent Tube Lamps	\$ 247,510	100.00%	\$ 184,965	100.00%	\$ 77,921	\$ 77,921	100.00%
Room Air Conditioners	\$ 155,245	100.00%	\$ 37,757	96.61%	\$ 24,679	\$ 24,679	100.00%
Low Volatile Organic Compound Products	\$ 5,629	100.00%	\$ 5,889	100.00%	\$ 14,470	\$ 14,470	100.00%
Household Consumer Products	\$ 150	100.00%	\$ 3,397	100.00%	\$ 14,311	\$ 14,311	100.00%
Cleaning Compound	\$ 5,479	100.00%	\$ 2,492	100.00%	\$ 159	\$ 159	100.00%
Water Conserving Products	\$ 58,553	**	\$ 106,162	**	\$ 37,190	\$ 37,190	**
Urinals	\$ 58,553	**	\$ 106,162	**	\$ 37,190	\$ 37,190	**
Asbestos Alternative Products	*	*	\$ 315	100.00%	\$ 1,052,798	\$ 1,052,798	***
GRAND TOTALS	\$ 16,985,902	72.79%	\$ 10,399,703	89.71%	\$ 9,653,911	\$ 11,798,894	81.82%

* No items were identified in this new attribute category until FY2004

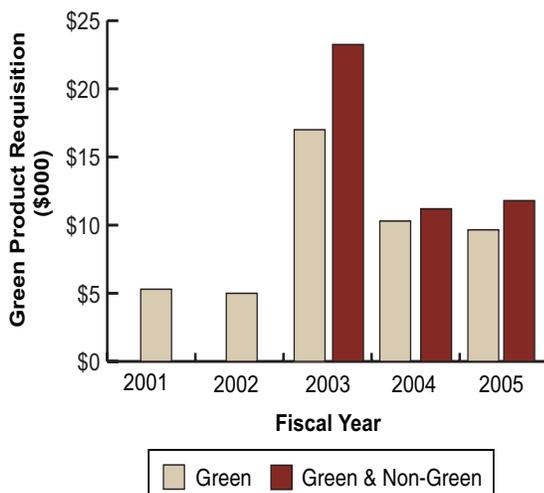
** Indicates no non-green substitutes have been recorded in ERLS

*** Addition of new products not yet reviewed for non-green counterparts

- 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 requisitions from customers to purchase DLA-managed products, 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.

The FY2005 green product requisition totals in Figure 30 show a decrease from green purchases made in the two previous years. The FY2003 green product requisition totals increased due to changing customer needs, such as units deploying to Afghanistan and Iraq and a general increase in operating tempo and training. 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 and FY2005 as orders slowed to sustaining levels. In some cases, product performance also affects the dollar levels for green products; when DLA supplies

Figure 30
DLA Requisitions of Environmentally Preferable Products



longer lasting components, such as energy-efficient lighting, or air conditioners, demand frequency is reduced. This results in decreases in some sales but also reflects the desired lower life-cycle cost for the product.

DLA-Managed Environmentally Preferable Products

The National Stock Number (NSN) items in the FCS designated as green conform with predefined environmental attributes identified by the Joint Group on Environmental Attributes (Joint Group). The Joint Group is responsible for selecting, evaluating, and approving proposed attributes for inclusion in the FCS. The current list includes:

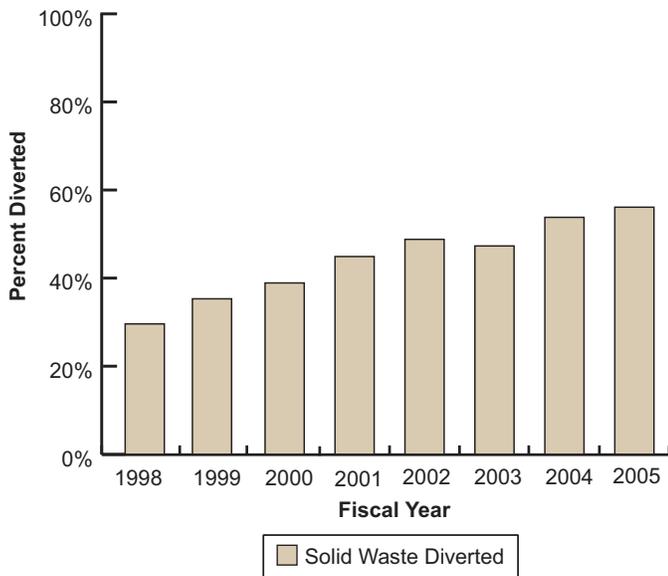
- Comprehensive procurement guidelines for items with recycled content
- Energy efficient
- Water conserving
- Low volatile organic compounds
- Asbestos alternative
- Low standby power

DLA chairs the Joint Group whose voting members include Army, Navy, Air Force, Marine Corps, and the General Services Administration. The Departments of Agriculture and Energy and the U.S. Environmental Protection Agency act as advisors to the Joint Group. The list of attributes reflects federal procurement preference mandates established in statutes, regulations, and executive orders. Items determined to conform with one of the environmental attributes are identified in the FCS with an Environmental Attribute Code (ENAC). A total of 4083 DLA-managed items were identified as "green" with an ENAC at the end of FY2005, compared to 529 in FY2004 and 475 in FY2003. The 87 percent increase in FY2005 resulted from a newly established asbestos-alternative attribute that identified additional items at the end of FY2004 and in early FY2005.

Integrated Solid Waste Management

DoD employs integrated solutions to reduce solid waste from entering disposal facilities. The Department focuses on reducing waste generation and diverting solid waste materials from the waste stream through recycling whenever feasible and cost effective. Total generation of solid waste includes construction and demolition (C&D) debris and non-hazardous municipal solid waste.

Figure 31
DoD Solid Waste Diversion

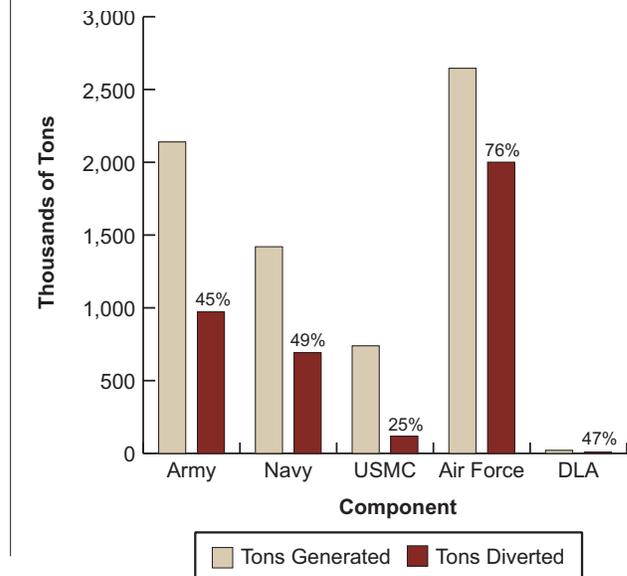


In 1998, DoD established a total solid waste diversion rate metric to calculate the rate at which installations divert non-hazardous solid waste from entering a disposal facility. In response to an Executive Order 13101 requirement to establish a goal for solid waste diversion, the Department set a diversion rate goal of 40 percent or greater by the end of Calendar Year (CY) 2005. This goal was met in FY2001 when the DoD solid waste diversion rate reached 45 percent as illustrated in Figure 31. For FY2005 reporting, DoD revised the solid waste metric to differentiate between C&D debris and municipal solid waste diversion.

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 C&D solid waste diversion rate also depends on the Department's schedule for demolishing buildings, which produces large quantities of C&D debris.

In FY2005, DoD generated a total of 7.4 million tons of solid waste, consisting of 3.5 million tons of C&D debris and 3.9 million tons of non-hazardous municipal solid waste. The generation of municipal solid waste equates to 5.4 pounds per person per day. The Department had an overall diversion rate of 55 percent in FY2005. This includes a 70 percent C&D debris and 41 percent of non-hazardous municipal solid waste diversion. Figure 32 shows the quantities of solid waste generated and diverted and percent diverted by the DoD Components in FY2005. In FY2005, the solid waste program produced cost

Figure 32
FY2005 Solid Waste Diversion

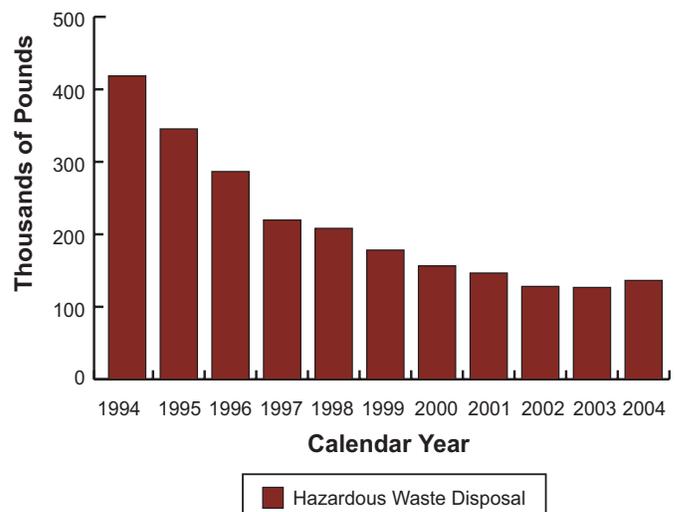


savings of over \$160 million through integrated solid waste management practices, including reducing the amount of solid waste and C&D debris received by a landfill or incinerator, and the associated costs.

Hazardous Waste Reduction and Disposal

DoD is committed to reducing hazardous waste. From CY1994 to CY2004, (the last year for which data are available), the total amount of hazardous waste disposed of declined by 67 percent as seen in Figure 33. DoD personnel continue to identify opportunities for reducing hazardous waste generation.

Figure 33
Hazardous Waste Disposal





Looking Forward

DEFENSE ENVIRONMENTAL PROGRAMS

Introduction

The Department of Defense (DoD) manages over 30 million acres of land in fulfilling the Department's mission to protect and defend the United States and the American people. This land is just one element of DoD's natural infrastructure, consisting of numerous and diverse natural and cultural resources, such as threatened and endangered species, archaeological and historical sites, rare ecosystems, and Native American sites. DoD has an obligation to protect these assets for future generations. To meet this responsibility, DoD is continually transforming environmental management programs and strategies to become more capability-based and performance-oriented. These transformations will allow DoD to protect the environment and human health, while sustaining DoD's capability to maintain military readiness and ensure America's security.

Funding

Conservation

Restoration

Compliance

Pollution Prevention

Looking Forward

DoD manages hundreds of installations and facilities essential to military operations and training. The Department uses the Defense Environmental Restoration Program to restore property on military installations and formerly used defense sites that were environmentally impacted by past defense activities. DoD's efforts at Base Realignment and Closure locations ensures that transferred property is safe for reuse and allows DoD to realign its forces and infrastructure to effectively transform the military to meet emerging mission needs. Cleaning up contamination from past activities protects both military personnel and the public from environmental health and safety hazards and supports the ability of U.S. forces to train effectively.

DoD remains committed to achieving sustained compliance with all federal, state, and local environmental laws and regulations. To maintain efficient and effective compliance with these laws, DoD provides Components with guidance and procedures for meeting regulatory requirements and conducts self assessments to measure progress toward meeting compliance requirements. DoD reviews and updates its performance measures to improve operational efficiency and ensure the highest level of compliance.

Throughout the Department, the Components are taking the initiative and looking beyond environmental compliance to determine how Environmental Management Systems can improve operational efficiency, mission planning, and sustainment. Management efforts also include those directed at reducing pollution; increasing efficient energy use; implementing affirmative and green procurement practices; and reducing solid and hazardous waste generation.

DoD also continues to improve the transparency of its environmental programs by enhancing existing partnerships and creating new opportunities with federal and state agencies, local communities, and private organizations. The Department has developed programs, such as Compatible Land Use Partnering and the Defense and State Memorandum of Agreement, that promote military training and sound environmental stewardship through collaboration with multiple stakeholders. These multi-faceted partnerships will ensure that DoD is improving environmental performance and enhancing mission capability, while working to address the concerns of neighboring communities. Sustainment of the environment, human health, and military readiness is one of the foundations of DoD's environmental strategy—a strategy that will help DoD continue as an environmental leader.