FUDS Restoration Status and Progress

The FUDS program continues to be challenging for both the Department of Defense and the Department of the Army. We are applying our best expertise, resources, and technology to the FUDS program as we face one of our biggest tasks—cleaning up buried ordnance and other military items. We continue to focus on our primary mission—cleaning up contamination related to the military's past activities in a manner that ensures protection of public health, the environment, and safety. We are working hard at improving and enhancing the lines of communication along with greater involvement of the regulators and community in the planning and cleanup process. It's definitely a challenge, but one we embrace and that we are meeting daily.

—Raymond J. Fatz, Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health

The Department of Defense (DoD) is responsible for cleaning up properties that it formerly owned, leased, possessed, or operated. Such properties are known as formerly used defense sites (FUDS). The Army is the executive agent for the FUDS program, and the U.S. Army Corps of Engineers (USACE) is the program's executing agent and manager. Because DoD no longer owns or uses the FUDS properties, a USACE district commander serves as each property's installation commander, executing environmental restoration projects and fulfilling associated responsibilities.

The scope and magnitude of the FUDS program are significant, with 9,181 properties identified for potential inclusion in the program. Information about the origin and extent of contamination, land transfer issues, past and present property ownership, and program policies, must be evaluated before DoD considers a property eligible for the FUDS program. At eligible FUDS properties, environmental restoration procedures are similar to those at active DoD installations.

Organization and Management

DoD is responsible for developing overall FUDS program policy and budget guidance, developing and defending the budget, and reviewing program performance. The Secretary of the Department of the Army is the executive agent of the FUDS program and, through the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health (DASA(ESOH)), supplements DoD policies and oversees the

FUDS PROJECT CATEGORIES INCLUDE —

- ❑ Hazardous, toxic, and radioactive wastes (HTRW)
- ❑ Ordnance and explosives waste
- ❑ Containerized HTRW, such as underground storage tanks
- ❑ Building demolition and debris removal
- ❑ Potentially responsible party actions.

FUDS Facts

In Fiscal Year 2001 (FY01)…

- ❑ The FUDS program experienced a net increase of 73 projects.
- ❑ Preliminary eligibility assessments were completed at 42 properties.
- ❑ Remedy in place (RIP) or response complete (RC) status was achieved for 157 projects. RIP/RC attainment is projected in the bar chart on the adjacent page.

Through FY01…

- ❑ 2,743 properties were identified as containing a hazard requiring an environmental response actions.*
- ❑ 99 percent, or 9,119 of the 9,181 properties, have been evaluated through the preliminary eligibility assessment process.
- ❑ 4,649 potential cleanup projects have been identified on the 2,743 eligible properties, and 2,416 of these projects have been completed.
- ❑ The total cost for completing the remaining 2,233 projects is estimated at approximately $19 billion.

*Note: Properties potentially identified as FUDS may not necessarily contain FUDS eligible projects (for instance, only non-DoD hazards or no hazards may be finally determined to be at the property). Thus, not all identified potential properties are ultimately determined to be FUDS eligible properties. Of the initial 9,181 properties identified for potential inclusion in the program, current indications are that less than one-third will require DoD environmental response.

program (reference FUDS Hierarchy Chart on page 128). The Director of Environmental Programs within the Office of the Assistant Chief of Staff for Installation Management establishes general program policy and guidance and, in concert with DASA(ESOH), approves the annual work plan and program priorities. USACE headquarters is responsible for FUDS program management and execution. The FUDS mission within USACE is executed by the field organization, which consists of 7 geographic military divisions; 22 military districts, with necessary support from civil works districts; 1 hazardous, toxic, and radioactive waste (HTRW) center of expertise; and 1 ordnance and explosives (OE) center of expertise.

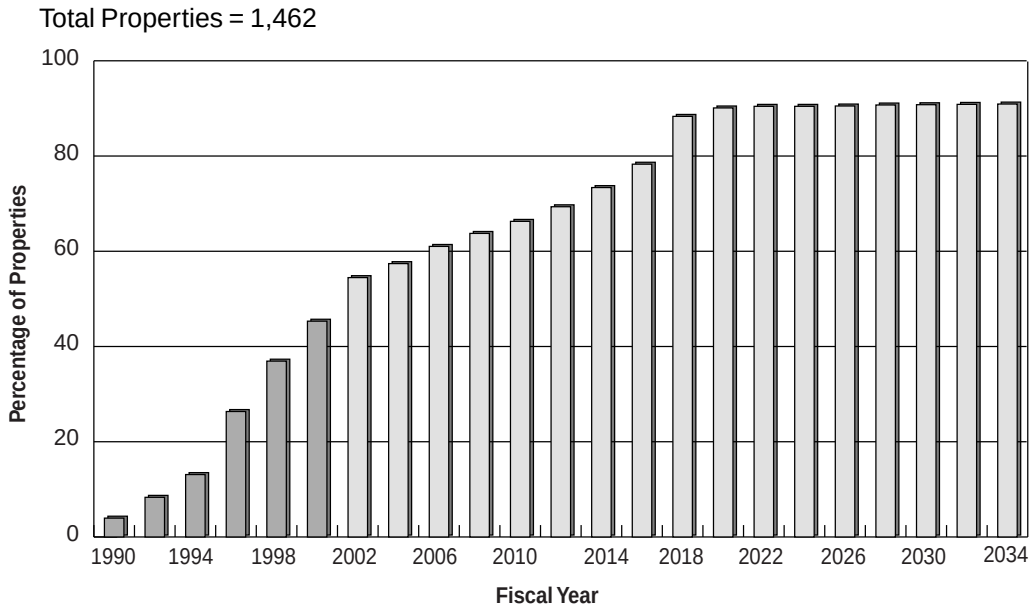
Goals and Priorities

The goal of the FUDS program is to reduce, in a timely and cost-effective manner, risk to human health, human safety, and the environment resulting from past DoD activities at FUDS properties. The pie charts on the following page illustrate project status. Meeting environmental restoration goals for FUDS properties depends on—

- ❑ Consistent communication and coordination
- ❑ Partnerships
- ❑ Community involvement.

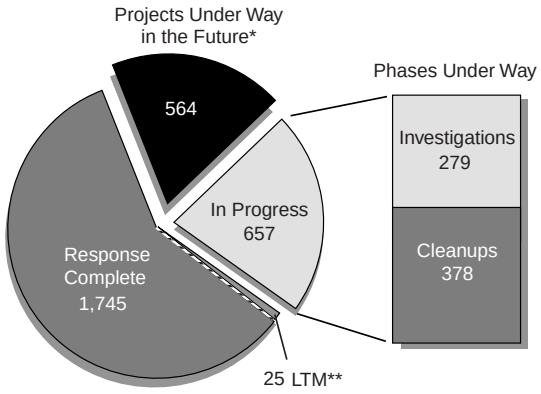
USACE sets priorities for the FUDS program on the basis of an evaluation of relative-risk and other factors, such as legal agreements, stakeholder concerns, and economic considerations.

FUDS Properties Achieving Final Remedy in Place or Response Complete (cumulative and projected, FY90 through completion)*



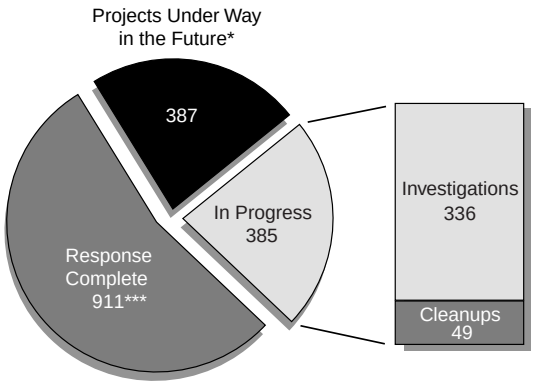
*This graph does not show FUDS properties as reaching 100 percent remedy in place or response complete because completion dates have not been determined for some properties. This graph does not include ordnance and explosives waste, building demolition and debris removal, potentially responsible party, or No DoD Action Indicated properties or projects.

FUDS Project Status (as of September 30, 2001)



Total Projects: 2,966

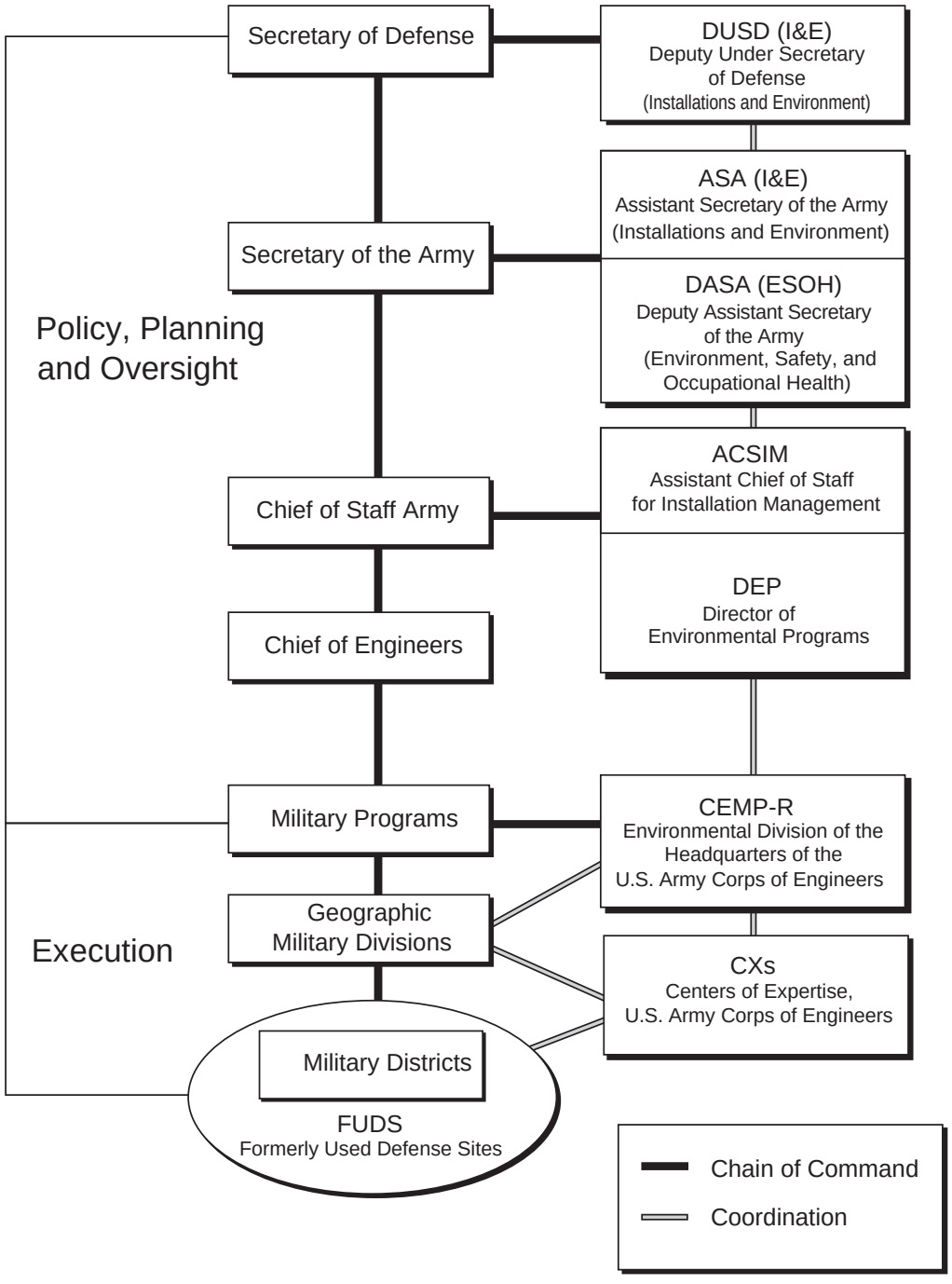
FUDS MMRP Project Status (as of September 30, 2001)



Total = 1,683

*Includes projects with future preliminary assessment starts planned and cleanup projects that are between phases.
**LTM is a subset of response complete.
***This includes 240 sites that have no response complete dates, but which were declared No DoD Action Indicated by FUDS.

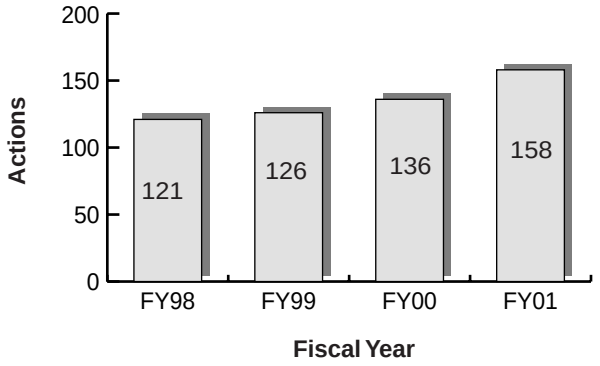
FUDS Program Hierarchy Chart



Program Accomplishments

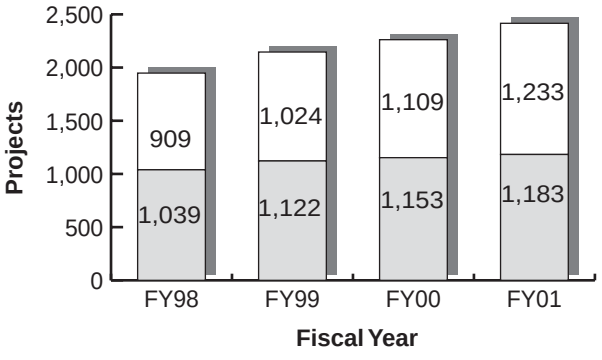
USACE continues to emphasize executing projects, cleaning up FUDS properties, and ensuring that regulators and the public are active participants in the environmental restoration process. FUDS continues to work toward evaluating potentially FUDS eligible sites, as seen in the figures below. Project execution figures for FY01 demonstrate that the FUDS program is making significant progress. As of September 30, 2001, 2,416 FUDS projects had reached the RC milestone (see bar chart below). Cumulative interim actions are also illustrated in a bar chart below.

Cumulative Interim Actions Completed at FUDS*



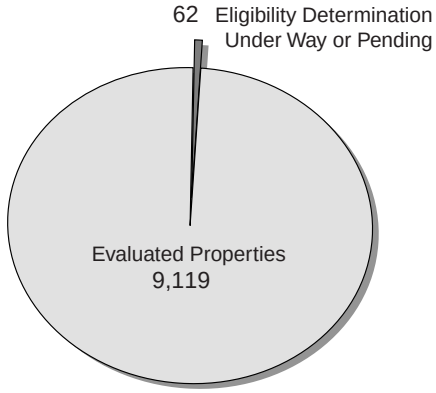
* FY98 through FY00 totals have been updated since the previous Annual Report to reflect new and revised data as of FY01.

FUDS Projects with Response Complete*

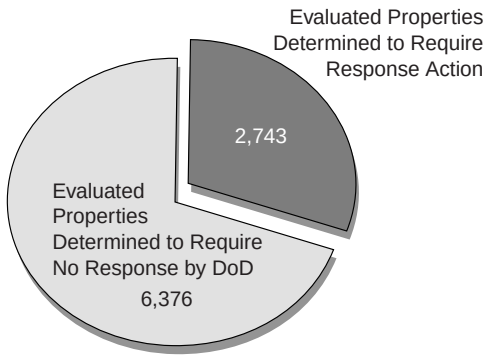


* FY98 through FY00 totals have been updated since the previous Annual Report to reflect new and revised data as of FY01.

FUDS Program Eligibility Status of Potential FUDS Properties (as of September 30, 2001)



Response Action Status at Evaluated FUDS Properties (as of September 30, 2001)



Focus on the Field:

Partnering Yields More Effective Cleanup at Sundance Air Force Station, Wyoming

Sundance Air Force Station (AFS) was a manned radar station used by the Air Force in the 1960s. The operations area, which included five radar domes and the Ground-to-Air Transmitter Receiver area, were built on top of Warren Peak in the Black Hills National Forest. For a period of its operational life, this radar facility was powered by a portable nuclear reactor. When the facility was closed the reactor was decommissioned, and all fuel and liquid were removed and shipped off site. Parts of the reactor, however, were encased in concrete and buried on-site.

While the property where the reactor is buried has remained the property of the Air Force, the adjacent property was returned to the U.S. Forest Service (USFS) and is in the FUDS program. The Air Force has performed annual environmental sampling for radioactive contamination, but Sundance AFS came back to the attention of the public and regulators because of concerns with radioactive contamination from the buried reactor remnants that may have migrated to the USFS property. In response to these concerns, environmental sampling was performed in FY01. The results of this sampling indicated no significant environmental problems.

The U.S. Army Corps of Engineers Omaha District has been actively coordinating with the community, the State of Wyoming, EPA, USFS, and Ellsworth Air Force Base (AFB) for the past two years in an effort to perform a thorough, cost effective environmental review of the combined properties. Ellsworth AFB, with its local presence, has taken the lead in community involvement activities and has developed strong relationships with state regulators and EPA, including establishing monthly team meetings.

Substantial cost savings and efficiencies have been obtained by integrating the cleanup efforts of FUDS and the Air Force, and these efforts have successfully resolved many of the concerns expressed by the community and regulators. Through these efforts, DoD has demonstrated it is an environmentally-concerned custodian of this property.

Management Initiatives and Improvements

The DASA(ESOH) has been working with regulators and other interested parties to effect change within the FUDS program. The FUDS Improvement Initiative includes management efficiencies, FUDS business plan development, establishing pilot agreements with Native Americans for cleanup at FUDS, and emphasize coordination and communication with stakeholders through an interagency work group.

USACE's goals are —

- ❑ Responsible protection of human health and the environment
- ❑ Prudent stewardship of taxpayer funds
- ❑ Addressing regulatory and stakeholder concerns and interests at FUDS properties through better coordination efforts and increased communication.

Focus on the Field:
Propelling FUDS to Higher Levels— New Initiatives

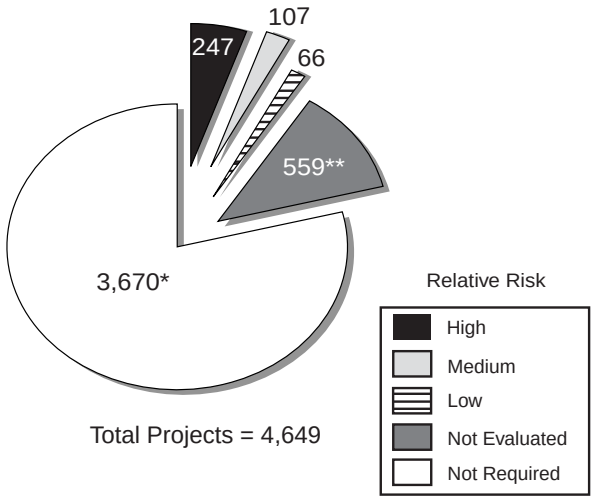
During FY01, USACE continued to make enhancements to the FUDS Management Information System (FUDSMIS), which supports FUDS program planning, programming, budgeting, execution, and reporting. Project managers now have an excellent geographic information system (GIS) interface for individual properties and projects. A new public GIS Web site has also been created and awaits implementation; this site will allow public access to general information on each eligible FUDS property, as listed in the Defense Environmental Restoration Program Annual Report to Congress. A range inventory capability has been added to FUDSMIS to satisfy congressional requirements of collecting and reporting inventory information on military munitions and chemical residues at FUDS properties.

Other major enhancements include adding a program planning function that automatically distributes the authorized future-year program budgets to individual USACE divisions, based on program prioritization methodologies. In addition, project costs, as entered into FUDSMIS by the USACE districts, can now be spread over the entire program life-cycle through another new programming function, resulting in balanced future-year program budgets within FUDSMIS.

Relative-Risk Implementation

New projects are continually being discovered and added to the FUDS program. USACE strives to evaluate as many projects as possible for relative-risk to human health and the environment. At the end of FY01, 45 percent of the 1,226 total hazardous, toxic, and radioactive waste (HTRW) projects no longer required relative-risk evaluation because they had achieved either RIP or RC status. Another 42 percent of the eligible HTRW projects had relative-risk ratings. The remaining 14 percent of the eligible HTRW projects that are ready for site inspection require future funding for data collection and relative-risk evaluation. The adjacent relative-risk ranking figure summarizes the number of sites in each category. For containerized HTRW (CON/HTRW) projects, removal of abandoned underground storage tanks, transformers, and 55-gallon drums

Relative-Risk Ranking for FUDS Projects Identified



*Includes building demolition/debris removal, ordnance and explosives waste, and potentially responsible parties/HTRW projects.
**Includes CON/HTRW projects.

have proven to be the most appropriate and cost-effective response. Thus, when funding becomes available, USACE will pursue removal responses at these FUDS properties instead of conducting expensive field sampling for relative-risk evaluation. USACE has completed response actions for 69 percent of the 1,280 eligible CON/HTRW projects. The remaining 31 percent of CON/HTRW projects have removal responses under way or require future funding for necessary removal responses.

USACE evaluates ordnance and explosives waste (OEW) projects for relative-risk to human safety. OEW risk assessments consist of a hazard severity assessment and a hazard probability assessment. Both are based on the best available information from record searches, reports of explosive ordnance disposal teams, field observations, interviews, and actual measurements. Of the 1,683 eligible OEW projects in the FUDS program, 911 have reached RC status. Risk assessment codes have been assigned for the remaining 1,012 OEW projects to indicate their potential impact on human safety.

USACE uses ratings of relative-risk to human health, human safety, and the environment for HTRW and OEW projects, along with other management factors, such as stakeholder concerns, to aid in sequencing work during FUDS planning, programming, budgeting, and project execution.

Information and Technology Transfer

USACE works closely with the Army and other federal entities, particularly the U.S. Environmental Protection Agency, to transfer information on and coordinate innovative technologies within the environmental community.

Innovative technology advocates (ITAs) have been established across the nation to promote such innovative technology transfer and use. The USACE ITAs participate actively in the Interstate Technology and Regulatory Cooperation Work Group, which assists state regulators and federal agencies in the use of innovative technologies, technical protocols, and regulatory information. ITAs also perform peer review of EPA Superfund Federal Facilities Forum issue papers. The most recent paper reviewed by this body was *Field Sampling and Selecting On-Site Analytical Methods for Explosives in Water*.

USACE continues its participation in the Web site development subgroup of the Federal Remediation Technologies Roundtable. The Roundtable's Web site includes completed case studies, including information on media and contaminant types and remedial technologies used. It also provides links to other federal Web sites offering environmental guidance and policy, and provides a matrix of field sampling and analysis technologies.

A USACE initiative accomplished in FY01 was the development of innovative monitoring and measurement technologies and their incorporation into the scopes of work, investigations, feasibility studies, and design and monitoring of remedial actions through use of systematic planning and dynamic work plans.

This dynamic planning allows adjustments to be made in the field as site conditions and new information dictate. These types of plans have the potential to reduce the time and cost of field activities (i.e., hazardous waste site assessments, characterization, and remediation

activities) while also increasing the quality of the site decisions.

Outreach

In FY01, USACE continued its community relations efforts, ensuring that the public was made aware of the FUDS program and of opportunities to participate in the environmental restoration process.

USACE continues to make every effort to establish Restoration Advisory Boards (RABs) at FUDS properties where there is sufficient community interest, but it recognizes that the establishment of RABs is not always feasible for every property or project.

The FUDS program currently has 41 active RABs. During FY01, 6 new RABs were established and none were disbanded.

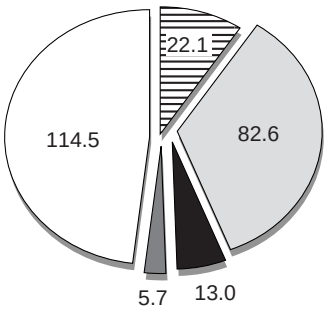
Funding

Since the devolvement of the Defense Environmental Restoration Account, funds for DoD's environmental restoration program have been distributed into five separate accounts, including one for FUDS. In FY01, USACE obligated $231.0 million for environmental restoration activities at FUDS properties. The FUDS Environmental Restoration Funding Profile charts on the following page illustrate funding levels for FY00 through FY03. Cost-to-complete funding trends are illustrated in the bar chart on the following page.

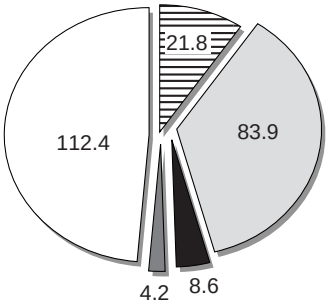
USACE management and support costs for the FUDS program were approximately 9.4 percent of total program costs, meaning that 90.6 percent of the environmental program's dollars went directly toward project execution in USACE districts.

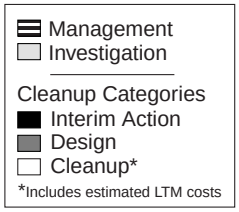
FUDS Environmental Restoration Funding Profile
(in millions of dollars)

FY00 FUDS Funds Obligated
Total = $238.0 million

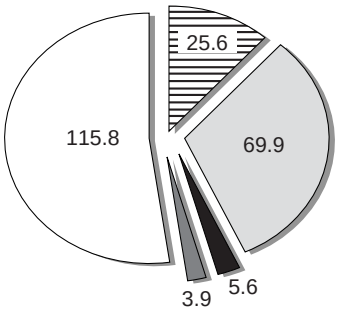


FY01 FUDS Funds Obligated
Total = $231.0 million

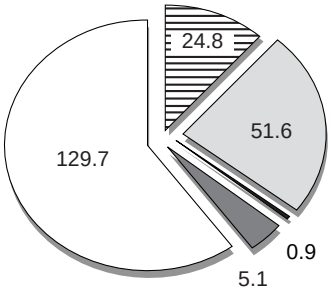




FY02 FUDS Execution Planned
Total = $220.7 million*

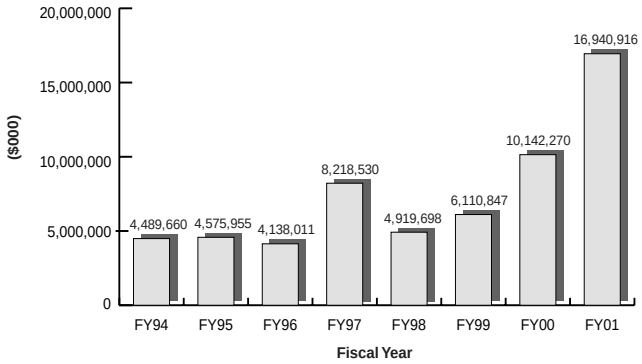


FY03 FUDS Planning Estimate
Total = $212.1 million



Due to rounding, category subtotals may not equal fiscal year totals.
*Includes $11.2 million that will be transferred to projects.

FUDS
Cost-to-Complete Trends
(in $000)



Note: Funding represents site level data and does not include management and support or other miscellaneous costs not directly attributable to specific sites.