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An Analysis of State Superfund Programs:

50-State Study, 1998 Update

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AN ANALYSIS OF STATE SUPERFUND PROGRAMS:
50-State Study, 1998 Update

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An Analysis of State Superfund Programs: 50-State Study, 1998 Update
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List of Acronyms

AG - Attorney General
ARARs - Applicable or Relevant and Appropriate Requirements
AST - Above-ground Storage Tanks
ASTSWMO - Association of State and Territorial Solid Waste Management Officials
CA - Cooperative Agreement
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System
CPCA - Core Program Cooperative Agreement
DSMOA - Department of Defense and State Memorandum of Agreement
ELI - Environmental Law Institute
FOIA - Freedom of Information Act
FTE - Full-time Equivalent
GAO - General Accounting Office
HRS - Hazard Ranking System
LUST - Leaking Underground Storage Tank
MCL - Maximum Contaminant Level
MCLG - Maximum Contaminant Level Goal
MSCA - Multi-Site Cooperative Agreement
NBAR - Non-Binding Allocation of Responsibility
NCP - National Oil and Hazardous Substances Pollution Contingency Plan
NPL - National Priorities List for Uncontrolled Hazardous Waste Sites
NRD - Natural Resource Damages
OGC - Office of General Counsel
O&M - Operations and maintenance
OPA - Oil Pollution Act
PA/SI - Preliminary Assessment/Site Investigation
PRP - Potentially Responsible Party
RA - Remedial Action
RCRA - Resource Conservation and Recovery Act
RD - Remedial Design
RI/FS - Remedial Investigation/Feasibility Study
ROD - Record of Decision
RP - Responsible Party
RPM - Remedial Project Manager
SACA - Support Agency Cooperative Agreement
SARA - Superfund Amendments and Reauthorization Act of 1986
SMOA - Superfund Memorandum of Agreement
SSCA - Site Specific Cooperative Agreement
TAG - Technical Assistance Grant
UST - Underground Storage Tank
VOC - Volatile Organic Compound

Chapter I: Introduction

In 1976, New Jersey's landmark Spill Compensation and Control Act pioneered the concept of government programs to clean up contaminated land. Four years later, Congress modeled the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, generally referred to as Superfund) on New Jersey's Spill Act. In the 18 years since the passage of the Federal Superfund law, the nation has realized that contamination of land and water with hazardous substances is far more common, and more expensive to clean up, than was thought in 1980. Coordinated cleanup efforts between Federal and State agencies currently address numerous sites targeted by the U.S. Environmental Protection Agency's (EPA's) National Priorities List (NPL), the list of sites with uncontrolled releases of hazardous substances that are the highest priorities for long-term remediation.

At NPL sites, the role of the States ranges from required cost sharing at Federally funded cleanups to active site management. A vast number of contaminated sites do not meet the criteria for inclusion on the NPL. For these non-NPL sites the Federal government's role is likely to be limited to site assessment and emergency response or removal activities. For many non-NPL sites, the Federal government may not be involved at all. Thus, if any government-supervised activity is to occur at non-NPL sites, States will have to oversee, enforce, or fund cleanups. For these reasons, the role of the States in addressing contaminated sites, independently and in concert with the Federal government, has become increasingly important. The prospects for increasing State involvement at both NPL and non-NPL sites depend on the willingness and capacity of States to develop effective programs, obtain adequate resources to fund cleanups, encourage private party cleanups, take enforcement action where needed to ensure private cleanups, and conduct oversight activities.

A key step in enhancing the Federal-State partnership is to understand the States' cleanup programs aimed at non-NPL sites. This is the objective of the present report. This report updates the results of a study initially conducted in 1989 (and updated in 1990, 1991, 1993, and 1995) by the Environmental Law Institute (ELI) in cooperation with EPA's Office of Emergency and Remedial Response.

Purpose of the Study

Under the Superfund Amendments and Reauthorization Act (SARA) of 1986, Congress requires EPA to involve States in the Superfund program in a "substantial and meaningful" way. EPA's State, Tribal and Site Identification Center is responsible for developing regulations, guidance, and policy related to this Congressional mandate. As part of its responsibilities, the Center routinely collects and examines information about States' capabilities to contribute to or manage cleanups at hazardous substance sites. The Environmental Law Institute's Center for State, Local, and Regional Environmental Programs helps States and the Federal government to improve State environmental programs and promotes better public understanding and cooperation between State and Federal environmental agencies. Prepared by ELI under a cooperative agreement with EPA, this study examines site cleanup programs in all 50 States, and the District of Columbia and the Commonwealth of Puerto Rico, and provides descriptions of their statutes, program organization, staffing, funding, expenditures, cleanup standards, and cleanup activities. For convenience in discussion and in the tables accompanying this report (see Chapter V), these are all referred to as "States." Totals, therefore, include 52 "States."

Research Methodology

To ensure the completeness and accuracy of the information for this report, ELI collected statutes, regulations, and other State documents, interviewed State program staff by telephone, and verified information for each State. ELI initially reviewed both the information gathered for prior versions of the report and newer information found in State documents, legislative reporting services, newsletters, and EPA documents. A request for updated program information was sent to each State with a general request for copies of relevant legislative amendments or State reports. ELI then conducted telephone interviews to clarify written responses and to reconcile any discrepancies in the data.

In assembling this report, ELI has tried to take a "snapshot" of State cleanup programs, while recognizing that they are dynamic and that changes may occur after the publication of this update. For this report, ELI used State information available *on or before December 31, 1997.* States were provided an opportunity to review and update all of the information in the State program summaries.

Organization of the Report

The report is divided into three discussion chapters, a chapter devoted to tables, and a chapter of State program summaries. Chapter II highlights the most noteworthy developments in State capabilities that emerged in comparing the 1997 information with the previous reports. An analytical overview of State superfund programs is provided in Chapter III. This overview examines statutes, program staffing and organization, sites, cleanup activities, cleanup policies and standards, public participation requirements, funding and expenditures, and enforcement tools. Chapter IV discusses the States' voluntary remediation programs and brownfields programs, a topic of particular interest and activity first covered in the 1993 Study. Chapter V presents detailed program information arranged in tables that facilitate comparisons among the 52 States (including the District of Columbia and the Commonwealth of Puerto Rico). Chapter VI contains individual summaries of each State program. For the few States that do not have non-NPL cleanup programs, the summaries focus on their capabilities to address contaminated sites using other authorities and resources.

Comparison of State Data

There is significant interest in State cleanup programs due to the pending reauthorization of the Federal Superfund statute. The information in this report will consequently receive increased scrutiny and use. It is, therefore, critical to acknowledge the limitations of this data in directly comparing State programs.

First, *this study covers non-NPL sites, with information about NPL sites provided primarily for context.* Second, differences in State program terminology, administrative procedures, and accounting procedures, as well as in the detail of information provided by States, limit the comparability of programs. Variation among State cleanup programs should be expected because there is no national standard. There may also be differences between the information presented in this report and in other studies concerning State cleanup programs. This is due not only to the differences among States but also to specific program questions asked. The most appropriate comparisons, therefore, are among State non-NPL cleanup capabilities and activity levels, and similarities and differences in the general types of cleanup authorities and policies applied.

Chapter II: Developments in State Programs

The capabilities of States to clean up contaminated sites and to oversee others who clean up sites depend on many factors, including availability of funds to pay for cleanups and related activities, enforcement authorities, sufficient staff to implement the cleanup program, and cleanup standards or a process for determining when a cleanup is successful. Successful cleanup programs also are able to include the public in the process for making cleanup decisions. The Environmental Law Institute has studied and reported on these and other aspects of State cleanup programs in a series of reports beginning in 1989. Comparing information from the 1989, 1990, 1991, 1993, and 1995, reports with the 1997 data in this update of *An Analysis of State Superfund Programs* reveals that, collectively, the States have steadily increased their capabilities since 1989. Although this Study is organized by discrete program elements, States' cleanup programs should be evaluated holistically looking at how all the elements work together, not element by element. New Jersey, for example, despite having 138 fewer staff in 1997 than in 1995, a decrease of 21.2%, completed 235 more cleanups in 1997 than in 1995, an increase of 8.6%.

Furthermore, virtually every State has increased its individual capability during this period. Chapter III describes the capabilities of the States at the end of the 1997 fiscal year and compares that information to prior years, particularly 1995. This Chapter provides an overview of States' capabilities and highlights developments in State cleanup programs as of the end of the States' fiscal year 1997 (FY97).

The number of sites States identified as needing attention (*i.e.*, some type of cleanup) continued to decline, to approximately 24,000 sites, from 30,000 sites in 1995 and a high of 40,000 sites in 1993.

The number of known and suspected sites, a broader category that may include sites that have not yet been investigated, also declined to approximately 69,000 sites from 85,000 in 1995 and 100,000 in 1993.

Aggregate program staff levels decreased slightly to 3,474 after increasing slightly from 3,394 in 1991 to a high of 3,585 in 1995 (the numbers are not exactly comparable as different States did not report staffing numbers in different years). Legal support was provided by an aggregate of 206 attorneys, compared to 211 in 1995, 247 in 1993, and 262 in 1991.

State cleanup funds had an aggregate balance of $1.41B, a 2.5% decrease from $1.46B in 1995 and continuing the decline from the maximum of $2.43B in 1990.

Forty-four (44) States reported spending $565.1M on cleanup activities during FY97, compared to 44 States reporting spending $386.1M in FY95 and $711.7M spent by 44 States in 1993. Thirty-nine (39) States reported obligating an additional $448M to be spent in the future, compared to $363.4M obligated by 38 States in 1995 and $459.2M obligated by 36 States in 1993.

During FY97, 45 States reported adding $538.3M to their State cleanup funds, which did not quite offset the amount spent in 1997 (the numbers are not exactly comparable as a few States reported one figure but not the other). Additions to funds have varied considerably over the years, with a maximum of $957.3M added by 46 States in 1993 and $444.6M added by 46 States in 1995.

The number of States that have standardized at least some of their cleanup standards by adopting regulations continues to increase, from only seven in 1991, to 19 in 1993, 24 in 1995 and 44 States in 1997. In addition, 17 States have broadened the criteria they use to set cleanup standards, with seven States adding groundwater standards and five States adding soil standards.

Most States use a variety of criteria to determine cleanup standards, but over the past ten years a consensus seems to have developed about the most important criteria. Among the most commonly used criteria are: risk assessments for carcinogens and noncarcinogens (44 States); surface

water quality criteria (42 States); drinking water standards (MCLs or MCLGs)(42 States); groundwater standards (39 States); soil standards (30 States) and future land use (41 States). Only Puerto Rico provided no information about cleanup criteria.

A significant development has been the rapid adoption by States of future land use as a factor in determining cleanup levels to be achieved. Future land use was first mentioned as a factor in determining cleanup standards in 1995, when five States emphasized that they considered future land use as an important factor. In 1997, therefore, land use was added to the list of potential cleanup criteria, and 41 States reported that they consider land use in determining cleanup standards.

If future land use is taken into consideration in determining cleanup levels, there must be some mechanism for assuring that land will continue to be used in a manner that is compatible with the cleanup. Land use then becomes an integral part of maintaining the protectiveness of the cleanup. The mechanisms for maintaining appropriate land uses are institutional controls, and include zoning, notices in deeds or property records, restrictions on use of property placed in the deed, and regulatory restrictions on the use of groundwater. Twenty-nine (29) States report using deed notices or deed restrictions as institutional controls, while at least five States report that they have no institutional controls in place.

Virtually all States provide for public participation in decisions concerning hazardous substance cleanups and voluntary or brownfields cleanups, with some also providing for public participation in natural resource restoration projects. Forty-seven (47) States reported requiring some form of public participation.

State enforcement and cost recovery provisions have remained relatively constant, however a few States have made changes to their liability standards. Forty-one (41) States have strict liability, 36 States use joint and several liability to allocate responsibility for costs among multiple responsible parties at a site, and 32 States use the combination of strict, joint and several liability. Eleven (11) of the States that use joint and several liability also allow responsible parties to enter into an allocation process or prove a divisible share of the total cost. Only five States specify proportional liability as the only allocation standard.

Forty-three (43) States have retroactive liability under their State cleanup laws, the same as in 1995.

Thirty-two (32) States report having independent State authority to recover for damage to natural resources at sites contaminated by hazardous substances. Only ten States reported having recovered for such damages, while 11 States reported having claims pending.

Thirty-one (31) States have property transfer provisions, up from 25 in 1995, 23 in 1993 and 18 in 1991. Property transfer provisions are "laws, regulations, or policies that link the discovery, identification, investigation, cleanup, or disclosure of hazardous substance contamination to transfers of real property, or to transfers of ownership or control of such property."

Forty-four (44) States now have voluntary cleanup programs, a substantial increase from the 31 States that had such programs in 1995, and 14 in 1993. At least two States that do not have voluntary cleanup programs nevertheless allow private parties to initiate voluntary cleanups. In addition, Louisiana has passed legislation establishing a program framework, but has not yet begun accepting sites.

Most States apply the same cleanup standards to voluntary cleanups as they apply to State lead or enforcement cleanups.

Most States encourage voluntary cleanups by offering some form of incentive to volunteers. At least 40 States provide some form of release from liability for future cleanup, but these releases vary widely in form and substance.

States continue to create programs to facilitate cleanup and redevelopment of brownfields sites, including at least twelve new programs since 1995. Half of the States now report having specific brownfields programs, about half of which are in conjunction with their voluntary cleanup

programs and about half of which are separate programs. Several other States target brownfields through other means.

More than 600 cleanups are underway at brownfields sites, with the vast majority being in Illinois (439). In addition, although it could not provide a precise number (and thus was left out of Table V-25 and the 600 cleanups reported above) Minnesota reported having "several hundred" cleanups underway at brownfields sites. More important in terms of the ultimate goal is that the States report having commitments for redevelopment at 236 brownfields sites.

These developments are merely some of the indicators of the breadth and vitality of activities being taken by States to protect human health and the environment from risks associated with sites contaminated by hazardous substances. More detailed information on these and other aspects of State hazardous substance cleanup programs is provided in the remaining chapters of this report.

Chapter III: State "Superfund" Programs

Since 1980, the vast majority of States have enacted laws governing cleaning up contaminated land and establishing funds to pay for cleaning up non-NPL sites where no responsible party is available, able or willing to do it. Many States have been cleaning up land contaminated by hazardous substances, or overseeing such cleanups, for well over ten years. Even States that have only recently established cleanup programs have benefited from the experience of other States.

The fact that State cleanup laws are independent of the Federal Superfund statute is critical to understanding the current state of development of State cleanup programs. This Federal law did not follow the pattern of the Federal pollution control laws, which set minimum national standards that could be administered by the States after their programs received approval by the Federal agency. The absence of a requirement to submit their programs to Federal review and approval has enabled States to experiment widely and to develop some highly innovative and effective cleanup programs. Nevertheless, the majority of the State cleanup programs have authorities similar to the Federal Superfund program. For the purposes of this study, a State "superfund" or cleanup program has some or all of the following characteristics:

1) Procedures for emergency response actions and more permanent remediation of environmental and health risks;

2) Provisions for a cleanup fund or other financing mechanism to pay for studies and remediation activities;

3) Enforcement authorities to compel responsible parties (RPs) to conduct or pay for studies and/or site remediation;

4) Staff to manage State-funded remediation and to oversee RP-conducted remediation; and

5) Procedures for public participation in decision-making on site cleanup.

This chapter presents detailed information on State cleanup programs for all 50 States, the District of Columbia, and the Commonwealth of Puerto Rico. For convenience in discussion and in the tables accompanying this report (see Chapter V), these are all referred to as "States." Totals, therefore, include 52 "States." This chapter highlights similarities and differences among State statutes and programs in areas such as cleanup and oversight capabilities, number of sites cleaned up, staffing, funding, enforcement authorities, cleanup standards, and public participation.

A. Overview of Cleanup Activities and Capabilities

State cleanup programs have expanded and improved substantially since ELI first studied them in detail in 1989, but the improvement has not been uniform and there have been some retrenchments in the past few years, particularly in funding, and to a lesser extent staffing. Even these decreases may not have affected an individual State's ability to cleanup sites if other elements of the program have been augmented. Fewer staff and less State money may be needed, for example, if a State is relying more on a new voluntary cleanup program, or if it has improved the efficiency of its State superfund program. Among the more notable improvements has been in actual cleanups. In

1989 half of the States were actively managing cleanup activities at non-NPL sites, but by the end of FY97 virtually all of the States were actively managing non-NPL cleanups and the States report having completed approximately 41,000 cleanups over the entire period that their programs have existed. In the aggregate, the States have more than 13,700 cleanups underway and completed more than 5,500 in FY97. In addition, they are overseeing more than 5,500 voluntary cleanups that are currently underway.

As early as 1989 all but two States had established a fund from which they could pay for cleanups if no responsible parties could be found to pay for, or conduct, the cleanup. But at the end of FY89, 18 of those States' funds had balances of less than $1 million (M), which is likely to be insufficient to pay for a permanent remedy at even a single site with moderate contamination. In 1997, only Nebraska and the District of Columbia remain without a fund, and, although 11 States have funds with balances below $1M, some of those balances are low because the State has spent substantial amounts on cleanups. Nevertheless, the amount of money available to a State is one indicator of capability to clean up sites and the number of States with small amounts of money available (< $1M) increased substantially between 1995 (4) and 1997.

Another indicator of the maturation of State cleanup programs is the degree to which States have standardized their decisions on the crucial question of how clean is clean. In the late 1980s, most States were still in the site discovery and assessment stage and few had much experience with deciding what cleanup standards to apply. Thus cleanup standards were largely determined on an ad hoc, site-by-site basis, and many States were unclear about where to look for guidance or for appropriate standards. In 1989, 20 States reported using EPA guidance in determining cleanup standards, but few States specifically identified other potential sources of standards. By 1997 virtually every State had moved beyond merely looking to EPA for guidance to using a variety of criteria, including risk assessments for carcinogens and noncarcinogens, surface water quality criteria, future land use, drinking water standards, groundwater standards and soil standards. The maturity of State cleanup programs is also illustrated by the increase, from two in 1989 to forty-four in 1997, in States that have established some cleanup standards by regulation. Thus, the vast majority of States have moved from purely ad hoc decision making to providing predictability for this crucial decision.

B. Statutory Authorities

Table V-2 summarizes the many cleanup statutes and related environmental laws enacted by the States to address sites contaminated by hazardous substances. In some States with comprehensive cleanup statutes, these laws include State cleanup funds, enforcement authorities, priority lists, natural resource damages, citizen suit provisions, victim compensation and water replacement, provisions governing property transfers, and voluntary cleanup standards. Table V-2 is intended to show which State statutes authorize specific activities or programs. Totals listed in this section and in Table V-2 may not, however, be the same as the number of States listed as having a particular program, such as a cleanup fund or brownfields program, because the State may have created the program as part of an administrative initiative or under more general authority.

An area where States have been active in implementing legislation is the remediation and reuse of industrial property through brownfields programs. Significantly, 26 States have separate statutes for voluntary cleanup programs or brownfields programs, and several States provide financial and tax incentives for the voluntary cleanup of these sites. Upon successful cleanup, a certificate of completion, or other form of written proof, is provided to demonstrate that the action has taken place (see Chapter IV for further discussion of voluntary cleanup programs and brownfields programs). Some States have added to the authority of their statutes. Twenty (20) States

have natural resource damages provisions in their hazardous substance cleanup laws (others have such provisions in their natural resource laws); Colorado and Indiana are recent additions to the list.

This year, 14 States listed one statute as the sole source of statutory authority (Alabama, California, Delaware, the District of Columbia, Massachusetts, Michigan, Minnesota, Missouri, Oregon, South Carolina, Tennessee, Washington, Wisconsin, and Wyoming). Of these 14 States, two States without cleanup programs (District of Columbia and Wyoming) reported having only enforcement authority in their one statute. Furthermore, 11 of these States combined their authorities for a superfund cleanup program and a voluntary cleanup program under one statute (Alabama, California, Delaware, Massachusetts, Michigan, Minnesota, Missouri, Oregon, Tennessee, Washington, and Wisconsin). Of the 19 States reporting two separate sources of legal authority (Arizona, Arkansas, Florida, Georgia, Illinois, Kentucky, Hawaii, Maine, Maryland, Nebraska, Nevada, New Hampshire, North Dakota, Pennsylvania, Puerto Rico, Rhode Island, Texas, Utah, and Virginia), 11 had separate statutory authorities for a superfund program and a voluntary cleanup or brownfields program. On the other end of the spectrum, five States reported having five separate statutes for authority (Kansas, Louisiana, Montana, New Jersey, and Oklahoma).

Three States reported authority for all eight listed items in one statute (Michigan, Pennsylvania, and Washington). Iowa and New Jersey also report authority for all eight listed criteria, but across multiple statutes. Additionally, eight States had singular authority for at least six criteria, with all of these statutes providing authority for a cleanup fund, enforcement, a priority list, and natural resource restoration (Arizona, California, Delaware, Hawaii, Massachusetts, Minnesota, Montana, and Oregon).

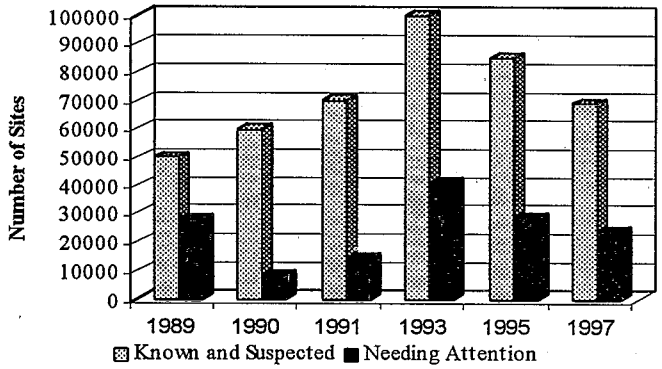
Also of note, 15 States reported authority for replacing water supplies (Arizona, California, Connecticut, Delaware, Florida, Hawaii, Illinois, Iowa, Kansas, Michigan, New York, Oregon, Pennsylvania, Texas, and Washington), an overall increase of six States from the 1995 Study.

C. Hazardous Substances Sites

Site Inventory

State programs have responsibility for a substantial number of sites contaminated with hazardous substances. While approximately 1,200 sites are on the National Priorities List (giving EPA primary jurisdiction for remediation), tens of thousands of sites are not on the NPL. Responsibility for remediation of these sites falls primarily to the States (or to EPA's removal program).

Chart III-1: Hazardous Sites



Ascertaining the number of non-NPL sites is critical to understanding the magnitude of the cleanup task facing the States. This study reports the hazardous substance sites identified by the States while excluding petroleum-contaminated sites and leaking underground storage tank sites (except Alaska, which does not differentiate between petroleum sites and hazardous substance sites and where 80% of its sites are petroleum related). The number of non-NPL hazardous substance sites for each State is reported in Table V-3.

ELI has used three categories for reporting the number of non-NPL sites. These categories have been devised to assure that, even though States use widely differing internal approaches in accounting for sites, similar sites are counted in similar ways. The categories and approximate 1997 totals are:

- known and suspected sites (~69,000 sites)
- sites identified as needing attention (~24,000 sites)
- sites on a State inventory, priority list, or registry (~15,500 sites, but numbers not comparable)

The broadest category of hazardous substance sites is *known and suspected sites*. This category reflects the maximum number of sites known to each State and tracked in some way in connection with its cleanup program. The number is an estimate in some States, but is a confirmed number in most. In some States, the known sites category includes those that have not yet undergone assessment. This category is most useful (1) in determining how large each State perceives the universe of sites is within its own jurisdiction, and (2) in defining an outer limit to the national task of addressing hazardous sites. The number of known and suspected sites in each State ranges from 0 (North Dakota) to 15,177 (New Jersey). In 1997, the States reported approximately 69,000 sites in this category, a decline from the over 85,000 reported in 1995. The decline appears to result primarily from the completion of cleanup activities (~5,500) and a few States reclassifying sites.

Large changes in the reported numbers for known and suspected sites between 1995 and 1997 occurred in a handful of States. Colorado, Connecticut, Florida, Kentucky, New Hampshire, New York, and Wisconsin reported increases, whereas California, Iowa, Louisiana, Massachusetts, New Jersey, Texas, and Vermont reported decreases. However, most of these fluctuations are attributed to changes in reporting systems.

The second, and most useful, of the hazardous site categories tracked by ELI is *sites identified as needing attention.* This category—a subset of the known and suspected sites – consists of sites that have been evaluated by the State and determined to require some level of cleanup or further evaluation. This number is the best indicator of the workload facing each State's cleanup program, and is the most useful for national and State program planning purposes. Nationally, the States reported approximately 24,000 sites in this category in 1997, a decline of approximately 5,500 sites since 1995. The number of sites needing attention in particular States ranges from 0 (District of Columbia and North Dakota) to 4,915 (New Jersey). Only six States have more than 1,000 sites in this category: Alaska (1,206), Florida (1,094), Massachusetts (2,679), Michigan (2,789), New Jersey (4,915), and Washington (1,006). While some of the decline in this category from 1995 to 1997 reflects reclassification of sites, it also reflects continued progress in accomplishing cleanups. Notably, the 1,402 cleanup actions New Jersey completed during this period resulted in a significant decline in the number of sites identified as needing attention (6,500 sites in 1995 compared to 4,915 sites in 1997. Only Arkansas and Florida had significant increases in sites identified as needing attention. None increased by more than a few hundred. In summary, it appears that the total universe of sites requiring attention has stabilized and continues to decline as State assessment and cleanup programs have had an effect.

Some States also track the *types* of sites identified needing attention. Cumulatively, there are approximately 850 municipal landfills, 250 industrial landfills, 1800 manufacturing sites, 350 recycling sites, 60 mining sites, and 8,847 other types of sites.

The third category reflects the number of sites maintained on a State's official *priority list, inventory, or registry.* Approximately 40 States maintain some kind of list, registry, or inventory – usually pursuant to a statutory or regulatory requirement. Although about 15,500 sites are on these

lists, State definitions and approaches vary widely so the aggregation of these numbers is not very useful and no direct comparisons between State lists can be made. Many States maintain no formal list or registry; others do, but vary widely in approach. Some lists include all known and suspected sites, while others include only a very small number of sites that have completed a long evaluation process. Still others include only sites where cleanup is funded by States rather than by responsible parties. For example, Connecticut lists only 11 sites on its registry, but, at the same time, has identified 668 sites as needing attention. Conversely, Wisconsin's registry lists 5,000 sites, although only 600 Wisconsin sites need attention.

At non-NPL sites, clean up activities were completed at more than 5,500 sites, bringing the total number of sites completed to roughly 41,000 since the inception of the various States' programs. The total numbers of cleanup activities in progress is approximately 13,700.

Over the last ten years, many States have implemented voluntary cleanup programs (VCPs). Voluntary cleanup activities are underway at approximately 5,500 sites. Since the start of the VCPs in the various States, approximately 6,800 cleanup activities have been completed, including roughly 2,400 sites in 1997.

D. Program Organization

State hazardous substance programs are generally administered within the State agency that has primary responsibility for environmental matters. In North Dakota and Hawaii, the cleanup program is carried out by the State health department. In a few States, including Kansas, Colorado and South Carolina, the responsible agency has jurisdiction over both health and the environment.

Table V-5 lists the responsible agencies for the 52 States and the offices that administer the cleanup programs. This table provides the staffing levels for the cleanup programs, including actual and authorized full time equivalent (FTE) positions. Table V-5 also lists the offices providing legal support to the cleanup programs, along with actual staffing levels.

Program organization varies considerably within the State agencies, and it is difficult to make generalizations concerning program administration. The discussion below includes examples of some of the more noteworthy organizational features of the States' hazardous substance cleanup programs. This discussion also highlights information from Table V-6, which lists the funding sources for staff and administrative expenses of the State's cleanup program, as well as the percentage contribution from each source.

Cleanup Program Organization

Principal Program Office

Within the responsible agency, the hazardous substance cleanup program is usually administered by the division that carries out the State's waste programs, although in some cases the division has broader or narrower responsibilities. The hazardous substance cleanup program may, in turn, be housed in a separate office within this division, as is the case in Arizona, Kentucky, Oklahoma, Pennsylvania and a number of other States. In some States, the cleanup program is divided into two or more units or offices with separate functions. For example, the Bureau of Environmental Remediation within Kansas' Department of Health and Environment addresses hazardous substance site cleanup through its Restoration Section and its Remediation Section. Similarly, the Waste and Water Division of the New Mexico Environment Department's Groundwater Quality Branch administers the State's cleanup program through its Superfund Oversight Section, as well as its Assessment and Abatement Section. In Maryland, the Department of

the Environment's Environmental Restoration and Redevelopment Program is responsible for hazardous substance cleanup activities and has three divisions involved in this area: the Site and Brownfield Assessment/State Superfund Division; the Federal Facilities and NPL Division; and the Voluntary Cleanup Program.

Intra-Agency Activities

In a number of States, other divisions within the responsible agency provide support to the State's hazardous substance cleanup program. In South Carolina, the Division of Site Assessment and Remediation is the lead division administering the cleanup program; however, staff in the Division of Hydrogeology also provide support. In Missouri, the cleanup program administered by the Division of Environmental Quality receives support from the Division of Geology and Land Survey. In Massachusetts, the Bureau of Waste Site Cleanup is the lead bureau administering the Waste Site Cleanup Program, however the Bureaus of Waste Prevention and Resource Protection also have staff dedicated to the program. In addition, scientists in the Department of Environmental Protection's Office of Research and Standards provide risk assessment support.

Inter-Agency Activities

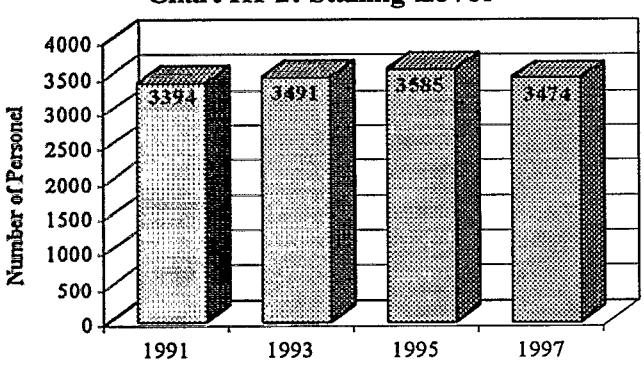
The agency that administers the State's hazardous substance cleanup programs often relies on other agencies for assistance. In some States, including Maine and Missouri, the environment agency consults regularly with the public health agency on risk assessment, laboratory testing and other activities. The responsible agency may also work with the State economic development agency on implementing brownfields financial incentives programs, as is the case in Connecticut and Maryland.

The responsible agency may share jurisdiction over assessment and restoration of natural resource damages (NRDs) with one or more State natural resource agencies. This is the case in Maryland (Department of Environment and Department of Natural Resources), Texas (Texas Natural Resource Conservation Commission, Texas General Land Office and Texas Parks and Wildlife Department) and a number of other States. In New York and Michigan, the environment agency shares NRDs responsibilities with the State Attorney General's Office.

Staffing Levels

The 49 States that provided staffing information reported a total of 3,474 FTE staff working in the States' cleanup programs. In most cases, this number reflects staff positions devoted to hazardous substance remediation activities. In some cases, however, the State's principal cleanup program office undertakes a variety of related activities—*e.g.*, RCRA hazardous waste and LUST program implementation, in addition to site remediation activities—and the staffing levels reported reflect these broader program activities.

Chart III-2: Staffing Level



Staffing levels vary considerably, from New Jersey's 512 FTE positions, to South Dakota's 2.5 FTE staff. The following 11 States employ more than 100 people that work on cleanup activities: California, Florida, Illinois,

Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania, Texas, and Washington. Of the States reporting staffing levels, a total of seven have 51-100 personnel, while 25 have between 10.5 and 50 FTEs. Only six States have 10 or fewer people assigned to their superfund programs.

The total of 3,474 FTE staff positions reported this year represents a decrease of about 3% from the 3,585 FTE positions reported in 1995. Several States reported sharp decreases in program staff from 1995: *e.g.*, New Jersey (512, down from 650); Michigan (234, down from 298); and Rhode Island (20, down from 30). At the same time, a number of States reported considerable increases in program staff: *e.g.*, Georgia (39, up from 18); South Carolina (45, up from 30); and Arizona (56, up from 24). In some States, program reorganization may affect the number of positions reported. In New Hampshire, for example, organizational restructuring resulted in an increase of 20 FTE positions over the number reported in 1995.

The decrease in total FTE positions also reflects an overall decrease in the number of States that reported this information. Three States (West Virginia, Puerto Rico, and the District of Columbia) provided FTE figures in 1995 (a total of 56 positions) but did not provide complete FTE staff information for this survey. At the same time, Wyoming did not provide information in 1995, but did report eight FTE positions for this survey. In addition, changes in FTE numbers may reflect changes in a State's ability to identify staff positions that relate specifically to hazardous substance cleanup activities. This is the case in Kansas, for example, which reported 57 fewer FTE positions than in 1995, when the State's reporting included staff working on a broader range of activities.

Because cleanup program staff often assume multiple duties, State officials are frequently unable to indicate precisely the staff time devoted specifically to non-NPL sites. The 14 States providing this information varied widely in the percentage of total program staff devoted to non-NPL sites – from 10% in North Dakota to almost 90% in Connecticut. In the majority of these States, however, at least half of the total program staff are dedicated to non-NPL cleanup activities.

Finally, 40 States provided information on the number of *authorized* FTE positions in the principal cleanup program office. These States reported 2,853 authorized positions, compared with 2,684 actual positions. Among the States that did not report authorized FTE positions were four that have more than 100 FTE staff; California, Florida, Ohio and Pennsylvania.

Legal Support

In the 50 States that provided FTE attorney information, a total of 206 attorneys work on waste cleanup issues. The total number of attorneys is five fewer than in 1995, when all 52 States reported information (including Puerto Rico and the District of Columbia, both of which reported one FTE attorney position each). In many States, the attorneys assigned to handle State superfund cases also handle other types of cases, such as Resource Conservation and Recovery Act (RCRA) and general environmental cases.

The number of FTE attorneys for most States is small. Only seven States reported 10 or more FTE attorneys providing legal support: Massachusetts (21), New York (20), New Jersey (18), Pennsylvania (12), California (12), Ohio (11.7) and Colorado (10). Combined, these States have more than half the total number of attorneys working on State superfund-type activities.

The State Attorney General's Office (or its equivalent) is the sole source of legal support for the cleanup program in 24 States, while in 18 States the agency responsible for the hazardous substance cleanup program itself provides the sole legal support for program. The remaining nine States rely on a combination of attorneys from both the Attorney General's Office and the responsible agency. Vermont uses attorneys from its Attorney General's Office and the Department of Environmental Conservation's Enforcement Division, as well as one attorney from its own superfund program staff.

Funding Sources

There are three common sources of funding for the States' hazardous substance cleanup program staff and administrative costs: State cleanup funds, State general funds and Federal grants. Federal grants include primarily the Environmental Protection Agency's core Superfund program grants, site-specific cooperative agreements and multisite cooperative agreements. Some States, including North Carolina and Minnesota, receive grants from the Departments of Energy or Defense.

Of the 50 States that provided information on funding sources, all but two—Pennsylvania and Georgia—use Federal monies to fund staff and administrative expenses. No State uses Federal funds alone, but of the States that receive Federal funding, six report that Federal monies provide 90% or more of funding. On the other hand, three States report that Federal funds comprise 10% or less of the program's funding for staff and administrative expenses.

State monies for staff and administrative expenses of the cleanup program derive exclusively from the general fund in eight States and from separate site cleanup funds alone in 16 States. In West Virginia, State funding comes solely from voluntary cleanup reimbursements, and Oklahoma relies on solid waste fees. The remaining 24 States reporting this information use a combination of general fund appropriations, site cleanup fund monies, and a variety of other sources to fund these expenses. Other sources include cost recovery, taxes, State waste funds, and fees.

E. Funds

A State must be able to pay for its activities in cleaning up sites. A readily available source of money is, therefore, an essential element of a State's program to clean up sites. Experience has shown that a fund separated from the operating funds of the environmental agency and continuing from year to year without the need for annual appropriations or other legislative action allows the agency to avoid disruptions to cleanups. A fund allows a State to investigate, plan, design and conduct emergency response and remedial actions at sites where immediate action is required or where RPs are unavailable, unable, or unwilling to conduct or pay for remedial actions. At least some of these expenditures can be replaced through cost recovery actions against RPs that initially did not pay for the cleanup. But money spent at orphan sites, where no RPs can be found, cannot be replenished through cost recovery and must be replenished from other sources. A State may also incur certain expenses that it is not authorized to recover from RPs, including some administrative costs.

A fund also allows a State to control the pace of cleanups; if RPs do not agree to conduct the cleanup, the State will be able to use its own funds to clean up the site without delay. Beyond recovering its costs, the State may be authorized to seek punitive damages from the RPs that refused to conduct or pay for the cleanup. For a State to maintain control over the time sites are cleaned up, a State must have enough money available to pay for cleanup activities when they become necessary. Money should also be available to pay for responses to emergencies and for unexpected expenses, such as for activities at sites where anticipated agreements with RPs are not reached. To be most effective, a fund needs to be large enough to cover these contingencies, including potentially paying for the entire cost of one or more site cleanups. The amount of money necessary to meet these contingencies will depend on the number and characteristics of a State's sites, but will also depend on the risk that RPs and the State will not reach agreement on sites for which the State expects RPs to pay. A fund of adequate size allows a State to control which sites and risks it responds to and how and when that response occurs.

A State fund can also be a significant contributor to a State's cleanup enforcement program. If the State can clean up a site with State funds and promptly recover its costs, then RPs may decide

that it is in their interests to agree to conduct future cleanups. States that have demonstrated this ability have been able to reach agreements with RPs.

The amount of money needed to make such action credible obviously depends on the number of sites and types and expense of cleanup actions needed in the State. The experience of some States indicates that completing a remedial action at a single site is likely to cost more than one million dollars. Thus, for many States, particularly those with multiple sites needing permanent remedies, a fund of more than one million dollars would be needed to preserve the option for conducting a State-funded remedial action at a site while maintaining the ability to respond to emergencies. Some States have considerably less than a million dollars available, which restricts their response capability. Typically they have only been able to pay for emergency responses or relatively simple cleanups.

Fifty (50) States (including Puerto Rico) have established cleanup funds or provided a mechanism for the State agency to pay for one or more types of cleanup activities at non-NPL sites. Only Nebraska and the District of Columbia have no authorized cleanup funds. This has not changed since 1991. Table V-7 lists the States' funds, their balances as of the end of the State's fiscal year (June 30, 1997 for most States), the amount of money added to the funds during the fiscal year, the amount of money spent from the funds during the fiscal year, and the amount of money obligated for future work. Not all State cleanup funds or funding mechanisms are listed in Table V-7. Funding instruments that are used solely as repositories for Federal monies or are available only for cleanup of leaking underground storage tanks have been excluded. Also excluded are funds that may be used solely to clean up spills of oil or petroleum products.

Thirty-three (33) States have more than one fund for cleaning up sites contaminated by hazardous substances. This is 12 States more than had multiple funds in 1995 and more than twice the number that had multiple funds in 1989 (15). States have more than one fund for a variety of reasons. A State may have multiple funds to differentiate sources or uses of the funds. One fund may receive all the proceeds from a hazardous waste fee, while another is the repository for other authorized types of funding, typically appropriations, penalties, and cost recoveries. For example, Arkansas' Hazardous Substances Remedial Action Trust Fund receives most of its funding from fees on hazardous waste generators, while its Emergency Response Fund is funded by civil penalties (the ERF is capped at $150K and excess penalties are deposited in the Remedial Action Trust Fund). When a State authorizes bonds to be issued to pay for cleanups, it typically creates a separate fund whose sole source of money is bonds. New Jersey, for example, now has four separate bond funds among its seven funds.

States also may have multiple funds because they separate the uses to which their funds may be put. Thus Ohio has a Hazardous Waste Facility Management Fund that may be used for emergency response, administrative costs, and the State's share of NPL remedial actions (CERCLA match), in addition to its primary RCRA-related purposes. Ohio also has a Hazardous Waste Cleanup Fund that may be used for other non-NPL related cleanup activities, and a Voluntary Action Program Administration Fund to be used as its name indicates.

Most of the increase in the number of States with multiple cleanup funds is due to States that have created funds dedicated to voluntary cleanup programs or other specific types of cleanups. Since 1995, seven States, Hawaii, Maryland, Mississippi, Missouri, Ohio, Utah, and Virginia, have created funds specifically devoted to their voluntary cleanup programs. Similarly, Hawaii, Maryland, and New York have created new funds focused on brownfields programs. A few States also have established special funds dedicated to cleaning up dry cleaning sites. Kansas had such a fund in 1995 and Oregon and Tennessee have created such funds since then. In 1997, Alaska and Arizona reported separate accounts within funds that were reported as a single fund in prior years.

The States vary considerably in their funding sources and authorized uses of funds. Sources of funding for State cleanup programs are listed in Table V-9. These funding sources include appropriations (A in the Table), bonds (B), waste fees (WF), taxes (TX), interest (I), penalties (PE),

transfers from other State funds (TR), cost recovery (CR), private funds (PF), user fees (for voluntary cleanup programs)(UF), and other (O). The activities for which a State is authorized to use a fund are listed in Table V-10. Authorized uses include: site investigation (SI); emergency response (ER); removals (RM); CERCLA match (CM); studies and design (SD); remedial actions (RA); operations and maintenance (OM); grants to local governments (GLG); natural resource restoration (NRR); program administration (PA); victim compensation (VC); and other (O).

A key issue for State and Federal policymakers is the extent of the States' capabilities to clean up non-NPL (and potentially NPL, or NPL-caliber) sites. The States have identified approximately 24,000 sites as needing some type of cleanup. Clearly, the States will rely on RPs to perform or pay for the cleanups of most of these sites, yet just as surely the risks at some sites will be addressed only if the State conducts and finances the cleanup itself. A State's capability to perform cleanups is determined by many factors, including staffing, expertise, experience, funding, and expenses. This section discusses the financial measures of State capabilities.

Fund Balances and Additions

Analysis of fund balances at the end of a State's fiscal year and the amount of money added to the fund during the past fiscal year is intended to provide a sense of the State's capability to pay for cleanups in the near future. The fund balance is a measure of the current availability of funds for new work. This is supplemented by fund additions, which serve as a measure of the State's immediate past capability to sustain the fund and is intended to provide a sense of the State's potential to maintain and increase the fund in the future. Both measures are flawed and, even considered together, do not necessarily provide a complete or accurate sense of State financial capabilities to pay for future cleanups. This is particularly true if comparisons are made among the States. Some of the issues are:

1. Fiscal year-end balances could not be obtained for all funds or all States – Idaho, Puerto Rico, and Wyoming provided no fund balance information at all, Maryland did not provide a balance for two of its three funds, and Indiana, Missouri, and Montana each provided no balance for one of their funds.

2. Fund balances may be artificially low because of infrequent collection of fees or taxes, timing of appropriations (some States use biennial budget and appropriation cycles), or a program's need to exhaust its fund at the end of the fiscal year because carryover is not allowed.

3. Some States continue to rely on site-specific appropriations for remedial actions, despite the existence of a cleanup fund. In that case the State's ability to pay for cleanups may be less predictable.

4. A portion of a State's fund balance may be obligated for future work on sites in the system and thus all of the fund balance will not be available for work on new sites. ELI attempted to mitigate this difficulty by asking States how much money was obligated for future work. This information is included in Tables V-7 and V-8.

With these caveats, the total of the balances, including bond authorizations, for all the States' funds is $1.41B, down slightly (3.5%) from $1.46B in 1995, which was 4% less than the $1.52B in 1993. Fund balances have been declining since 1990.

As has been the case in past years, much of the aggregate fund balance is attributable to large sums of bonds authorized in just a few States. New York's bonding authority of $601M constitutes 42.5% of the total balance for all funds in all States at the end of FY97, and the total of $799.7M in bonds available to Massachusetts, New Jersey and New York is 56.6% of the aggregate balance for all States. In 1995, the bonding authority available in three States (Michigan, New Jersey, and New York) totaled $845.6M, which was 58% of the $1.46B total fund balance available to the States at the end of FY95.

In past years the principal reason for the decline in State balances, including bonds, was declining amounts of bonding authority available in the few States that have authorized large amounts of bonds (see Charts III-3 and III-4 for the aggregate State fund balances including and excluding bond authorizations since 1989). In contrast to past years, there was relatively little change from 1995 to 1997 in aggregate bond funds available to the States. In 1997, nine States reported bond authorizations of $853.4M. This compares with bond authorizations totaling $873.6M in 1995, $967.2M in 1993, $1614.8M in 1991, $1729.2M in 1990, and $1981M in 1989. Thus, bond authorizations have been declining since the first 50-State Superfund Study in 1989. Most of this decline is due to the fact that the States have been issuing the bonds and spending the proceeds on cleanups, as was intended. New York, New Jersey, and Michigan have each issued hundreds of millions of dollars of bonds and spent the money on cleanups since 1989. With one exception, all of the States that have had bond authorizations in the past, including Connecticut, Maine, Maryland, Massachusetts, Michigan, Montana, New Hampshire, New Jersey, Oregon, Rhode Island, and Wisconsin, appear to have spent virtually all of their initial bond authorizations. New York is the exception in that it has $401M in bond authority remaining from its 1986 Environmental Quality Bond Act authorization of $1.2B. Yet, New York is also the State that has spent the most, $800M, from its bond fund.

Chart III-3: Balance and Percentage Change Including Bonds

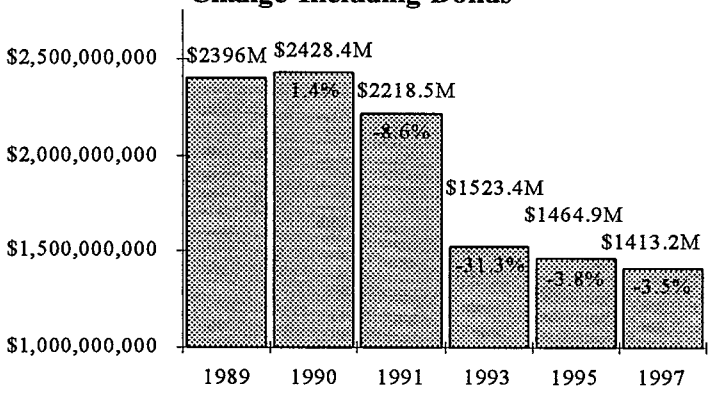
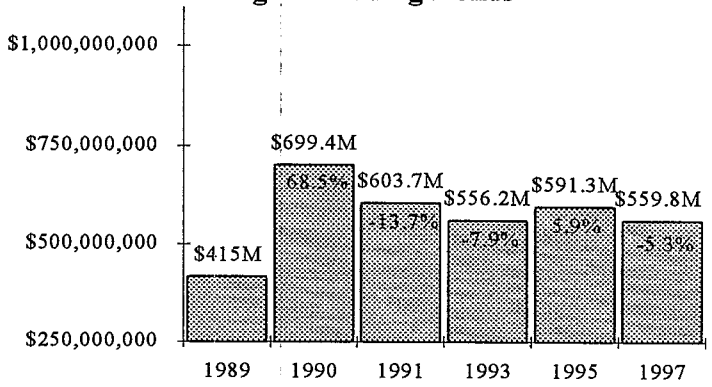


Chart III-4: Balance and Percentage Change Excluding Bonds



Although New York's bond fund was not depleted by the end of FY97, as had been predicted by its staff in 1995, in 1996 the legislature authorized $200M in new bonds. Similarly, the legislatures in Massachusetts and New Jersey also authorized substantial amounts of bonds in 1996. Other than Maine, these have been the only grants of bonding authority since 1991. These new authorizations of bonds offset large decreases in existing bond funds in New York, New Jersey, and Michigan, resulting in the aggregate amount of bonds available to all States remaining about the same as in 1995.

A trend away from very small fund balances was reversed in 1997. The number of States with balances less than $1M increased from six in 1995 to ten in 1997 (excluding the District of Columbia and Nebraska, which have no fund at all)(this year three States, Idaho, Puerto Rico, and Wyoming, provided no fund information). Missouri reported having a deficit of $1.3M, the first time a State has reported a negative fund balance. The number of States with balances below $1M had been declining, from thirteen in 1991 to nine in 1993 to six in 1995. Fourteen (14) States had balances from $1M up to $5M (down from 21 in 1995, 15 in 1993 and 14 in 1991), 6 States had balances from $5M to $10M (compared to 8 in 1995, 11 in 1993, and 5 in 1991), 11 States had balances from $10M to $50M (compared to eight in 1995, 12 in 1993 and 14 in 1991), and 6 States had balances of $50M or more (compared to seven in 1995, three in 1993 and four in 1991).

The total amount of money in fund balances, however, continues to be concentrated in a few States. The six States with fund balances (including bonds) exceeding $50M had $1079.1M, which was 76.4% of the aggregate balance of State funds. This is comparable to the share held by the same category in prior years: $1178.1M or 80.4% of the total in seven States in 1995, $1127.4M (74% of total balance) in three States in 1993, and 84% in 1991. Moreover, the 17 States with fund balances of at least $10M had $1331.6M, or 94.2% of the aggregate for all States. This is similar to the 93% of the total held by 15 States with balances greater than $10M in 1995, and little changed from prior years: 93% in 1993, 96% in 1991, 97% in 1990, and 96% in 1989.

Contributions to State funds have varied widely since the first 50-State Study in 1989. In FY97, 45 States reported adding $538.3M to their funds (of 50 with funds), compared to 46 States that reported adding $444.6M during fiscal year 1995. The FY97 additions are, however, only somewhat more than half of the $957.3M added to the cleanup funds in 46 States during fiscal year 1993. Among the States that did not provide information about fund additions California was the most likely to have added a substantial amount, based on past years. In 1993, California added $107M to its Hazardous Waste Control Account and in 1991 it added $50M to that account.

Much of the difference between the 1993 additions and the amounts added in 1995 and 1997 can be attributed to New Jersey. In 1997, New Jersey added $62M to its funds, approximately the same amount that it added in 1995 ($64.7M), but less than 20% of the $350.1M added in 1993. The variability in New Jersey's additions is largely attributable to changes in the amounts being added to its Bond Funds, which received no infusions of money in 1997 and $8.5M in 1995, but $239.5M in 1993.

Other States have also experienced substantial changes in the amounts added to their funds during different years. Texas added $20M to its funds in 1991, increased that to $112.3M in 1993, more than halved that to $47.4M in 1995, and further decreased its additions to $35.4M in 1997. Similarly, Florida almost doubled its additions from $13.7M in 1991 to $25M in 1993, but then added only $1.5M in 1995 and nothing in 1997. California's additions went from $50M in 1991 to $107M in 1993, but then provided no information for 1995 or 1997. On the other hand, Pennsylvania's additions decreased from $89M in 1991 to $45.6M in 1993, then rose to $51M in 1995 and increased substantially in 1997 to $94.7M.

As with fund balances, only a few States account for most of the amounts added to State funds, with three adding more than $50M in 1997, compared with four in 1995, five in 1993 and one in 1991. The additions in these three States (New Jersey, New York, and Pennsylvania) totaled $239.4M, which was 43.7% of the total added to State funds by all States. In 1995, the four States in this category (Michigan, plus the same three as in 1997) added a total of $229.3M to their funds, which constituted 51.6% of the total added by all States. In addition, eight States reported additions to their funds in the range from $10M to $50M in 1997, two more than were in this category in 1995. At the other end of the scale, 18 States reported adding less than $1M to their funds in 1995, continuing an upward trend in this category from 14 in 1995, 10 in 1993 and nine in 1991. Four of these added no money at all to their funds during FY97.

As might be expected, the States that add the largest amounts to their funds also tend to be the ones with the largest balances, though there are some notable exceptions. Seven States (Alaska, New Jersey, New York, Ohio, Pennsylvania, Texas, and Washington) are in the top ten of both additions to funds and fund balances. The exceptions include Massachusetts, which was one of the four States that added no money to its fund in 1997, but which had the fourth largest balance, at $86.3M. This is explained by the fact that Massachusetts receives all of its funding from bonds, which the legislature authorizes in relatively large amounts that the agency then uses over several years. Since new bonds were authorized in 1996, no further additions would be expected in 1997. Georgia illustrates the other type of exception, States with small fund balances that have large amounts added to them during the fiscal year. Georgia's fund balance at the end of FY97 was $1.1M, but $19.1M was added to its fund during the year. The fact that Georgia spent $17.6M in 1997 and has obligated another $13.8M seems to explain why it has such a low balance compared to the amount it added to its fund. Georgia is essentially funding its activities on an annual basis.

Fund Expenditures

The amount of money spent by States on cleanups in the past year is another indicator of the financial capabilities of States to clean up sites contaminated with hazardous substances. State expenditures reflect the State's cleanup capability for the past year and may be a good indicator of future capabilities if the State is maintaining a stable cleanup program. Table V-8 reports States' expenditures and obligations from FY97.

States were asked to separate expenditures, *i.e.*, money actually spent during the year, from obligations, *i.e.*, money committed to a specific project or task and thus not available for spending, but not yet spent. States also were asked to categorize their expenditures and obligations by whether they were for NPL or non-NPL sites.

Most States were able to separate their expenditures from the amounts they obligated, although some States could provide no information for one or more of the categories of information. North Dakota, Puerto Rico, South Dakota, and Wyoming provided no information on expenditures or obligations. Arizona, Hawaii, Idaho, Kansas, Maine, Maryland, and Mississippi provided no information about obligations, but supplied information about expenditures, while Connecticut provided no information about expenditures, but supplied information about obligations. Most States also were able to separate the amounts they spent or obligated on non-NPL sites from the amounts committed to NPL sites. Unfortunately, the information provided for these sub-categories is less complete than for total expenditures. A number of States that each spent tens of millions of dollars on cleanups did not disaggregate the amounts spent on non-NPL and NPL sites. These included Alaska (two funds that together spent $20M), Florida (one fund that spent $22M), New York (two funds that together spent $102M), and Texas (one fund that spent $41M). Nevertheless, it is possible to use the 1995 and 1997 spending data to explore the States' capabilities to clean up non-NPL sites.

In 1997, 44 States reported spending a total of $565.1M and 39 States reported obligating $448M to be spent in the future, with some States reporting one figure but not the other. Thirty-one (31) States also reported spending $136.5M on non-NPL sites while 30 States reported spending $32M on NPL sites in 1997, though 14 of the 30 spent $0.

By comparison, in 1995, 44 States reported spending a total of $386.1M and 38 States reported obligating $363.4M. In addition, 37 States reported expenditures of $203M on non-NPL sites and 32 States reported spending $19.6M on NPL sites (12 States spent $0).

Combined, States reported spending $179M more in 1997 than they did in 1995, an increase of 46.4%. Of the 40 States reporting expenditures in both 1995 and 1997, 23 States reported increases, while 17 States reported decreases. Moreover, six States increased expenditures by more

than $10M; Florida ($22.2M in 1997 compared to $3.2M in 1995), Georgia ($17.6M in 1997 compared to $2.5M in 1995), New Jersey ($81.3M in 1997 compared to $37.6M in 1995), New York ($158.8M in 1997 compared to $129.4M in 1995), Pennsylvania ($37.4M in 1997 compared to $16M in 1995), and Texas ($41.2M in 1997 compared to $28.6 in 1995). Only two States, California ($228K in 1997 compared to $14.4M in 1995) and Washington ($42.7M in 1997 compared to $52.9M in 1995), lowered spending by more than $10M.

The aggregate amount of total obligations increased $84.6M (23.3%) from 1995 to 1997. Of the 31 States reporting obligations in both 1995 and 1997, 18 States reported increases while 11 States reported decreases (two States reported $0 in obligations in both years). Five (5) States noted increases in obligations of more than $10M; Connecticut ($31.8M in 1997 compared to $18M in 1995), New Jersey ($98M in 1997 compared to $62.5M in 1995), Pennsylvania ($43.3M in 1997 compared to $23M in 1995), South Carolina ($20.8M in 1997 compared to $700K in 1995), and Texas ($27M in 1997 compared to $0 in 1995). Conversely, Massachusetts ($0 in 1997 compared to $10.5 in 1995), Michigan ($12.7M in 1997 compared to $50.5M in 1995), New York ($95.3M in 1997 compared to $123.5M in 1995), and Washington ($7.9M in 1997 compared to $18.1M in 1995) reported decreases in obligations of more than $10M.

As usual, most States (27 of 44 States reporting) spent less than $5M on all sites in 1997, with 17 States spending less than $1M. At the high end, only New Jersey and New York spent more than $50M, with New York spending over $100M.

Chart III-5: 1997 State Expenditures

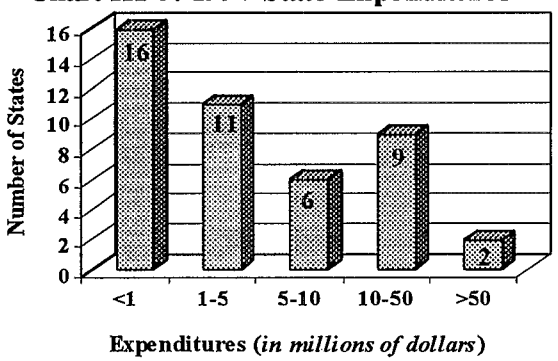
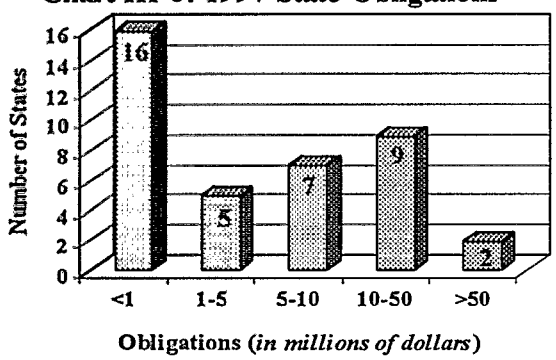


Chart III-6: 1997 State Obligations



Similarly, most States (21 of 39 States reporting) obligated less than $5M on all sites in 1997, with 16 States obligating less than $1M. Again, only New Jersey and New York obligated more than $50M.

In contrast to the substantial increase in overall spending, the reported spending on non-NPL sites dropped by 32.7% from $203M in 1995 to $136.5M in 1997. This change may be due to the fact that New York reported $79M in non-NPL spending in 1995, but did not provide a breakdown for NPL versus non-NPL spending in 1997. Beyond that, Georgia, Pennsylvania, and Washington reported significant increases in non-NPL spending, while California and New Jersey reported significant reductions.

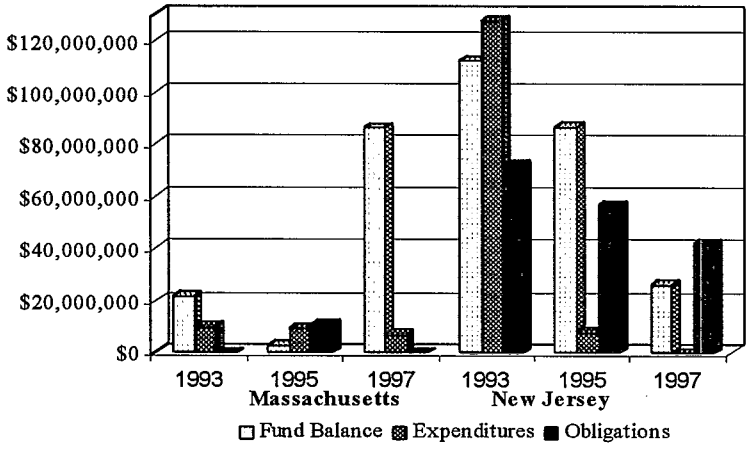
As is the case with fund balances, the majority of the total spent by the 31 States reporting on non-NPL sites is accounted for by a few States. Four States account for 68.7% ($93.9M) of the total reported spent by the States on non-NPL sites in 1997; Washington spent $39M on non-NPL sites, Pennsylvania spent $32.4M, Georgia spent $11.4M, and Oregon spent $11.1M. At the other end of the scale, 15 States reported spending less than $1M, and two States, California and Utah, spent less than $100K, on non-NPL sites.

Unlike expenditures, reported obligations on non-NPL sites increased 65.8% from $81.4M in 1995 to $135M in 1997. Connecticut, Pennsylvania, and South Carolina reported significant increase in non-NPL obligations, while only New Jersey and Wisconsin reported even moderate reductions.

The combination of fund balances, additions to funds, and expenditures can provide the most accurate indicator of the capability and stability of a State cleanup program. For example, Pennsylvania continues to add more to its Hazardous Sites Cleanup Fund ($77M) than the total of its expenditures and obligations ($75M) and its balance continues to grow (from $21.8M in 1991 to $60.5M in 1993 to $75M in 1995 to $105M in 1997) indicating that the State is expanding its capacity, presumably in anticipation of paying for more expensive remedial actions. Other States whose additions continue to exceed their expenditures and obligations included Arkansas ($637K added in 1997, expenditures and obligations of $201K, balance rose from $7.5M in 1995 to $8.8M in 1997), Delaware ($5.2M added in 1997, expenditures and obligations of $3M, balance rose from $3.7M in 1995 to $8.4M in 1997), and Virginia ($1.1M added in 1997, expenditures and obligations of $625K, balance rose from $2.5M in 1995 to $3.5M in 1997).

When expenditures exceed additions by a significant amount, the size of the fund balance is critical to maintaining the State's ability to continue the same level of activity. Several States fund their programs using relatively large amounts in authorized bonds. Massachusetts, for example, authorized an $89M bond in the late 1980s to fund its program. Over the years, the State added no money to the bond fund so the balance declined steadily to $2.5M in 1995. A $100M bond reauthorization in 1996 allowed the State to continue its relatively steady spending pace ($10M in 1993 compared to $9.5M in 1995 and $7.1M in 1997). Similarly, New Jersey, with a $60.2M decline in its bond fund from 1995 to 1997 (balances of $86.6M and $26.4M respectively), authorized new bonds and was able to continue spending and obligating at a notable level ($64.9M in 1995 and $42.1M in 1997). Interestingly though, both Massachusetts and New Jersey increased the ratio of obligations to expenditures as their bond funds diminished. California has not authorized any additional bonds though the balance in its bond fund continues to decline (from $12.9M balance in 1993, to $3.4M in 1995, and then $2.4M in 1997). There has been a corresponding decline in expenditures and obligations (not reported in 1993, but $3M in 1995 compared to $228K in 1997).

Chart III-7: Obligations versus Expenditures as Balances in Bond Funds Decrease



This raises the question as to whether States that use bond funds operate on a boom-and-bust cycle, whereby they decrease or delay activities as their fund balances diminish, and then increase expenditures when the new monies arrive. Looking across the bond fund data from 1993 on, it appears as though some States may indeed operate this way, while others seem to avoid the cycle. Still, these bond funds have been in existence for only ten years or so, and ELI's quantitative data only dates back to 1993. It is difficult, therefore, to draw any firm conclusions about the cyclical nature of bond funds.

Sources of Funds

Table V-9 indicates the sources of funding for State funds and classifies each source as a significant (contributing more than 20% of the Fund's revenues) or minor source. Ten specific types of sources are listed, including appropriations from the legislature, bonds, fees charged for hazardous

waste or other activities, taxes, interest on fund or other State investments, penalties or fines, transfers from other funds or accounts, cost recovery, private funds, and user fees (for voluntary cleanup programs), plus a final category for other sources. States did not prefer one method of funding over the others in 1997. In fact, the funds were broadly and evenly distributed across the 10 specific sources, with 7 of the 10 sources providing significant (>20%) funding for more than 10 funds. Waste fees were a significant source for 20 funds, taxes were a significant source for 19 funds, while cost recovery and appropriations were each a significant source for 17 funds. Bonds provided significant funding for 14 funds and penalties and user fees were each a significant source for 11 funds.

One hundred and five (105) funds exist in the 50 States that have funds for cleaning up sites contaminated by hazardous substances. This does not include funds that receive only Federal monies or funds restricted solely to cleaning up contamination from leaking underground storage tanks or funds limited solely to cleaning up contamination from petroleum or its products.

Fees on the generation, transport, treatment, or disposal of hazardous waste, hazardous substances, or solid waste (in Kansas, fees on water use are deposited in the Water Plan Fund, which is used for cleanups) are an important source of revenue for many State cleanup funds. Twenty (20) funds in 19 States rely on such fees to contribute more than 20% of the revenues for their funds. This compares to 24 funds in 23 States having fees as a significant contributor to their funds in 1995, and 26 funds in 25 States in 1993. In addition, waste fees provide minor support, less than 20% of total additions to the fund, to funds in four States.

Because hazardous waste fees are a substantial source of funding for State cleanups, it is important to note that State legislatures often attach limits or conditions on the collection and use of such fees. Fund administrators in South Carolina must report to the legislature on the need for continuing fee collection once the fund balance reaches $7.5M. Iowa and Kentucky both suspend fee collection if the fund balance exceeds $6M and resume collection if the fund balance falls below $3M. West Virginia does the same, but the cut-off fund balance is much lower, at $1.5M, and the range is narrower, since fee collection resumes when the balance drops to $1M. Illinois, on the other hand, suspends fee collection when its fund reaches $10M and resumes fee collection when it drops to $3M. The Tennessee legislature imposed even more restrictions on collection of its fees, requiring annual adjustments to maintain a fund balance of $3-5M in unobligated funds and limiting the amount of fees collected annually to $1M (estimated). Moreover, the fees are abrogated if the legislature fails to appropriate matching funds. Beyond these administrative limits imposed on fees, these revenues may also fluctuate due to changes in waste handling.

In addition to providing funds for cleanup, fees on hazardous waste activities are often intended to provide incentives to generators to reduce their generation of hazardous waste and to encourage recycling efforts. For example, Illinois has regularly raised its fees on the transport and disposal of hazardous waste at least in part to discourage the generation of hazardous waste. Kentucky bases its fees on the level of treatment required for hazardous waste. A sliding scale is also applied to solid waste disposal in Ohio, where fees provide up to 80% of total cleanup funds. Tennessee also requires the board that sets the hazardous waste fee structure to set the fees at levels (within a statutory range) that encourage recycling and discourage land disposal.

Taxes are a significant source of revenue for 19 funds in 14 States, compared to 17 funds in 15 States in 1995 and 11 funds in 10 States in 1993. Taxes are also a minor source of funding for one fund. Several States impose a tax on hazardous wastes or substances that is similar in nature to the fees charged for hazardous waste activities and, in fact, there may be no practical distinction at all. Restrictions similar to the ones imposed on fees are sometimes placed on waste taxes. For example, Florida's tax on pollutants is suspended if the Water Quality Assurance Trust Fund balance exceeds $12M and is reinstated if the balance falls below $5M. Taxes have the potential for raising substantial amounts of money, but may be politically difficult to impose or to raise if revenues do not

meet the need. Taxes on hazardous substances are the primary source of revenue for New Jersey's Spill Compensation Fund (transfer tax) and for New York's Hazardous Waste Remedial Fund. A corporate business tax is the sole source for another of New Jersey's many funds.

Bonds provide significant funding for 14 funds in nine States, a reduction from 16 funds in 12 States in 1995. More significant than the number of States or funds that rely on bonds for a substantial percentage of their revenues is that bonds can provide much larger amounts of money than the other methods of funding. This is likely why few States, three in 1997, report that bonds are minor sources for their funds. In 1986, the New York legislature authorized the State to sell $1.2B in bonds to pay for cleaning up contaminated sites, $100M of which was later redirected to cleaning up nonhazardous waste landfills. In 1996, New York authorized an additional $200M in bonds to be used for cleaning up brownfields sites. Although New York's bonding authority is by far the largest, a number of other States also receive large amounts from the sale of bonds. New Jersey currently has four bond funds (one dating back to 1981) that contain $112.4M. Over the years New Jersey has generated hundreds of millions of dollars for its cleanup program from the sale of bonds, adding $239.5M to its Bond Fund in 1993, for example.

The drawback of bonds is that they require legislative authorization, which can be difficult to obtain. Thus, some States, like New Hampshire, have exhausted their authority to issue bonds and must look for other sources of revenue for the future. Maine, Massachusetts, New Jersey and New York each created new bonding authority in 1996, but these were the first new authorizations by State legislatures since 1991.

Appropriations are also a primary source of funding for State cleanup funds. They provide more than 20% of the funds for 17 funds in 14 States, compared to 13 funds in 13 States in 1995, and 21 funds in 17 States in 1993. Appropriations are also a minor source of funding in an additional eight States, which is unchanged since 1993. Some States appropriate money to their cleanup funds on a regular basis, which allows the State agency flexibility in handling cleanups. In other States, such as Kansas, appropriations for State-funded cleanups must be requested on a site-specific basis. Appropriations are also, naturally, subject to the vagaries of State revenues and politics, reducing their reliability as a continuing source of funds. Even for States where appropriations provide a significant proportion (>20%) of the public funding for cleanups, the high percentage typically represents a relatively small amount of money because the fund is small or the additions to it are small. Notable exceptions include Michigan, where the legislature appropriated $10M for the General Fund and where appropriations were the primary source of $14.6M added to the Cleanup and Redevelopment Fund in 1997. In most States where appropriations were a significant percentage of additions they provided less than $1M in additions to the fund during FY97.

Penalties and fines provide more than 20% of the revenue for 11 funds in 10 States, a reduction from 16 funds in 14 States in 1995. Many of the funds for which penalties are a significant source are, however, quite small. Penalties, in fact, rarely provide revenues of the magnitude needed to conduct remedial actions (*i.e.*, on the order of $1M). Penalties, therefore, are used by many States as a supplementary rather than a primary source of funding. Thus they are minor (< 20%) sources of funding for an additional 21 Funds.

Uses of Funds

Table V-10 lists the activities on which States are authorized to spend fund monies. These activities are grouped into twelve categories: site investigation (SI), emergency response (ER), removals (RM), studies and design (SD), remedial actions (RA), operations and maintenance (O&M), natural resource restoration (NRR), CERCLA matching cost share for NPL sites (CM),

program administration (PA), grants to local governments (GLG), victim compensation (VC), and other (O).

Emergency response and removals continue to be the most widely authorized uses of States' funds. It is not surprising that virtually every State is authorized to pay for these activities since they are among the least expensive and most cost effective in reducing risks at a site. Among the States that have funds, only Colorado and Idaho are not authorized to pay for emergency responses out of any fund, and only Idaho, Puerto Rico and Wyoming may not pay for removals.

The vast majority of States also may use their Funds to pay for remedial actions, or more permanent cleanups. Only Colorado, Mississippi, New Mexico, Oklahoma, Puerto Rico, Utah, West Virginia and Wyoming, of the States with funds, may not use the money to pay for remedial actions.

Most States also may use their Funds to pay for other activities that support the primary functions of emergency response and short- and long-term cleanup. These include site investigation (46 States, 3 more than 1995 and 1993), studies and design (44 States, 2 more than 1995 and 1993), operations and maintenance (44 States, 3 more than 1995 and 5 more than 1993), and program administration (44 States, 5 more than 1995 and 7 more than 1993). Most States (44, 1 less than 1995, and 2 less than 1993) also are authorized to use their Funds to pay the required State share of remedial actions at NPL sites (CERCLA match).

Other uses are far less common. Twenty-one (21) States may use at least one of their Funds to pay for restoration of natural resources damaged by releases of hazardous substances, six more States than reported authority to do so in 1995. This does not mean that other States are not authorized to restore natural resources. A number of States do so under other programs, or by using authority under CERCLA. A similar number of States (18) are allowed to give grants to local governments from at least one of their funds. Only eight States, Connecticut, Minnesota, New Hampshire, New Jersey, Pennsylvania, Rhode Island, Vermont, and Virginia, reported being authorized to use their Funds to compensate victims harmed by releases of hazardous substances. Twenty-one States, however, have statutory authority to compensate victims (See Table V-2), often in their general environmental law. Apparently, a number of States prefer to pay the compensation from funds other than those intended to pay for cleanups.

The primary purpose of some State's funds is not cleanup of sites contaminated by hazardous substances. Ohio's Hazardous Waste Facility Management Fund, for example, is primarily used to pay for the agency's hazardous waste management activities, including responding to emergencies involving hazardous wastes. Other funds are extremely limited in their uses at contaminated sites. Colorado's Hazardous Substances Response Fund is primarily intended for CERCLA match, with only 5% allowed to be spent on program administration and grants to local governments. Other States also have funds intended primarily for CERCLA match, but they generally have other funds that may be used for a wider variety of activities on non-NPL sites. Colorado's only other fund, however, is the Natural Resource Damage Recovery Fund, which may be used only for restoration of natural resources.

Pennsylvania's Hazardous Sites Cleanup Fund is used for a broad range of activities that go beyond the scope of a typical site cleanup program. The Fund may be used to encourage recycling activities through a grant program for which $2M has been set aside. A small loan fund has been established to facilitate private party cleanups, and the State may also provide loans or grants as inducements and compensation to municipalities where hazardous waste facilities will be located. Oregon has established a more extensive loan program for RPs who need financing in order to undertake cleanup activities. The interest and other terms of the loan are negotiated by the RPs and the Department of Environmental Quality. Similarly, Washington's State Toxics Control Account funds a number of activities in addition to cleanup of contaminated sites, including hazardous and solid waste planning, management, regulation, enforcement, technical assistance, and public education.

Some States with funds that may be used for cleanup activities are limited in practice by low funding levels. North Dakota cannot pay for substantial cleanups because the year end balance in its fund has been consistently under $200K ($160K at the end of FY97) and additions to it in past years were less than $100K (North Dakota provided no information about additions in 1997). Such small amounts of money restrict a State agency to small-scale actions, such as emergency removals of drums.

A few States, on the other hand, spent very little on cleaning up non-NPL sites even though they had money available. Arkansas, for example, spent $201K from funds with a total balance of $8.8M, and to which more than $600K was added during the fiscal year. Although South Carolina spent only $630K from funds with a total balance over $25M, it obligated itself to spend more than $20M in the future.

Special Conditions on Fund Use

Restrictions and preconditions on fund use are primarily of two types: those that statutorily require the State to exhaust every funding alternative, whether Federal or private party, before drawing upon State cleanup monies, and those that require the State cleanup agency to obtain specific authorization before undertaking any response action. In Alabama, sites receiving funds must not be on the NPL at the time activity starts; and in several other States, State funds may be used only where Federal funds are not available or sufficient. Eighteen (18) States require that an attempt be made to obtain responsible party participation in site cleanup before State funds are used; many States waive this restriction in the presence of an imminent threat to public health or the environment. Virtually all States pursue RP participation first as a matter of practice and policy. Although it appears that only a relatively small number of States are required to seek alternative funding sources before using State monies, it is probably safe to assume that many more do so as a matter of policy.

Six States require that the State agency responsible for cleanup obtain prior approval from some administrative authority before undertaking one or more types of response or remedial action at hazardous waste sites. All expenditures must be approved by the Governor in New Hampshire, the Pollution Control Board in Minnesota, the Environmental Quality Council in Wyoming, the Board of Public Works in Maryland, and the agency's Commissioner in Indiana. Arkansas requires a commission to approve expenditures over $30K.

In six States, the agency must obtain prior legislative approval for some types of expenditures. Washington requires *any* expenditure from its State or Local Toxic Control Account to be appropriated by statute. Oklahoma requires a site-specific appropriation whenever site costs are expected to exceed $1M; Illinois must get a similar appropriation if site expenditures will exceed $1M for a single incident. According to Illinois program officials, this cap has not affected the program's effectiveness. In Vermont, the legislature or its joint fiscal committee must approve all nonemergency expenditures greater than $50K. Similarly, Delaware's joint fiscal committee must approve any expenditures that would exceed 15% of the fund balance. Finally, Nevada's Interim Finance Committee must approve any studies not already budgeted.

California is the only State that restricts fund use based on the origin of contaminants--monies from the State's primary cleanup vehicle, the Hazardous Substance Account, cannot be used for removals or remedial action if a significant portion of hazardous substances originated outside the State.

F. Cleanup Policies

Cleanup policies and criteria are used to establish cleanup goals and to determine the level of environmental and health risk reductions to be achieved by remedial action. As the stringency and protectiveness of cleanup goals increases, the costs of cleanup usually also increase. A larger proportion of State superfund program funds likely will be needed to meet strict remediation goals when enforcement efforts fail or there are no RPs.

Determining the appropriate and feasible level of cleanup for hazardous sites involves technical, administrative, and economic considerations that are necessarily evaluated on a site-by-site basis. The States vary considerably in the extensiveness and formality of procedures used to set cleanup standards. Nearly all of the States employ Federal guidelines and standards as part of the process of cleanup determination. Those States with the most active cleanup programs have adopted procedures for determining cleanup levels using a wide array of cleanup criteria. These procedures generally involve the application of health-based risk assessment and an evaluation of cost-effectiveness and land use factors on a case-by-case basis.

In recent years, land use has become a more significant factor in determining cleanup standards. In general, cleanup standards are established after deciding how a particular site will be used after the cleanup is completed. Furthermore, exposure pathways are considered based on expected land use. Thus, if a site will be used for an industrial or commercial facility—where children will not be exposed to contaminated soils, or groundwater will not be used for drinking—the cleanup standards may be set at existing levels. In such cases, contaminated groundwater or soils may be left in place because the planned land use of the site will reduce the risks associated with human exposure to those contaminants.

Since 1995, many States have added land use as a consideration in the cleanup process. This year's study indicates that a majority of States consider future site specific land use assumptions and make these assumptions by considering a range of factors. In addition, most States now employ institutional controls to ensure that property owners maintain the specified land use in the future.

Table V-11 lists a number of criteria that are used by States to determine cleanup levels at hazardous sites. These criteria include: risk assessment for carcinogens and noncarcinogens, background levels, water quality criteria, maximum contaminant levels (MCLs) or maximum contaminant level goals (MCLGs), groundwater standards, soil standards, and land-use based criteria. A State may use different criteria at different sites, as appropriate.

A total of 47 States employ health-based risk assessment for both carcinogens and noncarcinogens. Forty-four (44) States report the use of background levels to determine cleanup levels. Forty-seven (47) States report the application of water quality criteria, while 48 apply MCLs or MCLGs. Thirty-nine (39) States employ groundwater standards, 34 employ soil standards, and 41 employ land-use based criteria.

The information provided by States indicates the further maturing of State cleanup programs. In all, 17 States report that, since 1995, they have broadened the criteria they consider when establishing cleanup levels. Most notably, seven States report the introduction of groundwater standards to their cleanup policies, while five States report the adoption of soil standards.

In particular, a few States report additions to the cleanup criteria they consider. New Hampshire, for example, has added background levels, MCLs/MCLGs, groundwater standards, and soil standards to the health-based risk assessment and water quality criteria that the State cleanup program considered in 1995. Similarly, Kentucky has added water quality criteria, groundwater standards and soil standards to the risk assessment, background levels and MCLs/MCLGs employed in 1995. Currently, 22 States report the use of all eight criteria.

In total, 44 States now report the use of promulgated standards for certain cleanup criteria. Of these States, 18 have adopted promulgated standards for the first time. In six of these States, the newly adopted statutes or regulations cover only groundwater standards. States reporting the most widespread adoption of promulgated standards since 1995 include Florida, Hawaii, Illinois, New Mexico, Oregon and Rhode Island, and, to a lesser extent, Maryland and Montana. Eleven States (Arizona, Connecticut, Florida, Illinois, Massachusetts, Michigan, Nevada, Pennsylvania, Rhode Island, Texas and Washington) now report use of promulgated standards for all eight criteria.

Furthermore, at least 21 States report the use of a combination of promulgated standards and standards set by policy or ad hoc procedures. In addition to water quality criteria and MCLs/MCLGs, which are set pursuant to the Clean Water Act and Safe Drinking Water Act respectively, the criteria States most frequently adopted by statute or regulation are groundwater standards (34), followed by background levels (24) and risk assessment (22).

In a majority of States, cleanup determinations are made on a site- or media-specific basis; however, the methods by which States establish standards vary from State to State. In determining cleanup levels, States most often consider human health and welfare, environmental harm, and current and prospective land use.

A number of States employ EPA guidelines to establish standards. Several States now employ tiered systems or multiple methods to establish cleanup standards. Missouri, for example, is in the process of developing a three-tiered system—Cleanup Action Levels in Missouri (CALM)—designed to establish cleanup levels for residential, commercial and industrial sites. Virginia also employs a three-tiered approach, as established by regulation. Tier One employs background levels; Tier Two uses regulatory levels (such as MCLs or water quality standards) or risk-based concentrations; and Tier Three employs site-specific risk assessment. Illinois (through its TACO program), Pennsylvania, Minnesota and West Virginia (in its voluntary cleanup program) also use three-tiered systems.

The 1993 Massachusetts Contingency Plan (MCP) provides three methods for establishing cleanup standards at disposal sites. The first method relies on numeric cleanup standards for 105 chemicals in three groundwater categories and three soil categories. The second method allows modification of the Method 1 numeric standards based upon site-specific fate and transport information. The third method establishes cleanup goals based on site-specific conditions and a quantitative risk assessment. With some limitations, the State allows parties conducting response actions to choose among these methods.

Most States use carcinogenic risk levels between 10^{-4} and 10^{-6} with a Hazard Index of 1 for noncarcinogens, while a small minority (seven States) did not report the use of numerical risk goals.

States consider a variety of factors in making assumptions about future site-specific land use. The most commonly used approach is to consider current land use and zoning requirements, often accompanied by consideration of potential future land uses for particular site. A few States—such as New York, Nevada and North Carolina—assume that a site will be used for residential purposes in the future unless a deed restriction is in place. Furthermore, several States consider a statement of a responsible party, while others leave all or some decisions about future land use to local governments. In many cases, States use a combination of these and other considerations.

In a few States, future land use is based on more loosely defined considerations, such as "common sense," "reasonable expectations," and "best professional judgment." At least three States do not use land use assumptions at all, while several others use land use assumptions only for voluntary cleanup or brownfields sites.

Deed restrictions and deed notices are by far the most frequently used institutional control mechanisms to ensure that the specified land use is maintained in the future. At least 29 States report deed notices or deed restrictions as a primary institutional control mechanism. In addition, a number of States report the use of specific restrictions for groundwater and soil. A few States also report the

use of restrictive land-use covenants as an institutional control. At least five States report that they have no land-use institutional controls in place at this time. The individual State summaries in Chapter VI describe how a State uses institutional controls.

In sum, the information provided by States on cleanup policies and criteria indicates a further maturing of State cleanup programs, particularly in the areas of groundwater standards and soil standards, and in the widespread adoption of statutes and regulations governing specific cleanup criteria. In addition, almost all States report numerical carcinogenic risk goals between 10^{-4} and 10^{-6} with a Hazard Index of less than or equal to 1 for noncarcinogens. Moreover, a majority of States consider current land use and zoning requirements (often in conjunction with consideration of potential future land use) as at least one factor in the process of determining future land use assumptions, and use deed restrictions and deed notices as institutional controls to maintain a specified land use in the future (see Chapter IV for a discussion of cleanup standards in States' voluntary cleanup programs).

G. Public Participation

General

Most States require some form of public participation in decisions concerning State hazardous substance cleanups, State voluntary or brownfield cleanups, and NRD restorations. Public participation may be required by statute or regulation, pursuant to agency policy, or implemented on an ad hoc basis in response to expressed public concern. For many States, the degree of public participation required during the site remediation process is directly dependent upon public interest. Table V-13 describes formal and ad hoc public participation requirements for each State.

There has been a decrease in the overall States' public participation requirements since 1995. A total of 41 States report some form of public participation in the State superfund program, a decrease from 51 in 1995. This decrease may be attributed to a few States that reported public participation requirements according to policy or on an ad hoc basis in 1995, but did not report any public participation requirements in 1997. This change may indicate that the degree of public participation provided according to policy or on ad hoc basis varies greatly from year to year. Over time, statutory or regulatory requirements may provide more consistency for public participation in the site cleanup process. Of the 41 States that do report some form of public participation, 23 States have only statutory or regulatory requirements for public participation, 13 solicit public participation strictly as a matter of policy or on an ad hoc basis. Another five States have a combination of statutory or regulatory and policy or ad hoc requirements for public participation.

Seventeen (17) States apply the same public participation requirements to their State superfund and voluntary cleanup programs. Other States though have separate and distinct public participation requirements for each program. Within Florida's superfund program, public notice, public comment, and public hearings/meetings are provided by policy or conducted on an ad hoc basis. Alternately, the Florida brownfields program provides for public notice, public hearings/meetings, and document availability according to statute. Similarly, Idaho provides opportunities for public comments, hearings/meetings, and document availability within the State superfund program, but under the voluntary program, statutory provisions require public notice, public comment, and hearings/meetings for all site cleanups. In addition to these two, other States, including Iowa, Oklahoma, Vermont, Virginia, and West Virginia, have statutory or regulatory public participation requirements for their voluntary remediation programs, but not for general State cleanups. Conversely, statutory or regulatory public participation requirements exist for the Missouri,

New Jersey, New York, and Pennsylvania superfund programs, but these States' voluntary remediation programs conduct public participation according to policy or on an ad hoc basis.

Public participation requirements may also exist under State natural resource damage recovery programs. Currently though, only Colorado, Delaware, Indiana, New York, and Texas require public participation in the NRDs assessment and restoration processes.

Public Notice Requirements

One of the most common and important public participation practices is notification of the public throughout the site handling process. A total of 39 States report public notification at some point during the site handling process within the State superfund program. Of these 39 States, 26 have statutory or regulatory provisions for public notice, and the remaining 13 provide for public notice according to policy or on an ad hoc basis. Of the 44 States that have voluntary cleanup programs, 36 States report public notification at some point during the site handling process within the program; 27 through statute or regulation, and 9 through policy or on an ad hoc basis.

The manner in which public notice is implemented within a cleanup program depends upon specific State requirements. States such as Nebraska (groundwater cleanup program only), New York, Oregon, Rhode Island, Vermont, and Washington, require public notice of draft or final remedial action plans. Other States, including California, Florida, Delaware, New Jersey, Oklahoma (voluntary program only), and Pennsylvania, notify the public of decisions concerning cleanup activities. Hawaii and Delaware provide public notice of administrative records.

The various forms of public notice may be communicated via mail, newspaper, radio, and availability in public libraries to specific parties within the State. Mississippi provides for public notice via direct mailings to local governments. New York must mail notice of an addition of a site to its Registry of Inactive Hazardous Waste Sites, or reclassification of a site within the registry, to adjacent property owners and to town and county clerks. Hawaii publishes a notice of availability of the administrative record in a newspaper when the State determines that public participation is in the public interest or significant concern has been expressed. Nebraska uses multiple forms of communication giving public notice of remedial action proposals via newspaper, radio, and copies in local public libraries.

Public Comment

Most States solicit public comments at some point during the site handling process. Within the State superfund program, a total of 38 States have provisions for public comment. Of these 38 States, 26 have statutory or regulatory provisions for public comment, and the remaining 12 have provisions according to policy or on an ad hoc basis. Within the voluntary cleanup programs, a total of 34 States report provisions for public comments at some point during the site cleanup process. Of these 34 States, 24 have statutory or regulatory provisions for public comments, and the remaining 10 have provisions according to policy or on an ad hoc basis.

Most States require public comment in conjunction with public notice. No State, however, requires public comment without requiring public notice. Of the 44 States that require public notice for either the State superfund program or the voluntary cleanup program, 42 States require public comment as well. Iowa and Colorado require only public notice under their voluntary programs, though Colorado requires public notice and public comment under its State superfund program. Montana and North Dakota require only public notice under their State superfund programs, though Montana requires public notice and public comment under its voluntary cleanup program.

States solicit public comments for different events during the site cleanup process. For example, Louisiana holds a public comment period prior to approval of a remedial investigation plan and selection of a remedy. Rhode Island holds a public comment period on proposed settlement agreements. Other States like Florida and Wisconsin will solicit public comments for a site only if sufficient public interest exists.

Some States, such as Alabama (only for significant cleanup sites), Pennsylvania, Nebraska, New York, and Oregon, require a standard public comment period from 30 to 90 days. New York holds a comment period of 30 days to solicit comments on its proposed remedial action plan, as well as a 30 day comment period after public notice of a proposal to delete a site from the State registry. Oregon holds a 30-day comment period after providing notice of its program to identify releases, settlement agreements, and proposed remedial actions.

Public Hearings/Meetings

Public hearings/meetings may play a significant role in the site cleanup process. Within the State superfund program, a total of 37 States report provisions for public hearings/meetings on cleanup sites. Of these 37 States, 24 have statutory or regulatory provisions for public hearings/ meetings, and 13 have provisions according to policy or on an ad hoc basis. Within the voluntary cleanup program, a total of 31 States report provisions for public hearings/meetings on cleanup sites. Of these 31 States, 22 have statutory or regulatory provisions for public hearings/meetings, and 9 have provisions according to policy or on an ad hoc basis.

Public hearings/meetings may be required at different stages in the site handling process. States such as Arkansas (only for voluntary program), California, and Tennessee hold public hearings prior to making a decision to add or delete a site from a priority list, or before taking any actions upon a site. Tennessee requires public meetings at the end of the RI/FS stage to provide input in the development of the ROD. Missouri conducts public hearings only if resolution of appeals to the State Hazardous Waste Management Commission cannot be negotiated. In addition, many States, including Alaska, Florida, Michigan, Nebraska, and Oregon, conduct public meetings or hearings only if sufficient public interest exists. Moreover, Texas will conduct hearings if requested where not already required by law.

Grants

Nine States provide grants to citizen groups for public participation in the site cleanup process. Massachusetts, Pennsylvania, Michigan, Montana, and Washington have statutory or regulatory provisions for grants to citizen groups within the State superfund program. Alaska, Ohio, New Mexico, and Kentucky give grants to citizen groups according to policy or on an ad hoc basis within the State superfund program. Only Massachusetts and Michigan provide grants to citizen groups for public participation in the voluntary or brownfields site cleanup process.

States may offer grants to different parties within the site cleanup process. For example, Washington offers grants to affected persons or not-for-profit public interest organizations. In New Mexico, responsible parties often make technical assistance grants available to local communities at sites being cleaned up under AOCs; and in Massachusetts, technical assistance grants are available for all parties.

Other Public Participation Mechanisms

A few States' cleanup programs are assisted by an advisory group or other public committee predominantly consisting of citizens and private sector representatives. Washington, New Jersey, Nevada, and Minnesota involve citizens' advisory committees/groups in the site handling process, and Alaska and Oklahoma have citizens' oversight councils during the site handling process. These committees and councils may provide invaluable input in site handling decisions.

Statute or regulations require a few States to create public involvement plans during the site cleanup process. Louisiana must create a Community Relations Program for complex sites within its State hazardous substance program. This program includes regular public meetings and the issuance of educational fact sheets. New York develops a citizen participation program at the start of RI/FS that includes a site-specific citizen participation plan, establishment of a local document repository, creation of a public contact list, and a mailing of a description of the proposed RI/FS work within the State hazardous waste program. In Pennsylvania, a public involvement plan is created for voluntary cleanups when the affected municipality asks to be involved.

Certain States create fact sheets and/or press releases to inform and educate the public about a specific site. Arkansas provides fact sheets prior to major milestones in site cleanups, and Missouri uses fact sheets to inform the public and solicit public comments. Louisiana issues fact sheets for complex sites within the State. Press releases are used by Hawaii and Michigan to educate the public. In addition, Kentucky has a Public Information Repository for State priority list sites, and Ohio has an Information Clearinghouse within its voluntary cleanup program.

H. Enforcement

State hazardous substance cleanup laws frequently contain enforcement provisions. Enforcement authorities under State laws vary significantly. Many of the States with cleanup fund laws have enforcement provisions in those laws; many of these provisions are similar to those in the Federal CERCLA. However, other States rely for enforcement on their general environmental laws, hazardous and solid waste laws, groundwater laws, and other provisions. See Table V-2. For example, Nebraska's enforcement provisions are contained in its groundwater protection laws and apply only to contamination of groundwater. Colorado uses its hazardous waste laws and the citizen suit and natural resource damage provisions of CERCLA to conduct enforcement.

Liability

Who is Liable?

The most important issue in enforcement is determining who can be charged with liability for cleanup of hazardous substances. Most of the State statutes have followed the Federal lead by making a wide spectrum of actors "responsible parties." The majority of State liability standards provide a means to reach the same parties that CERCLA does—owners, operators, generators, transporters, etc.

A few States have more difficulty reaching beyond owners and operators of disposal sites. For example, States that rely on RCRA-type authorities for enforcement generally must show a RCRA violation or, at least, RCRA jurisdiction over the actor or the site at the time that the disposal occurred. However, even in these States, solid waste laws or imminent danger provisions can provide a longer reach. Because most States also have a general provision prohibiting pollution of "waters of

the State," even those States without CERCLA-type authority can at least arguably reach generators or transporters that have placed hazardous material where it has entered groundwater.

Retroactivity

A key issue is the "retroactivity" of the liability imposed by State cleanup statutes. This has become a topic of concern as Congress debates the reauthorization of CERCLA. CERCLA imposes liability for disposal and other actions that occurred prior to the date CERCLA was enacted, a form of liability that has been popularly described as retroactive. In order to avoid any confusion of State liability with Federal liability standards, ELI asked a precise question: "Can your State program impose liability *under State law* for cleanup of hazardous substances disposed of before the date the program was enacted?"

Forty-three (43) States impose retroactive liability (see Table V-15). Only California, Colorado, the District of Columbia, Idaho, Montana, Nebraska, Utah, West Virginia, and Wyoming cannot impose retroactive liability using State cleanup laws. Several States, including California and Colorado in particular, have used the Federal CERCLA to seek cleanup of such sites.

Liability Standards

Liability standards are subject to interpretation by State courts, based on the statutory language, statutory structure, and the common law legal arguments advanced by the State. In a number of States, the liability standard has never been tested in court. This study finds that the vast majority of liability schemes under State programs (32) continue to follow the Federal CERCLA model of "strict, joint and several" liability, which was itself borrowed from New Jersey.

This study and its prior updates have reflected changes in liability standards not only when statutes have changed, but also when States' interpretations of their laws have changed—where the relevant statutory language is subject to more than one interpretation. The study methodology, consistent since ELI's first study of these programs in 1989, uses the information about liability standards provided by the States themselves, which ELI then verifies against the statutory language to assure that the States' asserted standards are within the scope of the statutes. For example, Ohio's standard is shown as "strict, joint and several," rather than as "not specified" because of its Attorney General's interpretation of the statute, which is silent on these standards. Similarly, Virginia's standard is shown in this update as "strict" rather than "other" as in 1995, because of the Attorney General's interpretation of the statute, which imposes liability where a release occurs from waste that was "improperly managed." Virginia takes the position that a release of waste shows that the statutory standard was met.

Standards of liability in all of the States involve two questions. These two questions must be answered separately in order to understand a liability scheme. Unfortunately, they are often confused in public discussion.

The first question is whether any showing of fault is required in order to render a party liable. In other words, is liability strict—based solely on the occurrence of a release—or does it require proof of fault, such as reckless or negligent handling? This is the *culpability* standard.

The second question is how liability is to be divided among the various actors who contributed to the presence and release of a hazardous substance. This is the issue of how liability is to be allocated. Is liability joint and several, proportional, or some combination of both? This is the *allocation* standard.

State Culpability Standards

Strict liability is the most frequently used culpability standard in State cleanup programs. Strict liability means that the enforcement agency does not need to prove that the responsible party committed a negligent, reckless, or intentionally wrongful act. Rather, it must show simply that the party contributed to a release of hazardous substances. With strict liability, a responsible party who has contributed to hazardous conditions at a site is liable for cleanup costs based simply upon the occurrence of a release, without proof of fault.

Liability standards other than strict require the State to satisfy a higher burden of proof—such as proof of negligence or willful intent by a responsible party. This, in turn, requires the State to spend more resources investigating the past intent of parties involved in a particular site. Liability standards that require proof of fault effectively limit the universe of parties to whom cleanup liability may attach. This, in turn, is likely to reduce the effectiveness of the cleanup program.

Forty-one (41) States have strict liability standards (Table V-15). The remaining States either do not specify liability standards, lack an enforcement statute, or require proof of fault.

State Allocation Standards

Most hazardous substance sites have more than one potentially responsible party. These may include site owners and operators, the generators of the hazardous substances, the transporters of the hazardous substances, and various arrangers and disposers. Absent a statutory prescription of an allocation standard, joint and several liability is the normal common-law method of assigning costs among responsible parties where more than one party causes harm. It is used in the Federal CERCLA program. The joint and several liability standard means that each company that contributed in any way to the presence or release of hazardous substances is held responsible for the *entire* liability unless it can show that its contribution to the harm was distinct and divisible.

Joint and several liability enables a government to sue one or more of the responsible parties for the full amount of the cleanup, and leave it to them either to prove that their share is divisible or to pay the government the full amount and then seek to recover contributory shares from other responsible parties. Joint and several liability has been a cornerstone of the Federal program and many State programs because it allows the government to commence enforcement or cleanup before all information on the history of the site is available. It also conserves governmental funds by placing the burden of allocating costs on the private parties responsible for the contamination. Joint and several liability does not generally result in a single party bearing all of the costs. Instead, it generally promotes the formation of committees among the responsible parties to attempt to work out their shares among themselves.

In contrast, proportional liability requires the government to allocate liability in shares among the responsible parties by proving their proportional responsibility (which may be determined in a variety of ways). In addition, the government must pick up the tab for any defunct organizations that contributed to the hazardous substances released. A few State laws use proportional liability schemes, and some States use a hybrid approach.

Like the Federal government, 36 States use joint and several liability as their allocation standard (Table V-15); of these, all but Michigan, North Dakota, Oklahoma, and Wisconsin are also strict liability States. Eleven (11) of the 36 States that use the joint and several liability, however, also specifically allow responsible parties an opportunity to prove a divisible apportionment, or enter into an allocation process. These are Arkansas, Illinois, Louisiana, Maryland, Michigan, Mississippi, Montana, North Dakota, Pennsylvania, Texas, and Vermont. In most of these States, while liability begins with a joint and several presumption, the opportunity to prove a divisible share is afforded.

The standard for divisibility is usually more generous than that under the common law. Montana's law provides for joint and several liability in determining liability to the State, but allows the court to apportion liability among the responsible parties in the same proceeding after the State has been allowed to fully recover under the joint and several liability standard. Pennsylvania uses joint and several liability, but provides a process for responsible parties to participate in allocations of proportional liability.

Only five States have laws that specify proportional liability as the sole applicable standard (Alabama, Arizona, California, Tennessee, and Utah).

No standards for allocating liability are specified in 11 States (Colorado, District of Columbia, Idaho, Kansas, Missouri, Nebraska, Nevada, Puerto Rico, Virginia, West Virginia, and Wyoming). Some of these, like Colorado, lack a statutory cleanup program comparable to Superfund. Others simply are silent on the allocation standard. States where there is no allocation standard may be able to avail themselves of joint and several liability as a common law doctrine.

Enforcement Tools

Virtually all State programs have authority to issue administrative cleanup orders. Where such authority is not available under a State cleanup statute, it often is available under a solid and hazardous waste law, a groundwater protection law, or a general imminent endangerment provision. All States have authority to seek injunctions for cleanups. Both order authorities and injunction authorities are limited by the substantive provisions of State law; some do not reach generators, some require proof that the release is of a "hazardous waste," and some are as broad as the Federal Superfund program or broader.

State cleanup orders are not always identical to CERCLA § 106 orders, which are not subject to pre-enforcement review. In many of the States, a responsible party receiving an administrative cleanup order has the right to seek review of that order before a board, commission, or State court. For example, in Illinois, the State must file a complaint with the Pollution Control Board if the responsible party does not agree to cleanup. In Arizona, the recipient of an order may seek administrative review. Pennsylvania's Hazardous Sites Cleanup Act provides for two types of cleanup orders. While one type is not subject to pre-enforcement review, the other may be appealed administratively to Pennsylvania's environmental hearing board. In Texas, a cleanup order may be appealed to State court. Other States, such as Tennessee and Oregon, do not allow pre-enforcement review of cleanup orders. In a significant number of States, the availability of pre-enforcement review has not been determined because all sites have been handled by consent order or voluntary agreement.

The standard of review for an agency's administrative order may be important. In most States, no standard of review is spelled out in the statute. In contrast, in Pennsylvania (under one of the two order types) the agency action must be upheld unless the board or court finds it "arbitrary and capricious." In Texas, the State has the burden of proving on appeal that there is an imminent and substantial danger and that the order recipient is liable for the cleanup. However, if the "appropriateness" of the remedy is contested on appeal, the remedy must be upheld unless the court finds it "arbitrary and capricious."

Recovery of punitive damages is provided in 25 States (Table V-16). Recovery of treble damages is authorized in 22 States; one State (Montana) authorizes double damages; and two States (Connecticut and Tennessee) authorize recovery of 1½ times remediation costs as damages. Louisiana's statute has two standards. It provides for the recovery of treble damages by the State from noncooperating responsible parties, but it also provides that participating PRPs can recover

double damages from nonparticipating PRPs, thus giving a stronger incentive to PRPs to participate in settlements.

The States' standards for assessment of punitive damages vary somewhat, but generally require more than simple refusal to do the work directed in an order. For example, the Pennsylvania statute requires "willful" failure to comply. The New Jersey courts have created a "good faith" defense to such damages.

Most States have civil penalty provisions usable in enforcing cleanup of hazardous sites, but most rely on their hazardous waste laws, water pollution laws, and solid waste laws rather than on State superfund laws for this purpose. Moreover, in practice, penalties have not been highly important in securing cleanup actions. The potential to perform State-funded cleanups and recover punitive damages has been a much stronger incentive. The real force of this incentive depends upon the credibility of the State's threat to spend fund monies. The enforcement leverage is minimal to nonexistent in those States where the fund may only be expended for the State share of NPL cleanups or for emergency responses, or where it may be expended on State sites only after a lengthy listing process or by special enactment of the legislature. In contrast, in those States where expenditures can be authorized relatively quickly, the States' enforcement leverage is enhanced.

Criminal penalties are not a factor in most State cleanup programs. Virtually all of the State programs contain provisions making the submission of false information or failure to pay fees (where State funds are supported by fees) criminal offenses. In general, the failure to comply with a State cleanup order is not a criminal offense. However, solid and hazardous waste statutes provide a broad range of criminal offenses that may reach unlawful disposal and other types of conduct.

Natural Resource Damages Programs

There is great variation in the content and scope of the States' natural resource damages (NRD) programs. Thirty-two (32) States have independent authority under State laws to recover NRDs for hazardous substance sites (see Tables V-17 and V-18). Both these and other States have actively sought to recover NRDs under Federal CERCLA authority (see Table V-19). In ascertaining the level of NRD authority and activity, this study has attempted to exclude authorities and actions related solely to cleanup of petroleum-related spills. ELI also attempted to ascertain whether or not State laws imposed statutes of limitation on the recovery of NRDs. While seven States identified such limitations (ranging from three years to 20 years), it is likely that additional States have such limitations under general civil laws and jurisdictional provisions.

Ten (10) States reported having recovered NRDs under State law for contaminated sites (Alaska, Arkansas, Delaware, Kansas, Maine, Massachusetts, Michigan, Minnesota, New Jersey, and New York). Eleven (11) States reported having such claims currently pending under State law. The latter group includes three States that have not previously recovered such damages (Montana, Hawaii, and Washington) (Table V-18).

Seventeen (17) States reported having recovered NRDs under CERCLA. Fifteen (15) have Federal CERCLA NRD claims pending (see Table V-19). Colorado built its State cleanup program around CERCLA NRD claims. Other States are beginning to make greater use of these authorities, as the Federal program matures.

This study also examined the status of restoration activities conducted with NRD awards. States reported at least 96 restoration activities underway using recovered NRDs, and at least 52 restoration activities entirely completed with such funds. Although dollar amounts were not available for all of the actions reported, nearly $220M in natural resource restoration expenditures were noted (Table V-20). Most States with natural resource damage authorities reported that funds could be used to restore damaged resources (26 States) or replace such resources (24 States). Fewer States (18)

allowed use of such recoveries for protection of resources (*e.g.*, through acquisition, preservation, etc.).

States also provided information on their approaches to measuring natural resource damages. A significant number of States seek to recover not only restoration costs (the most common measure of damages), but also lost use values for damaged natural resources. Eleven or more recognize lost use value as a measure of natural resource damages. Seven States reported that they seek recovery for nonuse values as well (Delaware, Louisiana, Massachusetts, Minnesota, New Mexico, New York, and Ohio). Many States do not have formally adopted standards for NRDs, but use any credible approach or follow the Federal standards as a matter of practice. This approach may be influenced by the fact that State claims, in various instances, use both CERCLA and State law as the authority for recovery of damages.

A few States report that they conduct public participation in connection with NRD assessment and selection of restoration actions. These include Colorado, Delaware, Indiana, New York, and Texas.

Property Transfer Provisions

Property transfer provisions are "laws, regulations, or policies that link the discovery, identification, investigation, cleanup, or disclosure of hazardous substance contamination to transfers of real property, or to transfers of ownership or control of such property." Most property transfer provisions impose duties on land owners to disclose the presence of hazardous substances on a site; others require site investigations, and deed recordation; some even require site cleanup as a condition of the transfer.

An increasing number of States have adopted property transfer provisions. Thirty-one (31) States report that they have some type of property transfer provision related to sites contaminated with hazardous substances, up from 25 States in 1995, 23 in 1993, and 18 in 1991 (see Table V-21). States that simply maintain a database of contaminated sites or that have disclosure requirements only for sale of residential property, are also shown on Table V-21, but are not included in the total of 31 unless they also have some other provisions linked to transfer of real property.

Twenty (20) States have provisions that require deed recordation where hazardous sites have been discovered, listed, or cleaned up. Deed recordation requirements in some States are limited to hazardous or solid waste disposal facilities. Louisiana requires recordation of notices that a site has been used for disposal of hazardous waste or as a solid waste landfill, and that such wastes remain; or, where the State finds an abandoned site, that the site is an abandoned waste site. In Michigan, a seller who knows that hazardous substances were released in a reportable quantity must not only provide notice to the purchaser, but also record the notice with the deed of transfer. Upon completion of cleanup, the owner records a certificate of completion of an approved remedial action. Similar provisions apply in West Virginia, but only to hazardous waste conveyors, and treatment, storage, or disposal sites. New York requires county clerks to index in the land records any sites listed on the Registry of Inactive Hazardous Waste Sites. In Iowa, a conveyor of real property is required to provide the recorder of deeds with a statement regarding the existence of wells, disposal sites, underground storage tanks, and hazardous wastes; the recorder must notify the transferee and the State if these are present.

Twenty (20) States require disclosure of hazardous substances to purchasers of property. While these provisions typically apply to industrial properties and contaminated sites, in some States they apply broadly. Some of these States explicitly require sellers to examine their property; in others, the obligation to investigate is implied or unstated. In some cases, the disclosure is limited to sites that have come to the attention of the State cleanup program. In others, it applies to whole

classes of industrial properties. In California, for example, any owner of a nonresidential real property interest who knows, or has reason to believe that a hazardous substance is located on or beneath the property is required to notify, in writing, each buyer prior to the sale. Lessees of residential and nonresidential property are required to give notice to property owners of any release of a hazardous substance. Failure to give notice can subject the lessees to liability for damages and civil penalties. The Illinois Responsible Property Transfer Act requires that the transferor provide environmental disclosure documents to both the transferee and lender. The law applies to all transfers of real property that is used for manufacture, import, or use of hazardous materials above a statutory threshold or that contains an underground storage tank. Parties to the transaction may cancel a prospective transfer based on the disclosures. Indiana's Responsible Property Transfer Law is modeled on the Illinois statute. Missouri law requires disclosure by the seller, but only for sites on the State's registry.

Many States (24), including a number of those with hazardous substance disclosure requirements noted above, have disclosure requirements that apply solely to residential property transfers. Often part of these States' real estate codes, these typically apply to sales of residential property with one to four dwelling units. For example, in California, sellers of real property or residential stock cooperatives with one to four dwelling units must disclose whether they are aware of the presence of any substances, materials, or products, which may be an environmental hazard. California counties and cities may add their own disclosure requirements. Some of these requirements are quite narrow, prescribing a form to be completed by licensed real estate agents disclosing known material defects or environmental hazards (*e.g.*, Indiana, Washington). Others allow the buyer to disclose or disclaim knowledge of the condition of the property (*e.g.*, Maryland, Virginia). A 1995 New Jersey law requires real estate brokers to disclose to purchasers of new homes the availability of a list of certain off-site environmental conditions that may affect the value of the property. The list is to be maintained by municipal clerks and includes Federal Superfund sites and New Jersey contaminated sites among other properties.

Three States require cleanup or cleanup commitments in connection with transfers or sales of industrial establishments. New Jersey's 1983 Environmental Cleanup Responsibility Act (ECRA) pioneered the wave of disclosure laws that followed, but was one of only two to mandate cleanup as well as disclosure. In 1993, the New Jersey legislature amended ECRA, renaming it the Industrial Sites Recovery Act (ISRA). ISRA retains the basic approach of ECRA, requiring parties to examine sites and imposing cleanup obligations as a condition of the transfer. The law also applies to closures of facilities. Failure to comply makes the transaction voidable by the transferee or by the State; civil penalties are also available. ISRA does allow deferral of cleanup under three conditions: if the site has been assessed; if it will remain in the same industrial use after the transfer; and if the seller's ability to pay for cleanup is certified. The New Jersey law is particularly far-reaching because it is not limited to direct conveyances of real property; ISRA also applies to transfers of ownership and control of entities holding real property.

Connecticut has a cleanup law patterned after ECRA, but it is not quite as comprehensive. Like ECRA, it requires cleanup as a condition of transfer. However, the transaction is not voidable for noncompliance. Instead, the transferor remains strictly liable and is also subject to penalties. In a new law, Hawaii provides for seller investigation and a cleanup agreement in connection with the transfer of industrial property.

Twenty-six (26) States now report that they maintain a database or databases to assist purchasers and other parties to transactions in conducting environmental due diligence to determine whether sites have been contaminated. This is a substantial increase over prior years.

Superliens

Although not shown on a table, the study also assessed the States' ability to use superliens to aid in the recovery of State funds spent on site cleanup. A lien is a legal claim against the title of the property that often comes into play at the time of a transfer, because it makes property transfers more difficult, or requires satisfaction to give the transferee clear title to the property. A great many States with cleanup funds have authority to impose liens on the cleaned-up property to recoup the State's costs.

Superliens differ from ordinary liens in that they claim a higher priority than they would ordinarily obtain under the laws governing security interests. Ordinarily, liens obtain priority in the order in which they are recorded. The first lien recorded takes precedence over the second lien, the second over the third, and so on. This precedence means that upon sale of the property (or foreclosure), the earlier lienholders must be paid before the later ones can recover anything. A superlien changes this priority by giving the State's lien for recovery of cleanup costs priority over some or all liens even if they have been recorded earlier.

The rationale for the superlien is that if the State had not expended the money, the property would have been worthless; therefore, the State should recoup its expenses before any others benefit. Eight States—Connecticut, Louisiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, and Wisconsin have superliens. However, the superiority of these liens varies somewhat. For example, New Jersey's superlien takes priority over all other liens and over other real property owned by the site owner, not just the cleaned-up property. Most other superliens give priority only over liens on the cleaned-up property. Maine's superlien takes priority over any lien recorded after the date of the superlien law, but not those recorded before the law. Louisiana's lien does not take priority over prior recorded liens, but its Inactive and Abandoned Hazardous Waste Sites statute allows the recordation of the lien before the amount is known and allows the lien to relate back to the date of filing, thus giving it some effective priority. Michigan may file a superlien, rather than an ordinary lien, only if the Attorney General can make a showing that priority is necessary to protect the State's interests. Wisconsin's superlien takes priority over other liens except for valid prior liens on residential property. Arkansas had one of the early superlien authorities, but is no longer listed in this study as having such authority because of constraints placed on the authority by the legislature rendering it largely inapplicable in most instances.

Chapter IV: Voluntary Remediation Programs

A. Voluntary Cleanup Programs

Voluntary cleanup programs are State-sponsored programs that encourage private parties to conduct cleanups of contaminated properties in the absence of State enforcement measures. The States typically set the eligibility requirements for participation in voluntary cleanup programs, establish cleanup standards and provide oversight of the cleanup activities. Voluntary cleanups provide States with an additional tool to address the over 24,000 sites identified as needing attention across the country, as well as sites that have not yet been identified. Voluntary cleanups typically require fewer resources and funding from the State than State-funded or enforcement-based cleanups. Accordingly, voluntary cleanup programs often allow States to leverage their resources, concentrate their efforts, and achieve additional cleanups.

Tables V-22 and V-23 provide detailed information on State voluntary cleanup programs. Table V-22 outlines when the States' programs were established, under what type of authority, and the citation for that authority. Table V-23 describes eligibility requirements, funding information and sets out the incentives for participation. Table V-4 outlines information about number of cleanups.

Forty-four (44) States have established voluntary cleanup programs. Thirteen (13) States have started voluntary programs since 1995: Alaska, Florida, Georgia, Hawaii, Idaho, Iowa, Kansas, Maryland, Mississippi, New Hampshire, New Mexico, Utah, and West Virginia. One State, Nebraska, has a voluntary cleanup program but no other cleanup program.

Only the District of Columbia, Kentucky, Louisiana, North Dakota, South Dakota, Vermont, and Wyoming report that they do not have voluntary programs. However, several of these States, including South Dakota and Vermont, nevertheless allow private parties to initiate voluntary cleanups. In addition, Louisiana has a program framework established but has not yet started accepting sites, Vermont has a brownfields program that allows for certain types of voluntary cleanups, and Kentucky is in the process of developing guidelines for a voluntary cleanup program.

States have created voluntary cleanup programs in the absence of Federal legislation and there are no Federal standards that States must meet. Therefore, voluntary programs vary considerably from State to State in terms of formality and structure, as discussed below. For example, in Alabama, the voluntary program is an informal component of the State's cleanup program; whereas in Arkansas, the voluntary program is a formal, independent program established by statute.

Authority

States derive authority for their voluntary cleanup programs in several ways: specific statutory authority; the general authority of the State's hazardous waste laws; regulations issued pursuant to current statutory authority; and guidance or policy. Most State voluntary programs are specifically established by statute. Several States, however, including Alabama, California, and Nevada rely on their general cleanup authority for their voluntary programs. At least one State, Washington, reports that it derives its authority from regulations. Other States, including Alaska, New York, and South Carolina, have established their programs through guidance or policy.

Administration

In most States the voluntary cleanup programs are integral components of the general hazardous site cleanup programs and are administered by the same offices. A limited number of States separate the administration of their hazardous substance programs and voluntary programs, but typically describe the programs as compatible or companion programs (Arkansas, Iowa, Missouri, and New Mexico). In a few States, including Nebraska, Nevada, New Hampshire, and Oklahoma, almost all cleanups in the State are conducted under the voluntary program.

Eligibility

Most States limit participation in their voluntary programs in some manner. There are two basic approaches to defining eligibility for State voluntary programs: by site characteristics and by the type of volunteer. Some use one approach or the other, but many use a combination of the two approaches. One common approach, used by approximately 25 States, is to preclude sites that are subject to pending enforcement or regulatory actions under either State regulatory programs (hazardous waste, cleanup, UST, or AST) or Federal programs (Superfund or RCRA) or both. This approach is often used in conjunction with other eligibility criteria.

Another approach is to limit the program to certain types of volunteers. For example, some States bar parties responsible for the site contamination from participating in voluntary cleanups. These include Georgia, Louisiana, New York, and West Virginia. Other States bar parties that are not in compliance or have been convicted of a violation of an environmental law from participating in their voluntary programs (Maryland, New Mexico, and Oklahoma). Several States prohibit volunteers that are subject to Federal regulatory programs or enforcement proceedings (Arkansas, Idaho, Mississippi, New Jersey, New Mexico, Ohio, Oklahoma, and Wisconsin) or State enforcement proceedings or regulatory programs (New Jersey, Ohio, and Wisconsin). Several of these States also take site characteristics into account when determining eligibility.

Several States do not use any categorical exclusions, but typically reserve the option of rejecting applications if appropriate. These States include: Alaska, Michigan, Minnesota, Nebraska, Nevada, Oregon, and Pennsylvania.

Cleanup Standards

Cleanup standards for voluntary sites are typically the same as the standards applied at State lead or enforcement sites. Thus, contrary to the common perception that States may apply less stringent cleanup standards to voluntary cleanups than to other types of cleanups, it appears that, at least on paper, the standards are usually identical. The limited number of exceptions include Iowa, which uses background levels to determine cleanup levels in its voluntary program but not in its State regulatory program; Indiana, which uses background levels in its regulatory program but not in its voluntary program; and Maryland, which considers land use in its voluntary program but not in its regulatory program.

In some cases, the voluntary standards are statutory but the State cleanup standards are established in policy or applied on an ad hoc basis. This is usually because the State recently enacted voluntary program legislation that codified the standards currently used in State cleanups. In the alternative, the standards may have been enacted as part of the voluntary program and were subsequently adopted in policy for the State program. For example, several States have statutes that require the use of risk assessment for voluntary cleanups but apply risk assessment for State cleanups only as a matter of policy or on an ad hoc basis (Iowa, Kansas, Ohio, Virginia). Similarly, several

State statutes require land use to be taken into account in voluntary cleanups (Kansas, Ohio, Virginia); whereas their State programs consider land use on an ad hoc basis or as a matter of policy.

Consistent with the State regulatory cleanup programs, approximately 27 of the States with voluntary programs use groundwater standards established by statute or regulation and an additional six States use groundwater standards established by policy or on an ad hoc basis. Eighteen (18) of the States with a voluntary program have soil standards established in statute or regulation, and an additional 12 States use soil standards established through policy or on an ad hoc basis. Twenty-four (24) States have statutes or regulations that provide for land-use based standards for their voluntary cleanup programs and an additional 15 States take land use into account as a matter of policy or on an ad hoc basis.

Cleanup Activities

The number of voluntary cleanups underway in States that have voluntary programs varies dramatically from 0 in Iowa to more than 2300 in New Jersey. The wide range in numbers may be attributable, in part, to the fact that many programs were only recently established. In addition the number of sites and, therefore, the number of potential volunteers varies considerably from State to State. Furthermore, some States rely heavily on their voluntary programs while other States maintain active enforcement programs or State-funded cleanups in addition to their voluntary program. Of the States that provided cleanup activities numbers, those with voluntary cleanup activities underway at over 100 sites include: Georgia (205); Illinois (439); Indiana (200); Michigan (165); Minnesota (500—includes investigations and cleanups); New Jersey (2300); Ohio (200); Oregon (212); Pennsylvania (150); and Texas (445).

States with cleanups underway at less than ten sites include: Alabama (three); Arkansas (three); Hawaii (one); Iowa (zero); Maryland (four); Mississippi (two); Nebraska (three); Vermont (two); and West Virginia (six).

New Jersey reported the largest number, 1721, of sites with voluntary cleanups completed in 1997, followed by Minnesota with voluntary cleanups completed at 100 sites in 1997. No other States completed voluntary cleanups at more than 75 sites in 1997.

Since the start of their voluntary cleanup programs, Minnesota (500) and New Jersey (4454) have completed cleanups at the largest number of sites. Several States have completed voluntary cleanups at over 100 sites: Illinois (283); New Hampshire (136); North Carolina (250); Pennsylvania (300); Texas (158); and Washington (176). Although some of these States have had voluntary programs in place for 10 years or more (Illinois, Minnesota, and North Carolina), two of the largest programs were established more recently, in 1995 (Pennsylvania and Texas).

Incentives

Most States provide incentives for participation in their voluntary cleanups, in an effort to overcome deterrents to performing voluntary cleanups, including potential liability, cleanup costs, and transaction costs. One of the most common incentives offered by a majority of States with voluntary cleanup programs is some form of liability release upon completion of voluntary cleanup activities. Typically, the State provides liability protection contingent upon State approval of the cleanup and limits the protection to only the contamination addressed by the cleanup activities, excluding unknown, preexisting contamination or new releases of hazardous substances.

Liability relief is provided through a variety of mechanisms and the scope of the relief varies from State to State as well. Given that many voluntary programs are relatively new, liability relief tools are still being developed and refined. Furthermore, States do not use uniform terminology in

referring to forms of liability relief. Two States providing the same substantive form of liability relief may use different terms to describe it. Conversely, different forms of liability relief may be referred to by the same term in different States.

One of the most common methods of providing liability relief is the covenant not to sue. The scope of a covenant not to sue will vary from State to State but, at a minimum, will typically provide that the State will not take enforcement action against the volunteer for contamination addressed by the cleanup. Several States, including Georgia, Maine, Pennsylvania, Rhode Island and South Carolina, report that they specifically provide protection from third-party contribution actions, in addition to protection from State actions. Pennsylvania provides protection from citizens suits as well. At least one State, New Jersey, provides a covenant that "runs with the land" and, therefore, does not expire with transfer of the property.

Another common method of providing liability relief is the "No Further Action" letter. At a minimum, a "No Further Action" letter includes the State's assurance that, based on currently known facts, it is unlikely to require the volunteer to take further action with respect to contamination addressed by the voluntary cleanup. Many States use "No Further Action" letters that not only provide assurances that no further cleanup is required, but also specifically provide liability relief. It is important to note, however, that some States do not provide liability relief in their "No Further Action" letters—either because such relief is not available or because it is provided in a separate document, such as a settlement agreement with a covenant not to sue.

Other States issue certificates of completion or approval letters that provide liability relief. As with "No Further Action" letters, some States do not include a liability release in their certificates and approval letters, but simply provide assurances that are intended to give comfort to lenders and prospective purchasers that additional cleanup activities will not be required. Another approach to providing liability relief is taken by Iowa. The State issues indemnification letters to volunteers for any future claims.

Some States will only provide liability protection to parties that are not responsible for the contamination. For example, Delaware, Maryland, New Mexico, Rhode Island, and Utah will not provide liability protection to responsible parties.

In addition to liability relief and comfort letters, a common incentive reported by States is expedited and/or efficient cleanup oversight processes that include clear end points and deadlines for agency determinations. Alabama, Arizona, California, Maryland, Massachusetts, Mississippi, New Jersey, and other States employ some variation of a streamlined process for voluntary cleanups as an incentive for participation.

Additional incentives take a wide variety of forms. For example, some States provide financial assistance in the form of low interest loans (Ohio and Minnesota) or tax credits and incentives (Idaho, Ohio, Oklahoma, and Wisconsin). It is important to note that these financial incentives are often offered through economic development programs administered by State agencies other than the agency overseeing the brownfields cleanups. Tennessee provides orphan share funding as an incentive for voluntary cleanups and will decline to issue a lien or notice of hazardous substance on the property deed. Other States, including Minnesota and Washington, provide technical assistance to volunteers. Hawaii records the completion of cleanup activities on the deed to the property and sends a letter to the building permit agency.

Funding

States typically require participants to reimburse them for voluntary cleanup oversight costs, either in the form of a flat fee or on the basis of actual costs, or a combination of both. The following States impose only a flat fee for participation in the program regardless of actual costs to the State of

overseeing the cleanup: Colorado ($2,000); Massachusetts (site-specific); Nebraska ($5,000); New York (negotiated); North Carolina ($2,000, refundable if not used, plus $500 for "No Further Action" letter); Pennsylvania ($250); Rhode Island ($1,000); and Virginia (the lesser of $5,000 or 1% of remediation costs).

The following States seek reimbursement for their costs: Alabama; Alaska (reimbursement after expenses exceed $1,000); Arizona; Arkansas ($63 per hour); California; Idaho; Minnesota ($92 per hour for oversight costs); Montana; New Jersey (hourly fee except some volunteers, including farmers, may elect to pay a lower fixed fee); Ohio (site-specific); Oklahoma; Oregon ($2,000/$5,000 deposit depending on site); South Carolina (responsible parties pay actual costs, non-responsible parties' fees negotiable); Washington ($500 deposit and hourly rate).

Several States require a flat fee in combination with reimbursement for oversight costs. Although this approach differs in form from the other two approaches, for the most part, it is just another way that States ensure that their costs are recovered. These States include: Connecticut ($2,000 plus flat amount based on property value); Delaware ($5,000 plus costs); Hawaii ($1,000 plus $5,000 deposit); Indiana ($1,000 plus costs); Illinois ($1,000 plus costs); Iowa ($750 plus reimbursement for costs capped at $7,500); Kansas ($200 plus up to $5,000 deposit with specific amount determined by nature and extent of contamination); Maine ($500 plus costs); Maryland ($6,000 plus costs, refundable if not used); Mississippi ($500 plus direct and indirect costs); Missouri ($200 plus $5,000 deposit); New Mexico (fee and oversight costs not yet determined); Tennessee ($5,000 plus costs); Texas ($1,000 plus $67 per hour); Utah ($2,000 plus costs); West Virginia ($1,000 or $3,000 or $5,000 plus hourly fee); and Wisconsin ($250 fee plus hourly charge).

The following States do not impose fees on volunteers: Florida, Georgia, Illinois, Michigan, and Nevada. Florida, Georgia, and Nevada fund their programs from their general budgets. Illinois covers its costs for the voluntary program out of fees collected for hazardous waste treatment and disposal. Michigan relies on bonds and the State general fund.

Some States rely on State or Federal funding to supplement the fees and costs paid by volunteers. These States include: Connecticut (general fund, core and voluntary program funding); Maryland (State and Federal funds); Massachusetts (operating funds); Minnesota (State appropriations and Federal cooperative agreement); Missouri (appropriations); Nevada (Hazardous Waste Management Fund); Pennsylvania (Hazardous Sites Cleanup Fund); Rhode Island (general funds); Tennessee (EPA Core grant); Virginia (EPA grant).

B. Brownfields

States define brownfields in a variety of ways, but the term typically refers to urban industrial or commercial facilities that are abandoned or underutilized due, in part, to environmental contamination or fear of contamination. States have made special efforts in recent years to target brownfields for cleanup and reuse for several reasons, including the potential to revitalize distressed communities, increase tax dollars, and provide new jobs. States take a wide range of approaches and use an assortment of tools. Some States specifically address brownfields through their voluntary cleanup programs, others supplement their voluntary program activities, and still others have separate brownfields cleanup and redevelopment programs.

It is important to note that the difference between voluntary and brownfields programs can be a question of semantics rather than substance. In theory, a brownfields program would focus on urban, rather than rural, sites and on industrial sites rather than spill or dump sites, and a voluntary cleanup program would be open to volunteers at any type of site in any location. In practice, however, State voluntary cleanup and brownfields programs do not necessarily make those distinctions. For example, a voluntary program in one State may focus more heavily on cleanup of

brownfields sites than a "brownfields" program in another State. For this reason, it is important to look at both voluntary and brownfields programs to determine the brownfields redevelopment activities in any given State.

Typically, however, voluntary programs do not focus on redevelopment nor do they target urban sites specifically. Rather voluntary programs are more often aimed at getting simple, less contaminated sites cleaned up regardless of whether they are reused. Brownfields programs, on the other hand, are more likely to focus on redevelopment and be part of a broader State strategy or set of social policies aimed at improving distressed urban areas.

Tables V-24 and V-25 provide details about State brownfields programs. Table V-24 outlines the authority under which each State established its brownfields program, the citation for that authority and the criteria for including a site in its brownfields program. Table V-25 sets out the number of sites that have been identified by each program, the number of sites where cleanups are underway, and the number of sites that have commitments for redevelopment, in addition to the manner in which States facilitate or provide incentives for redevelopment of brownfields.

By the end of 1997, a little over half of the States reported that they had brownfields programs; an increase of 13 States since 1995. Approximately half the programs are separate and distinct programs but the other half are part of the States' voluntary programs. Most of the programs, approximately 22, were established by statute. In some States, statutes specifically create brownfields programs, but in other States the brownfields programs were established pursuant to the State's general voluntary cleanup statute. Other State brownfields programs were established informally or through policies (Alabama, Hawaii, Illinois, South Carolina, Texas, and Virginia) or a mixture of both (Maryland). Brownfields legislation is also pending in several States, including South Carolina and Massachusetts.

In Region 2, both New Jersey and New York have brownfields programs (Puerto Rico provided no information, but did not have a program in 1995). Similarly, in Region 5, all States, except for Ohio have formal programs. In Region 3, Delaware, Maryland and Virginia have brownfields programs. Although Pennsylvania does not have a separate brownfields program, its voluntary cleanup statute and program specifically address brownfields. In Region 4, five States have programs (Alabama, Florida, Mississippi, North Carolina and South Carolina) and in Region 6 all States except Louisiana have programs, though the Texas program is informal and limited in scope. In addition, all of the States in Region 9 have programs except Nevada. In Region 1, four out of six States (Connecticut, New Hampshire, Rhode Island and Vermont) have formal brownfields programs.

On the other end of the spectrum, in Region 7 only Missouri has a brownfields program. No States in Regions 8 and 10 have brownfields programs. The lack of brownfields programs in these Western and Midwestern States may be due in part to smaller inventories of underutilized or abandoned urban industrial sites.

Several States that do not have formal brownfields programs or have programs that are very limited in scope are targeting brownfields sites through other mechanisms. For example, through its voluntary program Maine is working with other State agencies to form a "Brownfields Team" that will identify potential in-State resources to promote redevelopment. Massachusetts' covenant not to sue program is designed to attract cleanup and redevelopment to areas in State-designated Economic Target Areas. Texas addresses brownfields through its voluntary program, as supplemented by education of local government and interested parties, technical reviews, and State and Federal tax incentives. Kentucky is in the process of developing guidelines for a formal broad-based brownfields program and currently has authority to provide municipalities with regulatory incentives to perform brownfields cleanups. In addition, Tennessee and Oregon brownfields sites are addressed through their voluntary programs.

Criteria for Inclusion

The criteria for inclusion in brownfields programs vary considerably depending on the scope, nature, and structure of the particular State program. The most common criteria used by States for including sites in their brownfields programs are that the sites are abandoned or underutilized and have potential for redevelopment. The precise articulation of this standard varies from State to State.

In the alternative, some States simply use the same criteria for their brownfields sites as for their voluntary program sites (Illinois, Minnesota, Oklahoma, and South Carolina). Other States have programs that are narrow in scope that include only locally or municipally owned properties (Missouri, New York, and Texas).

Some States have more unusual criteria. Florida's statute establishes a process through which "brownfields areas" must be designated by local government by resolution with appropriate public notice and hearings. In designating brownfield areas, the Florida local government must consider nine specific issues outlined in the statute. Among the criteria to be considered are redevelopment potential, private sector interest, recreational open space potential, cultural and historical preservation value, potential jobs, potential economic productivity, and consistency with local comprehensive plans and local land use. Delaware's program includes sites where employment is created and investments are made for business. Alabama's program is based on an alliance with EPA whereby EPA designates the brownfields and provides grants to fund remediation activities. Alabama provides assessments and oversight in lieu of oversight responsibilities at CERCLIS sites. Maryland has extensive statutory eligibility requirements for State financial incentives. For Maryland's site assessment initiatives, the sites may not be on CERCLIS, may not be seriously contaminated and must be likely to be redeveloped. In addition, some States specifically exclude sites that are subject to State or Federal enforcement or regulatory actions (Arkansas, Arizona, Florida, New Hampshire, New Mexico, Vermont, and Virginia).

Cleanup Activities

The number of brownfields sites identified and the size and the scope of many programs has increased since 1995, as a result in part of the increased focus on urban revitalization and the growing maturity of many State programs. For example, the number of brownfields sites identified for State programs has increased dramatically since 1995 in several States. In 1997, Illinois reported the largest number, 1011, of brownfields sites identified. Following Illinois are Arkansas (262), Connecticut (144), Delaware (300), Michigan (164), and New York (105). In contrast, in 1995, Illinois had fewer than half the number of sites identified in 1997 (400-500). Delaware reported only 19 sites identified in 1995, Connecticut only 34, and Arkansas zero.

Due in large part to the recent establishment of many of the brownfields programs, no other States had more than 100 sites identified and several States have identified fewer than ten sites for their programs (Alabama, Arizona, Florida, Hawaii, Mississippi, Missouri, New Mexico, Oklahoma, South Carolina, Texas, Vermont, and Virginia).

Several of the same States that have identified the largest number of sites also report the largest number of sites with cleanups underway: Connecticut (44); Delaware (30); Illinois (439); and Michigan (55). In addition, Minnesota reports that it has "several hundred" cleanups underway. Although the number of cleanups underway increased for each of these States from 1995, the increases are not dramatic and seem instead to represent a steady development of the brownfields programs in these States.

Given that site redevelopment is a cornerstone of most brownfields programs, the number of commitments for reuse is often an indication of the success of a program. In almost all of the States

reporting, the number of commitments for reuse is equal to, or greater than, the number of cleanups underway. In general, however, the number of commitments for redevelopment in each State is still fairly low. For example, the number of commitments for redevelopment or reuse of brownfields sites was fewer than eight for all States except Michigan (144), Delaware (30), New York (20); Montana (12); Missouri (8); and New Hampshire (8). The redevelopment commitment numbers for several States, including Connecticut and Illinois, are not available. Because many States did not report reuse commitments in 1995, it is difficult to gauge the relative increase in commitments for reuse.

Cleanup Standards

Almost all of the States use the same cleanup standards for brownfields and voluntary cleanup sites. The few States with different standards or cleanup approaches appear to be offering additional incentives for brownfields cleanups. For example, Florida provides for "risk-based corrective action," whereby brownfields cleanup participants may be allowed to substitute institutional and engineering controls for the remediation levels otherwise required by statute. Similarly, North Carolina also allows for alternative cleanup strategies that focus on removal of exposure pathways at certain brownfields sites. Florida also is currently conducting a rulemaking for its Brownfields Cleanup Criteria Rule that proposes to establish default cleanup target levels and authorize the establishment of alternative cleanup target levels on a site-specific basis. In addition, in Mississippi brownfields cleanup standards have not yet been determined, but the governing statute specifies that risk assessment must be used. Maryland and Virginia do not have established cleanup standards for their brownfields programs because their programs focus on site assessments rather than cleanups.

Incentives

Almost all States with brownfields programs provide incentives for participation. These incentives fall into two general categories: liability relief and financial incentives. However, several States also use other types of incentives, as discussed below.

Liability relief is a key incentive provided by States to encourage brownfields cleanup and redevelopment. The form of liability relief is often similar to the relief provided by the State voluntary programs. In some States, however, such as Florida and New Hampshire, liability relief incentives are reserved for the brownfields programs and are not usually available through the voluntary cleanup programs.

The following States provide some type of liability relief: Arkansas (liability release); Florida (protection for participants and certain lenders from State and third-party liability); Michigan (liability protection); Minnesota (extent of liability assurances depends on level of State review requested by volunteer); New Hampshire (covenant not to sue); New Jersey (liability release); New York (liability release transferable to future owners); North Carolina (liability limits, "No Further Action" letters); Oklahoma (certificate of no action with liability release); Rhode Island (covenant not to sue and contribution protection for non-responsible parties); South Carolina (covenant not to sue, contribution protection for non-responsible parties); Vermont (limited liability protection for redeveloper and successor); and Wisconsin (liability exemptions). In Mississippi incentives are under development but the governing statute requires liability protection.

Many States provide some type of financial incentive, including but not limited to, the following: Arkansas (low interest revolving loan program); Delaware (low interest loans, tax credit, grants); Florida ("bonus refunds" of $2,500 for each new job created in the State); Maryland (property tax credits, grants, loans, free site assessments); Illinois (State tax credit, brownfields

grants); Massachusetts (incentives through its economic development program); Michigan (grants to local governments for investigation and remedial action); Minnesota (various financial incentives); Missouri (grants, loan guarantees, tax credits); New Jersey (loans, grants, tax incentives, remedial cost reimbursement); New York (up to 75 percent of municipalities' costs associated with investment and cleanup); Oklahoma (tax incentives for remediation and redevelopment, job act incentives); Rhode Island (funding authorized but not yet available to facilitate redevelopment); Texas (property tax abatements); Vermont (site assessment funds through HUD grants); West Virginia (revolving loan fund for site assessments); and Wisconsin (funding for site assessments by municipalities; reimbursement for portions of UST and agricultural spill cleanups; tax incremental financing; and tax credit).

Other incentives include variances from technical standards (New Jersey); encouragement of local governments to offer economic incentives such as one-stop permitting, tax credits, and low interest loans (Florida); advice and document review (Oklahoma); issuance of letters for Federal income tax expensing of remediation costs (Texas); technical assistance (Texas); and education and outreach efforts to anyone interested in reusing a brownfields property (Texas and New Mexico).

Chapter V: State Program Tables

This Chapter consists of 25 Tables summarizing the information collected as part of this study. The Tables include all 50 states, the District of Columbia, and Puerto Rico, and are organized by EPA Region. The Tables have been designed to provide information at a glance and to be self-explanatory. Nevertheless, ELI recommends that readers consult the sections of Chapters III and IV that relate to specific Tables as those sections provide additional explanation, clarification, and analysis. For State specific information, readers should consult the individual State summaries in Chapter VI.

Table V-1: Overview of State Programs

Summary

This table provides an overview of three key elements of State cleanup programs: enforcement authority; staffing level; public participation procedures; and fund balance. This table provides a useful comparison of State programs when the elements are viewed as integral parts of each State's program. These elements were not selected for the purpose of evaluating the effectiveness of State programs. This tabulation of State information provides a picture of the general programmatic direction and activity levels of State programs. The table headings are defined as follows:

- "Cleanup Enforcement Authority" indicates whether or not States undertake enforcement actions under specific hazardous cleanup authority.

- "Staffing Level" indicates the number of full-time program staff and attorneys who work on each State program. (Attorneys in both State cleanup programs and State Attorney General's Offices are included in this figure.) There is a possibility of double counting, as some States may have counted attorneys who work full-time on superfund programs as staff.

- "Fund Balance" lists the balance of each State's cleanup fund at the end of FY97. If a State has multiple cleanup funds, this column indicates the sum of the balances. The balances, which range from zero to over half a billion dollars, do not signify the extent of cleanup activity on their own. The fund balance may be small because significant cleanup expenditures were made during the year, or it may be large because little activity occurred during the year. A State's balance amount is meaningful only when viewed in conjunction with the number of actions taken by the State, and as an indicator of future financial capability.

Table V-1: Overview of State Program

Region	State	Enforcement	Staffing Levels	Fund Balance
1	Connecticut	Yes	45	$13,500,000.00
	Maine	Yes	27.5	$7,400,000.00
	Massachusetts	Yes	224	$86,300,000.00
	New Hampshire	Yes	29.5	$1,500,000.00
	Rhode Island	Yes	22	$50,000.00
	Vermont	Yes	17	$4,800,000.00
2	New Jersey	Yes	530	$114,700,000.00
	New York	Yes	329	$612,041,042.00
	Puerto Rico	Yes	0	
3	Delaware	Yes	30	$8,400,000.00
	District of Columbia	Yes	0	
	Maryland	Yes	38	$500,000.00
	Pennsylvania	Yes	132	$120,026,484.00
	Virginia	Yes	17.25	$3,569,781.00
	West Virginia	Yes	1	$1,800,000.00
4	Alabama	Yes	28.1	$615,590.00
	Florida	Yes	110	$24,529,984.40
	Georgia	Yes	40	$1,073,451.00
	Kentucky	Yes	31.5	$4,000,000.00
	Mississippi	Yes	14	$750,000.00
	North Carolina	Yes	31.25	$4,823,533.00
	South Carolina	Yes	46.5	$25,077,099.81
	Tennessee	Yes	67	$9,559,568.88
5	Illinois	Yes	112	$21,900,000.00
	Indiana	Yes	60	$24,511,554.00
	Michigan	Yes	242	$7,644,000.00
	Minnesota	Yes	82	$5,300,398.00
	Ohio	Yes	161.7	$31,081,539.61
	Wisconsin	Yes	71.5	$21,381,000.00

Table V-1: Overview of State Program

Region	State	Enforcement	Staffing Levels	Fund Balance
6	Arkansas	Yes	11	$8,798,191.00
	Louisiana	Yes	35	$1,693,995.00
	New Mexico	Yes	24	$1,659,814.00
	Oklahoma	Yes	19	$17,168.00
	Texas	Yes	113	$69,898,478.00
7	Iowa	Yes	12	$1,060,868.00
	Kansas	Yes	49	$0.00
	Missouri	Yes	53	-$1,300,000.00
	Nebraska	Yes	11	
8	Colorado	Yes	28.5	$19,000,000.00
	Montana	Yes	26	$14,506,467.00
	North Dakota	Yes	6	$160,000.00
	South Dakota	Yes	3.5	$1,750,000.00
	Utah	Yes	36	$1,500,000.00
	Wyoming	Yes	11	
9	Arizona	Yes	63	$813,192.00
	California	Yes	310.2	$2,411,121.00
	Hawaii	Yes	18.5	$225,000.00
	Nevada	Yes	9.5	$1,000,000.00
10	Alaska	Yes	42.5	$76,154,222.00
	Idaho	Yes	33	
	Oregon	Yes	79	$12,142,352.00
	Washington	Yes	146.5	$44,867,955.00
		Totals:	**3680**	**$1,413,193,848.70**

Table V-2: Statutory Authorities and Provisions

Summary

- Forty-seven (47) States have cleanup funds authorized by statute.
- Five States have limited fund capabilities, in that their funds can only be used for emergency responses and/or CERCLA match.
- Nineteen (19) States have natural resource damages authorities.
- Fifty (50) States have State superfund laws that provide enforcement authorities.
- Twelve (12) States have enforcement authorities only in statutes other than their State superfund laws.
- Twenty-seven (27) States have statutory provisions for a priority list.
- Fourteen (14) States report some authority for citizen suits.
- Twenty-one (21) States provide compensation for victims of hazardous substance releases, although ten States limit that relief to replacement of water supplies.
- Twenty-seven (27) States have some mandatory provisions governing property transfers.
- Forty-four (44) States have statutory authorities for voluntary or brownfields cleanup programs (other States have adopted such programs by regulation or policy).

Table V-2: Statutory Authorities and Provisions

Reg.	State	Statute Name	Cleanup Fund	Enforce. Author.	Prior. List	NRDs	Citizen Suits	Victim Comp.	Prop. Trans.	Vol. Cleanup
1	CT	Emergency Spill Response Fund	X	X				WS		
		Public Act 87-561		X	X					
		Public Acts 95-183 and 95-190 (Voluntary Cleanup and Licensed Environmental Professional Programs)								X
		Transfer of Hazardous Waste Establishments		X					X	
		Urban Sites Remedial Action Program	X						X	X
	ME	Uncontrolled Hazardous Substance Sites Act	X	X		X				
		Voluntary Response Action Program								X
	MA	Oil and Hazardous Material Release Prevention and Response Act	X	X	X	X	X			X
	NH	Brownfields Program		X						X
		Hazardous Waste Cleanup Fund Act	X	X						X
	RI	Hazardous Waste Management Act	X	X		X		X		
		Industrial Property Remediation and Reuse Act		X		X				X
	VT	Act Relating to Administrative Enforcement of Specified Environmental Laws		X						
		Waste Management Act		X						X
		Water Pollution Control Law	X							
2	NJ	Brownfield and Contaminated Site Remediation Act			X					
		Environmental Rights Act					X			
		Industrial Site Recovery Act							X	
		Spill Compensation and Control Act	X	X		X		X		X
		Water Pollution Control Act						X		
	NY	1986 Environmental Quality Bond Act	X							
		Abandoned Sites Act of 1979		X	X			WS	X	
		Environmental Conservation Law	X	X					X	X
		New York State Superfund Act of 1982 and 1985 Amendments	X							
	PR	Environmental Emergencies Fund Act	X							
		Public Policy Environmental Act		X						
3	DE	Hazardous Substance Cleanup Act	X	X	X	X		WS	X	X
	DC	Hazardous Waste Management Act		X						
	MD	Annotated Code of Maryland, Environment Article, Title 7, Hazardous Materials and Hazardous Substances, Subtitle 2	X	X	X	X		X		
		Annotated Code of Maryland, Environment Article, Title 7, Hazardous Materials and Hazardous Substances, Subtitle 5	X	X						X
	PA	Hazardous Sites Cleanup Act	X	X	X	X	X	WS	X	X
		Land Recycling and Environmental Remediation Standards Act	X	X					X	X
	VA	Environmental Response Emergency Fund Act	X							
		Waste Management Act		X						X

Table V-2: Statutory Authorities and Provisions

Reg.	State	Statute Name	Cleanup Fund	Enforce. Author.	Prior. List	NRDs	Citizen Suits	Victim Comp.	Prop. Trans.	Vol. Cleanup
3	WV	Groundwater Protection Act						X		
		Hazardous Waste Emergency Response Fund Act	X							
		Hazardous Waste Management Act		X					X	
		Voluntary Remediation and Redevelopment Act								X
4	AL	Hazardous Substances Cleanup Fund	X	X						X
	FL	Environmental Control		X		X				
		Pollutant Discharge Prevention and Removal Act	X	X	X			WS		X
	GA	Hazardous Site Response Act of 1992	X	X	X				X	
		Hazardous Site Reuse & Redevelopment Act of 1996								X
	KY	Kentucky Revised Statute 224.01-400		X						
		Kentucky Revised Statute 224.46-580	X							
	MS	Air and Water Pollution Control Act	X	X		X				X
		Brownfields Voluntary Cleanup Act of 1998								X
		Solid Waste Disposal Act of 1974	X	X						X
	NC	Brownfields Property Reuse Act								X
		Inactive Hazardous Sites Response Act of 1987	X	X	X				X	X
		Solid and Hazardous Waste Management Act	X	X						
	SC	Hazardous Waste Management Act	X	X					X	
	TN	Hazardous Waste Management Act of 1983 Part 2	X	X	X				X	X
5	IL	Environmental Protection Act	X	X				WS	X	X
		Responsible Property Transfer Act							X	
	IN	Brownfields Revitalization Zone Tax Abatement								
		Environmental Legal Actions					X			
		Hazardous Substances Response Trust Fund	X	X		X				
		Responsible Property Transfer Law							X	
		Voluntary Remediation of Hazardous Substances and Petroleum								X
	MI	Natural Resources and Environmental Protection	X	X	X	X	X	WS	X	X
	MN	Minnesota Environmental Response and Liability Act (MERLA)	X	X	X	X		X	X	X
	OH	Environmental Protection Agency Act		X			X			
		Solid and Hazardous Waste Disposal Law	X	X						X
		Voluntary Action Program	X						X	X
		Water Pollution Control Act		X						
	WI	Remedial Action	X	X	X				X	X
6	AR	Brownfields Law							X	X
		Environmental Law	X	X	X		X			

Table V-2: Statutory Authorities and Provisions

Reg.	State	Statute Name	Cleanup Fund	Enforce. Author.	Prior. List	NRDs	Citizen Suits	Victim Comp.	Prop. Trans.	Vol. Cleanup
6	LA	Citizen Suits					X			
		Hazardous Waste Control Law	X							
		Inactive and Abandoned Hazardous Waste Site Law		X						
		Recordation of Notice of Solid or Hazardous Waste Site by Landowner							X	
		Voluntary Investigation and Remedial Action Act								X
	NM	Environmental Improvement Act		X						
		Hazardous Waste Act	X	X						
		Voluntary Remediation Act								X
		Water Quality Act		X			X			
	OK	Brownfields Voluntary Redevelopment Act								X
		General Regulation and Enforcement		X						
		Hazardous Waste Fund Act	X							
		Hazardous Waste Management Act		X						
		Solid Waste Management Act		X						
	TX	Hazardous Substances Spill Prevention and Control Act	X	X						
		Solid Waste Disposal Act	X	X	X			WS		X
7	IA	Environmental Quality Act	X	X	X	X	X	WS	X	
		Groundwater Hazard Documentation Law							X	
		Land Recycling and Environmental Remediation Standards Act								X
	KS	Drycleaner Environmental Response Act of 1995	X		X					
		Environmental Response Act	X	X				WS		
		Kansas Water Plan	X					WS		
		Voluntary Cleanup and Property Redevelopment Act of 1996								X
		Water Pollution Control Statutes	X	X		X				
	MO	Hazardous Waste Management Law	X	X	X				X	X
	NE	Environmental Protection Act		X			X			
		Voluntary Cleanup Program: Remedial Action Plan Monitoring Act								X
8	CO	Hazardous Waste Management Act		X						
		Hazardous Waste Sites Act	X			X				
		Voluntary Cleanup and Redevelopment Act								X
		Water Quality Control Act		X						
	MT	Comprehensive Environmental Cleanup and Responsibility Act	X	X	X	X	X		X	
		Controlled Allocation of Liability Act	X							
		State Participation in CERCLA	X	X	X	X	X		X	
		Voluntary Cleanup and Redevelopment Act							X	X
		Water Quality Act		X			X			
	ND	Hazardous Waste Management Act		X						
		Water Pollution Control Law		X						

Table V-2: Statutory Authorities and Provisions

Reg.	State	Statute Name	Cleanup Fund	Enforce. Author.	Prior. List	NRDs	Citizen Suits	Victim Comp.	Prop. Trans.	Vol. Cleanup
8	SD	Environmental Protection Act						X		X
		Hazardous Waste Management Act		X			X			
		Regulated Substance Discharge Law	X						X	
		Water Pollution Control Act		X						
	UT	Hazardous Substances Mitigation Act	X	X	X					X
		Voluntary Release Cleanup Act								X
	WY	Environmental Quality Act		X			X			
9	AZ	Environmental Quality Act	X	X	X		X	WS	X	X
		Greenfields Pilot Program								X
	CA	Health and Safety Code	X	X	X	X		WS	X	X
	HI	Environmental Response Law	X	X	X	X		WS	X	X
		Voluntary Cleanup Program	X	X	X	X		X	X	X
	NV	Hazardous Materials	X	X						
		Water Pollution Control		X						
10	AK	Liability and Cost for Oil and Hazardous Substance Discharge Law		X						
		Oil and Hazardous Substance and Pollution Control Law	X							
		Oil and Hazardous Substance Release Control Law		X						
		Oil and Hazardous Substances Releases Law	X		X					X
	ID	Environmental Protection and Health Act		X						
		Hazardous Waste Management Act		X			X			
		Land Remediation Act							X	X
	OR	Hazardous Substance Cleanup Law	X	X	X	X		WS	X	X
	WA	Model Toxics Control Act	X	X	X	X	X	WS	X	X

Table V-3: Hazardous Sites

Summary

- States identify ~69,000 known and suspected sites, a decline from ~85,000 identified in 1995, and ~100,000 identified in 1993.
- The number of known and suspected sites in each State range from 50 to 15,177.
- States identify ~24,000 as needing attention, a decline from ~30,000 sites identified in 1995, and ~40,000 identified in 1993.
- The number of sites needing attention in each State ranges from 20 to 4,915.
- Only six States have more than 1,000 sites identified as "needing attention."
- Thirty-seven (37) States maintain some kind of officially sanctioned inventory, priority list, or registry. However, the numbers on these lists are not comparable and cannot be aggregated because State definitions vary widely; some lists include sites where no activity is required, while others include only sites where the State is funding cleanup.

Table V-3: Hazardous Sites

Reg.	State	Final NPL sites	Proposed NPL sites	Deleted NPL sites	Known and Suspected State Sites	State Sites Identified as Needing Attention	State Inventory or Priority List
1	Connecticut	16	0	2	3029	668	11
	Maine	12	0	0	465	128	465
	Massachusetts	31	1	1	2679	2679	428
	New Hampshire	18	0	0	474	474	474
	Rhode Island	12	0	0	400	100	
	Vermont	8	0	0	362	255	362
2	New Jersey	121	2	14	15177	4915	1402
	New York	90	2	11	1567	769	906
	Puerto Rico	12	0	0			
3	Delaware	20	0	3	600	185	90
	District of Columbia	0	1	0			N/A
	Maryland	17	3	2	440	33	N/A
	Pennsylvania	111	2	13	50	20	14
	Virginia	27	2	2	2015	411	88
	West Virginia	7	1	1	600	150	N/A
4	Alabama	13	0	1	700	125	N/A
	Florida	64	1	12	1900	1094	44
	Georgia	16	2	2	1012	126	375
	Kentucky	20	0	4	1900	850	1350
	Mississippi	2	3	2	960	500	200
	North Carolina	24	1	1	1040	793	197
	South Carolina	27	0	1	603	150	150
	Tennessee	18	2	5	1360	234	141
5	Illinois	39	5	1	5000	140	70
	Indiana	36	1	7			61
	Michigan	81	3	13	N/A	2789	2789
	Minnesota	44	0	18	3000	219	138
	Ohio	34	5	2	1460	403	1189
	Wisconsin	42	1	3	5000	600	600
6	Arkansas	13	0	2	363	98	9
	Louisiana	15	3	3	410	120	410
	New Mexico	11	2	2	344	133	60
	Oklahoma	10	1	0	793	124	N/A
	Texas	34	2	6	388	52	49
7	Iowa	20	1	4	400	200	72

Table V-3: Hazardous Sites

Reg.	State	Final NPL sites	Proposed NPL sites	Deleted NPL sites	Known and Suspected State Sites	State Sites Identified as Needing Attention	State Inventory or Priority List
7	Kansas	15	1	5	720	484	556
	Missouri	23	0	1	1475	225	57
	Nebraska	10	0	0	400	200	N/A
8	Colorado	17	2	2	624	178	N/A
	Montana	8	1	0	N/A	187	187
	North Dakota	2	0	2	N/A	N/A	N/A
	South Dakota	3	0	1	1424		
	Utah	12	4	0	325	40	N/A
	Wyoming	3	0	0	140	N/A	N/A
9	Arizona	11	0	1	900	75	30
	California	94	4	4	3247	420	188
	Hawaii	4	0	0	524	103	4
	Nevada	1	0	0	129	129	N/A
10	Alaska	8	0	1	1625	1206	1625
	Idaho	9	2	2	N/A	N/A	N/A
	Oregon	12	1	2	1933	306	160
	Washington	60	0	13	1493	1006	595

Table V-4: Actions Taken at Non-NPL Sites

Summary

All hazardous substance cleanup programs (including voluntary cleanup programs)

- The number of cleanups underway ranges from 1 (Hawaii) to 4,363 (New Jersey).
- The number of cleanups completed during FY97 ranges from 0 (Iowa) to 2,591 (New Jersey).
- The number of cleanups completed since the start of a State's program ranges from 0 (Iowa) to 18,994 (Texas).
- The total number of cleanups reported by all States as of the end of FY97 was:
  - Cleanups underway: 13,713
  - Cleanups completed during last fiscal year: 5,552
  - Cleanups completed since start of program: 40,994

Voluntary cleanup programs only

- The number of voluntary cleanups underway ranges from 0 (Iowa, Kentucky, Louisiana, and New Mexico) to 2,313 (New Jersey).
- The number of voluntary cleanups completed during FY97 ranges from 0 (Alabama, Iowa, Kentucky, Louisiana, New Mexico, Vermont, and West Virginia) to 1,721 (New Jersey).
- The number of voluntary cleanups completed since the start of a State's program ranges from 0 (Iowa, Kentucky, Louisiana, New Mexico, Vermont, and West Virginia) to 4,454 (New Jersey).
- The total number of voluntary cleanups reported by all States as of the end of FY97 was:
  - Cleanups underway: 5,536
  - Cleanups completed during last fiscal year: 2,363
  - Cleanups completed since start of program: 6,792

Table V-4: Actions Taken at Non-NPL Sites

Reg.	State	All Hazardous Substance Cleanup Programs (including Voluntary Programs)			Voluntary Cleanup Programs Only		
		Cleanups Underway	Cleanups Completed Last Fiscal Year	Cleanups Completed Since Start of Program	Cleanups Underway	Cleanups Completed Last Fiscal Year	Cleanups Completed Since Start of Program
1	CT	453	17	73	44	5	17
	ME	98 (b)	26	140	98	16	73
	MA		619	1732			
	NH	83	50	136	83	50	136
	RI						
	VT	2 (b)	21	115	2	0	0
2	NJ	4363	2591	12634	2313	1721	4454
	NY	266 (a)	47 (a)	269 (a)			
	PR						
3	DE	87	16	56	40	9	20
	DC	—	—	—	—	—	—
	MD	37	3 (b)	3 (b)	4	3	3
	PA	160	87	390	150	75	300
	VA	88	23	44	64	5	11
	WV	14	39	111	6	0	0
4	AL	30	27	100	3	0	4
	FL	1094	67	555			
	GA	244	34	91	205	11	39
	KY	300	50	600	—	—	—
	MS	60	20	112	2	2	2
	NC	85	15	250	50	15	250
	SC	53	7 (b)	36	44	7	35
	TN	141	22	138	43	5	18
5	IL	479	78	323	439	71	283
	IN	250	15	30	200	10	20
	MI	361	101	363	165	47	
	MN	628	101	540	500	100	500
	OH	365	23	143	200	20	40
	WI	130					

(a) = includes only State "superfund" program cleanups
(b) = includes only voluntary program cleanups
Dash = no program
Blank = no data

Table V-4: Actions Taken at Non-NPL Sites

Reg.	State	All Hazardous Substance Cleanup Programs (including Voluntary Programs)			Voluntary Cleanup Programs Only		
		Cleanups Underway	Cleanups Completed Last Fiscal Year	Cleanups Completed Since Start of Program	Cleanups Underway	Cleanups Completed Last Fiscal Year	Cleanups Completed Since Start of Program
6	AR	60	2	17	2		
	LA	5	8	152	0	0	0
	NM	48	3	36	0	0	0
	OK	52	19	40	52	19	40
	TX	502	997	18994	445	55	158
7	IA	30	0	0	0	0	0
	KS	587	9	111			
	MO	103	17	141	50	12	30
	NE	3	1	1	3	1	1
8	CO	41	4	6	36	4	6
	MT	12	6	12 (b)	1		12
	ND	12	13		—	—	—
	SD	241	63	824	—	—	—
	UT	9	3	6	9	3	6
	WY				—	—	—
9	AZ	22	11	44	21	10	16
	CA	188	44	220		13	55
	HI	1			1		
	NV	129	90	520			
10	AK	1206	63	419			
	ID						
	OR	315	35	119	212	23	87
	WA	278	65	348	34	49	176

(a) = includes only State "superfund" program cleanups
(b) = includes only voluntary program cleanups
Dash = no program
Blank = no data

Table V-5: Program Organization

Summary

- Program staff levels range from 2.5 FTE staff members to 512.
- Five States reported program staff levels at or below ten FTE .
- The overall program staff level reported was 3,474 FTE, down from 3,585 in 1995.
- Total legal support was 206 FTE attorneys, down from 211 in 1995.
- The seven States reporting ten or more FTE attorneys accounted for more than half of the total number of attorney positions.
- Eighteen (18) States rely solely on the responsible agency for legal support.

Table V-5: Program Organization

Reg.	State	Agency Name	Program Office	FTE Staff Employed/Authorized	Legal Support Office	FTE Attorneys
1	CT	Department of Environmental Protection	Water Management Bureau, Permitting Enforcement and Remediation Division	42 / 51	Office of the Attorney General; DEP Counsel to the Commissioner	3
	ME	Department of Environmental Protection	Bureau of Remediation and Waste Management, Division of Remediation	26 / 27	Office of the Attorney General	1.5
	MA	Department of Environmental Protection	Bureau of Waste Site Cleanup	203 / 230	Office of the Attorney General; DEP Office of General Counsel	21
	NH	Department of Environmental Services	Waste Management Division, Hazardous Waste Remediation Bureau	25 / 25	Department of Justice	4.5
	RI	Department of Environmental Management	Bureau of Environmental Protection, Office of Waste Management	20 / 20	DEM Office of Legal Services	2
	VT	Agency of Natural Resources	Department of Environmental Conservation, Waste Management Division, Hazardous Materials Program	14 / 14	Office of the Attorney General; DEC Environment Division; DEC Waste Management Division	3
2	NJ	Department of Environmental Protection	Division of Publicly Funded Site Remediation, Site Remediation Program	512 / 512	Department of Laws and Public Safety	18
	NY	Department of Environmental Conservation	Division Of Environmental Remediation	309 / 309	Department of Law; DEC Division of Environmental Enforcement	20
	PR	Environmental Quality Board				
3	DE	Department of Natural Resources and Environmental Control	Division of Air and Waste Management, Site Investigation and Restoration Branch	29 / 31	Department of Justice	1
	DC	Department of Consumer and Regulatory Affairs	Environmental Regulation Administration, Pesticides, Hazardous Waste and Underground Storage Tank Division		Corporation Counsel	
	MD	Department of Environment	Waste Management Administration, Environmental Restoration and Redevelopment Program	36 / 41	Office of the Attorney General	2
	PA	Department of Environmental Protection	Bureau of Land Recycling and Waste Management, Division of Land Recycling and Cleanup Programs	120 / -	DEP Office of Chief Counsel	12
	VA	Department of Environmental Quality	Division of Special Programs, Office of Federal Facilities Restoration and Superfund	17 / 17	Office of the Attorney General	0.25
	WV	Department of Commerce, Labor and Environmental Resources	Division of Environmental Protection, Office of Waste Management		DEP Office of Legal Services	1
4	AL	Department of Environmental Management	Land Division, Hazardous Waste Branch	28 / 30	ADEM Office of General Counsel	0.1
	FL	Department of Environmental Protection	Division of Waste Management, Bureau of Waste Cleanup	108 / -	DEP Office of General Counsel	2
	GA	Department of Natural Resources	Environmental Protection Division, Hazardous Waste Management Branch, Hazardous Sites Response Program	39 / 42	State Law Department	1
	KY	Department for Environmental Protection	Division of Waste Management, Superfund Branch	29 / 29	Office of Legal Services	2.5
	MS	Department of Environmental Quality	Office of Pollution Control, Hazardous Waste Division, Superfund Branch	10 / 11	Office of the Attorney General; DEQ Legal Staff	4
	NC	Department of Environment and Natural Resources	Division of Waste Management, Superfund Section	29.75 / 29.75	Office of the Attorney General	1.5

Table V-5: Program Organization

Reg.	State	Agency Name	Program Office	FTE Staff Employed/Authorized	Legal Support Office	FTE Attorneys
4	SC	Department of Health and Environmental Control	Bureau of Land and Waste Management, Division of Site Assessment and Remediation	45 / 45	DHEC Office of General Counsel	1.5
	TN	Department of Environment and Conservation	Bureau of Environment, Division of Superfund	65 / 74	Office of the Attorney General; DEC Office of General Counsel	2
5	IL	Environmental Protection Agency	Bureau of Land, Division of Remedial Management	105 / 105	Division of Legal Counsel	7
	IN	Department of Environmental Management	Office of Environmental Response	58 / 71	Office of Legal Counsel	2
	MI	Department of Environmental Quality	Environmental Response Division	234 / 241	Department of the Attorney General	8
	MN	Pollution Control Agency	Hazardous Waste Division	80 / -	Office of the Attorney General	2
	OH	Environmental Protection Agency	Division of Emergency and Remedial Response	150 / -	Office of the Attorney General; OEPA Legal Office	11.7
	WI	Department of Natural Resources	Bureau for Remediation and Redevelopment	68 / 100	Office of the Attorney General	3.5
6	AR	Department of Pollution Control & Ecology	Hazardous Waste Division, Inactive Sites Branch	10 / 12	ADPC&E Legal Division	1
	LA	Department of Environmental Quality	Office of Waste Services, Inactive and Abandoned Sites Division	34 / 34	Office of Legal Affairs and Enforcement	1
	NM	Environment Department	Water and Waste Management Division, Groundwater Quality Bureau, Superfund Oversight Section; Assessment and Abatement Section	23.5 / 27.5	Office of General Counsel	0.5
	OK	Department of Environmental Quality	Waste Management Division, Site Remediation Section	18 / 22	DEQ Office of the Executive Director/ Office of General Counsel	1
	TX	Natural Resource Conservation Commission	Office of Waste Management, Pollution Cleanup Division	106 / 107	Office of Legal Services, TNRCC Legal Services Division	7
7	IA	Department of Natural Resources	Environmental Protection Division, Land Quality Branch, Solid Waste Section	11.5 / 11.5	DNR Compliance and Enforcement Bureau	0.5
	KS	Department of Health and Environment	Bureau of Environmental Remediation, Division of Environment, Remediation Section and Restoration Section	46 / 46	KDHE Office of Legal Services	3
	MO	Department of Natural Resources	Division of Environmental Quality, Hazardous Waste Program	51 / 53	Office of the Attorney General	2
	NE	Department of Environmental Quality	Air and Waste Management Division, Superfund Section	10.5 / 10.5	DEQ legal staff	0.5
8	CO	Department of Public Health and Environment	Hazardous Materials and Waste Management Division	18.5 / -	Office of the Attorney General	10
	MT	Department of Environmental Quality	Hazardous Waste Site Cleanup Bureau, Remediation Division, Site Response Section	22 / 30	DEQ Legal Unit	4
	ND	Department of Health	Environmental Health Section, Division of Waste Management	5 / -	Office of the Attorney General	1
	SD	Department of Environment and Natural Resources	Division of Environmental Regulation, Groundwater Quality Program	2.5 / -	Office of the Attorney General	1
	UT	Department of Environmental Quality	Division of Environmental Response and Remediation	34 / 35	Office of the Attorney General; DEQ Staff Attorneys	2

Table V-5: Program Organization

Reg.	State	Agency Name	Program Office	FTE Staff Employed/Authorized	Legal Support Office	FTE Attorneys
8	WY	Department of Environmental Quality	Hazardous Waste Permitting / Corrective Action Program, Solid and Hazardous Waste Division	8 / 8	Office of the Attorney General	3
9	AZ	Department of Environment Quality	Waste Programs Division, Superfund Programs Section	56 / 68	Office of the Attorney General	7
	CA	Environmental Protection Agency	Department of Toxic Substances Control, Site Mitigation Division	298.2 / -	Office of the Attorney General; DTSC Office of Legal Counsel and Criminal Investigations	12
	HI	Department of Health	Environmental Management Division, Office of Hazard Evaluation and Emergency Response	18 / 18	Office of the Attorney General	0.5
	NV	Department of Conservation and Natural Resources	Division of Environmental Protection, Bureau of Corrective Actions, Remediation Branch and Superfund Branch	7.5 / -	Office of the Attorney General	2
10	AK	Department of Environmental	Spill Prevention and Response Division, Contaminated Sites and Remediation Program	40 / 42	Office of the Attorney General	2.5
	ID	Division of Environmental Quality	Water Quality and Remediation Division, Remediation Bureau	30 / 30	Office of the Attorney General	3
	OR	Department of Environmental Quality	Waste Management and Cleanups Division	78 / 100	Department of Justice	1
	WA	Department of Ecology	Toxics Cleanup Program	144 / 144	Office of the Attorney General	2.5

Table V-6: Program Administration and Staff Funding Sources

Summary

- Twenty-seven (27) States reported using State general funds for program administration and staff.
- Thirty-seven (37) States reported using State cleanup funds for program administration and staff.
- Forty-eight (48) States reported using Federal funds for program administration and staff

Table V-6: Program Administration and Staff Funding Sources

Reg.	State	State General Fund	State Cleanup Fund	Federal Grants/Cooperative Agreements	Other Source
1	Connecticut	75%		25%	
	Maine	5%	34%	61%	
	Massachusetts	7%	28%	19%	46%
	New Hampshire	8%	12%	80%	
	Rhode Island	30%	10%	60%	
	Vermont	23%	2%	75%	
2	New Jersey		55%	5%	40%
	New York	1%	92%	7%	
	Puerto Rico				
3	Delaware	6%	10%	25%	59%
	District of Columbia				
	Maryland	10%	10%	80%	
	Pennsylvania		100%		
	Virginia	10%		90%	
	West Virginia			90%	10%
4	Alabama	10%	40%	50%	
	Florida		90%	10%	
	Georgia		100%		
	Kentucky		40%	60%	
	Mississippi	50%		50%	
	North Carolina	21%		79%	
	South Carolina	6%	17%	77%	
	Tennessee	X	X	22.4%	
5	Illinois		66%	34%	
	Indiana	X	X	X	
	Michigan	75%	10%	15%	
	Minnesota		65.5%	34.5%	
	Ohio	X		X	X
	Wisconsin	18%	37%	45%	
6	Arkansas		25%	75%	
	Louisiana		48%	52%	
	New Mexico	30%		55%	15%
	Oklahoma			90%	10%
	Texas		64%	36%	
7	Iowa		5%	43%	52%
	Kansas	5%	60%	20%	15%
	Missouri		10%	90%	
	Nebraska	5%		95%	

Table V-6: Program Administration and Staff Funding Sources

Reg.	State	State General Fund	State Cleanup Fund	Federal Grants/Cooperative Agreements	Other Source
8	Colorado		10%	60%	30%
	Montana		31%	65%	4%
	North Dakota	25%		75%	
	South Dakota	10%		90%	
	Utah	15%		84%	1%
	Wyoming	25%		75%	
9	Arizona		40%	60%	
	California		70%	30%	
	Hawaii	12.5%	37.5%	50%	
	Nevada		85%	15%	
10	Alaska		58.5%	41.5%	
	Idaho		20%	80%	
	Oregon		80%	14%	6%
	Washington		70%	30%	

Table V-7: State Cleanup Funds

Summary

- Fifty (50) States have cleanup funds; two States have no fund.
- Thirty-three (33) States have more than one fund.
- Total balance in all State funds at the end of FY97 was $1,413,193,848.70, including $853,358,148.00 in authorized bonds in nine States.
- The average State fund balance is $30,067,954.23, and the average State fund balance excluding bond authorizations is $12,723,538.65 (4.3% higher than the $12,200,000 in 1995).
- The median State fund balance (including bond authorizations) is $4,823,533.00, compared to $3,970,000 in 1995 and $3,890,000 in 1993.
- Fund balances, including bond authorizations, are distributed as follows (Idaho, Puerto Rico, and Wyoming provided no information):
    - Two States have no fund (Nebraska and the District of Columbia).
    - Ten (10) States have balances less than $1M.
    - Fourteen (14) States have balances of at least $1M but less than $5M.
    - Six States have balances of at least $5M but less than $10M.
    - Eleven (11) States have balances of at least $10M but less than $50M.
    - Six States have balances of $50M or more.
- Additions to the States' funds during FY97 totaled $538,306,253.51 (45 States reporting), a 21.1% increase from 1995. Additions were distributed as follows:
    - Nineteen (19) States added less than $1M.
    - Eight States added at least $1M but less than $5M.
    - Seven States added at least $5M but less than $10M.
    - Eight States added at least $10M but less than $50M.
    - Three States added $50M or more.

Table V-7: State Cleanup Funds

Reg.	State	Fund Name	Fund Balance	Fund Additions	Total Expended	Total Obligated
1	CT	State Superfund	$8,000,000.00	$0.00		$1,250,000.00
		Urban Sites Remedial Action Fund	$5,500,000.00			$30,500,000.00
	ME	Uncontrolled Sites Bond Account	$3,800,000.00		$1,562,807.00	
		Uncontrolled Sites Fund	$3,600,000.00	$320,894.00	$704,629.00	
	MA	Oil and Hazardous Material Response Loan	$86,300,000.00	$0.00	$7,100,000.00	$0.00
	NH	Hazardous Waste Cleanup Fund	$1,500,000.00	$1,400,000.00	$1,700,000.00	$7,500,000.00
	RI	Environmental Response Fund	$50,000.00	$300,000.00	$300,000.00	$681,000.00
	VT	Environmental Contingency Fund	$1,000,000.00	$400,000.00	$500,000.00	$0.00
		Petroleum Cleanup Fund	$3,800,000.00	$5,000,000.00	$4,700,000.00	$800,000.00
2	NJ	1981 Discharge Bond Fund	$2,500,000.00			$55,900,000.00
		1986 Hazardous Discharge Bond	$26,400,000.00			$42,100,000.00
		1996 Hazardous Discharge Bond	$65,000,000.00	$0.00	$0.00	$0.00
		Corporate Business Tax (Publicly Funded)	$0.00	$14,800,000.00	$14,800,000.00	
		Hazardous Discharge Capital Fund	$18,500,000.00	$0.00	$16,900,000.00	
		Hazardous Discharge Site Cleanup	$1,000,000.00	$21,500,000.00	$21,300,000.00	
		Spill Fund	$1,300,000.00	$25,700,000.00	$28,300,000.00	$0.00
	NY	1986 Environmental Quality Bond Act	$401,000,000.00	$0.00	$102,000,000.00	$94,000,000.00
		1996 Clean Water/Clean Air Bond Act (brownfield sites)	$200,000,000.00	$20,000,000.00	$0.00	$0.00
		Hazardous Waste Remedial Fund	$7,347,265.00	$61,634,168.00	$56,777,048.00	
		State Capital Funds	$3,693,777.00	$1,060,000.00	$17,851.00	$1,271,223.00
	PR	Environmental Emergencies Fund				
3	DE	Hazardous Substance Cleanup Fund	$8,400,000.00	$5,170,000.00	$2,670,000.00	$300,000.00
	DC	None				
	MD	Brownfields Revitalization Incentive Fund	$500,000.00	$500,000.00	$0.00	
		Hazardous Substances Control Fund				
		Voluntary Cleanup Fund		$138,000.00		
	PA	Hazardous Sites Cleanup Fund	$105,000,000.00	$77,000,000.00	$35,000,000.00	$40,000,000.00
		Industrial Sites Cleanup Fund	$13,613,667.00	$15,661,333.00	$1,895,128.00	$1,183,550.00
		Industrial Sites Environmental Assessment Fund	$1,412,817.00	$2,000,000.00	$502,505.00	$2,136,866.00
	VA	State Environmental Emergency Response Fund	$3,545,573.00	$1,078,680.00	$123,422.00	$501,401.00
		Voluntary Remediation Registration Fee Account	$24,208.00	$24,208.00	$0.00	$0.00
	WV	Hazardous Waste Emergency Response Fund	$1,800,000.00	$488,000.00	$758,585.00	$758,585.00
4	AL	Hazardous Substance Cleanup Fund	$615,590.00	$336,000.00	$199,290.00	$0.00

Table V-7: State Cleanup Funds

Reg.	State	Fund Name	Fund Balance	Fund Additions	Total Expended	Total Obligated
4	FL	Water Quality Assurance Trust Fund	$24,529,984.40	$0.00	$22,199,864.64	$10,560,503.39
	GA	Hazardous Waste Trust Fund	$1,073,451.00	$19,076,061.00	$17,589,411.00	$13,791,918.00
	KY	Hazardous Waste Management Fund	$4,000,000.00	$4,400,000.00	$1,800,000.00	$2,100,000.00
	MS	CERCLA Core	$100,000.00		$300,000.00	
		CERCLA PA/SI	$50,000.00	$100,000.00	$100,000.00	
		Pollution Emergency Response Fund	$600,000.00		$1,500,000.00	
		State General Fund	$0.00		$300,000.00	
		Voluntary Evaluation Fund			$80,000.00	
	NC	Cost Share Trust Fund	$1,623,533.00	$800,000.00	$752,311.00	$5,505,773.00
		Emergency Response Fund	$500,000.00	$23,000.00	$6,000.00	
		Inactive Hazardous Sites Cleanup Fund	$2,700,000.00	$0.00	$180,000.00	$180,000.00
	SC	Appropriated Funds	$104,000.00	$104,000.00	$104,000.00	$104,000.00
		Hazardous Waste Contingency Fund	$24,973,099.81	$1,000,000.00	$526,612.53	$20,676,029.00
	TN	Dry Cleaner Environmental Response Fund	$1,978,275.66	$1,621,971.23	$249,834.97	$6,045.75
		Hazardous Waste Remedial Action Fund	$7,581,293.22	$5,322,167.17	$6,959,821.50	
5	IL	Environmental Protection Fund	$11,400,000.00	$1,700,000.00	$3,800,000.00	$2,500,000.00
		Hazardous Waste Fund	$10,500,000.00	$6,800,000.00	$5,000,000.00	$3,200,000.00
	IN	Environmental Management Special Fund				
		Hazardous Substance Response Trust Fund	$24,511,554.00	$6,751,989.00	$4,284,337.00	$9,603,548.00
	MI	Cleanup and Redevelopment Fund		$14,600,000.00		
		Environmental Protection Bond	$7,644,000.00	$21,500,000.00	$40,088,000.00	$12,696,000.00
		General Fund		$10,000,000.00		
	MN	Superfund - (MERLA)	$5,300,398.00	$4,296,000.00	$5,144,005.00	$70,597.00
	OH	Hazardous Waste Cleanup Fund	$17,309,048.75	$12,885,204.18	$12,840,225.91	$1,392,078.76
		Hazardous Waste Facility Management Fund	$12,451,966.74	$9,260,404.95	$3,036,836.48	$75,162.18
		Voluntary Action Program Administration Fund	$1,320,524.12	$390,911.69	$964,314.43	$57,033.03
	WI	Bonding Authority	$20,500,000.00	$15,500,000.00		$6,000,000.00
		Environmental Fund	$881,000.00		$2,567,000.00	$2,432,000.00
6	AR	Emergency Response Trust Fund	$119,461.00	$14,050.00	$59,499.00	$0.00
		Remedial Action Trust Fund	$8,678,730.00	$623,571.00	$141,675.00	
	LA	Hazardous Waste Site Cleanup Fund	$1,693,995.00	$0.00	$200,790.00	$2,306,005.00
	NM	Assessment & Abatement State General Fund	$1,555.00	$230,800.00	$228,569.00	$675.00
		Hazardous Waste Emergency Fund	$1,658,259.00	$93,064.00	$1,843.00	$62,931.00
	OK	Environmental Trust Fund	$0.00	$0.00	$284,364.27	$282,549.35
		Hazardous Waste Fund	$17,168.00	$9,451.29	$593,353.96	$309,296.00

Table V-7: State Cleanup Funds

Reg.	State	Fund Name	Fund Balance	Fund Additions	Total Expended	Total Obligated
6	TX	Hazardous and Solid Waste Remediation Fee Account (Fund 550)	$69,707,181.00	$35,380,165.00	$41,242,559.00	$26,990,271.00
		Spill Response Fund	$191,297.00	$0.00	$0.00	$6,650.00
7	IA	Hazardous Waste Remedial Fund	$1,060,868.00	$347,926.00	$650,391.00	$0.00
	KS	Drycleaning Trust Fund	$0.00	$960,000.00		
		State Environmental Response Fund	$0.00	$616,000.00	$516,000.00	
		State Water Plan Contamination Remediation Account	$0.00	$1,700,000.00	$1,000,000.00	
	MO	Hazardous Waste Fund (VCP)				
		Hazardous Waste Remedial Fund	-$1,300,000.00	$3,100,000.00	$2,700,000.00	$6,500,000.00
	NE	None				
8	CO	Hazardous Substance Response Fund	$11,000,000.00	$3,600,000.00	$1,200,000.00	$16,000,000.00
		Natural Resource Damages Fund	$8,000,000.00		$0.00	
	MT	Direct PRP Fund	$13,763,918.00	$20,386,034.00	$6,630,940.00	$37,040.00
		Environmental Quality Protection Fund	$742,549.00	$779,096.00	$664,721.00	$5,331.00
		Hazardous Waste/CERCLA Account			$16,953.00	
	ND	Environmental Quality Restoration Fund	$160,000.00			
	SD	Regulated Substance Response Fund	$1,750,000.00	$200,000.00		
	UT	Environmental Voluntary Cleanup Fund	$0.00	$0.00	$0.00	$0.00
		Hazardous Substances Mitigation Fund	$1,500,000.00	$400,000.00	$500,000.00	$14,000,000.00
	WY	Trust and Agency Account Fund				
9	AZ	Emergency Response Fund	$70,919.00	$210,464.00	$139,545.00	
		Water Quality Assurance Revolving Fund (1500)	$432,768.00	$1,705,000.00	$1,272,231.00	
		Water Quality Assurance Revolving Fund (4000)	$309,505.00	$3,386,296.00	$3,076,790.00	
	CA	Chaptered Bond	$2,400,000.00		$228,000.00	
		Hazardous Waste Control Account	$11,121.00			$1,588,879.00
	HI	Brownfields Program	$75,000.00	$75,000.00	$0.00	
		Environmental Response Revolving Fund	$0.00	$500,000.00	$711,096.00	
		Voluntary Cleanup Program	$150,000.00	$150,000.00	$0.00	
	NV	Hazardous Waste Management Fund	$1,000,000.00	$300,000.00	$300,000.00	$500,000.00
10	AK	Oil and Hazardous Release Response Fund (Prevention Account)	$24,051,666.00	$22,143,400.00	$19,822,684.00	$1,367,216.00
		Oil and Hazardous Release Response Fund (Response Account)	$52,102,556.00	$79,400.00	$1,007,528.00	$329,339.00
	ID	Governor's Trust Account				
		State Appropriation				

Table V-7: State Cleanup Funds

Reg.	State	Fund Name	Fund Balance	Fund Additions	Total Expended	Total Obligated
10	OR	Dry Cleaner Fund	$689,556.00	$630,440.00	$169,246.00	
		Hazardous Substance Remedial Action Fund	$5,638,648.00	$6,842,255.00	$5,889,847.00	$0.00
		Orphan Site Account	$5,814,148.00	$465,371.00	$5,021,735.00	
	WA	Local Toxics Control Account	$37,459,348.00	$18,791,346.00	$15,639,662.00	$2,328,737.00
		State Toxics Control Account	$7,408,607.00	$23,944,132.00	$27,043,320.00	$5,536,648.00
		Totals:	**$1,413,193,848.70**	**$538,306,253.51**	**$565,137,181.69**	**$447,984,880.46**

Table V-8: Expenditures and Obligation from State Cleanup Funds

Summary

- States spent a total of $565,137,181.69 from their State funds (six States not reporting and two States have no fund).
- The average spent by States was $12,844,026.86, while the median spent by States was $2,273,718.00 (compared to $2,345,000.00 in 1995).
- Total expenditures are distributed as follows:
    - Sixteen (16) States spent less than $1M.
    - Eleven (11) States spent at least $1M but less than $5M.
    - Six States spent at least $5M but less than $10M.
    - Nine States spent at least $10M but less than $50M.
    - Two States spent more than $50M.
- States obligated a total of $447,984,880.46 to be spent in the future (39 States reporting).
- States spent $136,538,032.92 on non-NPL sites (31 States reporting).
- The average spent on non-NPL sites was $4,404,452.67, while the median spent on non-NPL sites was $1,411,776.00 (compared to $1,120,000.00 in 1995).

Table V-8: Expenditures and Obligations from State Cleanup Funds

Reg.	State	Fund Name	Expended for NPL	Expended for non-NPL	Total Expended	Obligated for NPL	Obligated for non-NPL	Total Obligated
1	CT	State Superfund				$0.00	$1,250,000.00	$1,250,000.00
		Urban Sites Remedial Action Fund				$0.00	$30,500,000.0	$30,500,000.00
	ME	Uncontrolled Sites Bond Account			$1,562,807.00			
		Uncontrolled Sites Fund			$704,629.00			
	MA	Oil and Hazardous Material Response Loan	$3,100,000.00	$4,000,000.00	$7,100,000.00	$0.00	$0.00	$0.00
	NH	Hazardous Waste Cleanup Fund	$100,000.00	$1,600,000.00	$1,700,000.00	$7,500,000.00	$0.00	$7,500,000.00
	RI	Environmental Response Fund	$0.00	$300,000.00	$300,000.00	$681,000.00	$0.00	$681,000.00
	VT	Environmental Contingency Fund	$0.00	$500,000.00	$500,000.00	$0.00	$0.00	$0.00
		Petroleum Cleanup Fund	$0.00	$4,700,000.00	$4,700,000.00	$0.00	$800,000.00	$800,000.00
2	NJ	1981 Discharge Bond Fund						$55,900,000.00
		1986 Hazardous Discharge Bond						$42,100,000.00
		1996 Hazardous Discharge Bond	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		Corporate Business Tax (Publicly Funded)			$14,800,000.00			
		Hazardous Discharge Capital Fund			$16,900,000.00			
		Hazardous Discharge Site Cleanup			$21,300,000.00			
		Spill Fund	$0.00	$2,400,000.00	$28,300,000.00	$0.00	$0.00	$0.00
	NY	1986 Environmental Quality Bond Act			$102,000,000.00			$94,000,000.00
		1996 Clean Water/Clean Air Bond Act (brownfield sites)			$0.00			$0.00
		Hazardous Waste Remedial Fund			$56,777,048.00			
		State Capital Funds			$17,851.00			$1,271,223.00
	PR	Environmental Emergencies Fund						
3	DE	Hazardous Substance Cleanup Fund	$0.00	$2,670,000.00	$2,670,000.00	$0.00	$300,000.00	$300,000.00
	DC	None						
	MD	Brownfields Revitalization Incentive Fund			$0.00			
		Hazardous Substances Control Fund						
		Voluntary Cleanup Fund						
	PA	Hazardous Sites Cleanup Fund	$5,000,000.00	$30,000,000.00	$35,000,000.00	$1,000,000.00	$39,000,000.00	$40,000,000.00
		Industrial Sites Cleanup Fund	$0.00	$1,895,128.00	$1,895,128.00	$0.00	$1,183,550.00	$1,183,550.00
		Industrial Sites Environmental Assessment Fund	$0.00	$502,505.00	$502,505.00	$0.00	$2,136,866.00	$2,136,866.00

Table V-8: Expenditures and Obligations from State Cleanup Funds

Reg.	State	Fund Name	Expended for NPL	Expended for non-NPL	Total Expended	Obligated for NPL	Obligated for non-NPL	Total Obligated
3	VA	State Environmental Emergency Response Fund	$0.00	$123,422.00	$123,422.00	$0.00	$501,401.00	$501,401.00
		Voluntary Remediation Registration Fee Account			$0.00			$0.00
	WV	Hazardous Waste Emergency Response Fund			$758,585.00			$758,585.00
4	AL	Hazardous Substance Cleanup Fund	$22,320.00	$176,970.00	$199,290.00	$0.00	$0.00	$0.00
	FL	Water Quality Assurance Trust Fund			$22,199,864.64			$10,560,503.30
	GA	Hazardous Waste Trust Fund	$6,153,577.00	$11,435,834.00	$17,589,411.00	$9,664,359.00	$4,127,579.00	$13,791,918.00
	KY	Hazardous Waste Management Fund	$0.00	$1,800,000.00	$1,800,000.00	$0.00	$2,100,000.00	$2,100,000.00
	MS	CERCLA Core	$0.00	$0.00	$300,000.00			
		CERCLA PA/SI	$0.00	$100,000.00	$100,000.00			
		Pollution Emergency Response Fund	$0.00	$250,000.00	$1,500,000.00			
		State General Fund	$0.00	$300,000.00	$300,000.00			
		Voluntary Evaluation Fund	$0.00	$80,000.00	$80,000.00			
	NC	Cost Share Trust Fund	$752,311.00	$0.00	$752,311.00	$5,505,773.00	$0.00	$5,505,773.00
		Emergency Response Fund	$0.00	$6,000.00	$6,000.00			
		Inactive Hazardous Sites Cleanup Fund	$0.00	$180,000.00	$180,000.00	$0.00	$180,000.00	$180,000.00
	SC	Appropriated Funds	$0.00	$104,000.00	$104,000.00	$0.00	$104,000.00	$104,000.00
		Hazardous Waste Contingency Fund	$0.00	$526,612.53	$526,612.53	$1,252,661.00	$19,423,468.00	$20,676,029.00
	TN	Dry Cleaner Environmental Response Fund			$249,834.97			$6,045.75
		Hazardous Waste Remedial Action Fund			$6,959,821.50			
5	IL	Environmental Protection Fund	$2,100,000.00	$1,700,000.00	$3,800,000.00	$9,200,000.00	$2,100,000.00	$2,500,000.00
		Hazardous Waste Fund	$1,100,000.00	$2,400,000.00	$5,000,000.00	$152,940.00	$2,500,000.00	$3,200,000.00
	IN	Environmental Management Special Fund						
		Hazardous Substance Response Trust Fund	$400,080.00	$3,884,257.00	$4,284,337.00	$288,461.00	$9,315,087.00	$9,603,548.00
	MI	Cleanup and Redevelopment Fund						
		Environmental Protection General Fund			$40,088,000.00			$12,696,000.00
	MN	Superfund - (MERLA)	$203,101.00	$4,940,904.00	$5,144,005.00			$70,597.00
	OH	Hazardous Waste Cleanup Fund			$12,840,225.91		$1,392,078.76	$1,392,078.76
		Hazardous Waste Facility Management Fund			$3,036,836.48			$75,162.18
		Voluntary Action Program Administration Fund		$964,314.43	$964,314.43		$57,033.03	$57,033.03

Table V-8: Expenditures and Obligations from State Cleanup Funds

Reg.	State	Fund Name	Expended for NPL	Expended for non-NPL	Total Expended	Obligated for NPL	Obligated for non-NPL	Total Obligated
5	WI	Bonding Authority				$1,200,000.00	$4,800,000.00	$6,000,000.00
		Environmental Fund			$2,567,000.00			$2,432,000.00
6	AR	Emergency Response Trust Fund			$59,499.00	$0.00	$0.00	$0.00
		Remedial Action Trust Fund			$141,675.00	$0.00	$0.00	$0.00
	LA	Hazardous Waste Site Cleanup Fund	$0.00	$200,790.00	$200,790.00	$1,925,000.00	$381,005.00	$2,306,005.00
	NM	Assessment and Abatement State General Fund	$0.00	$228,569.00	$228,569.00	$0.00	$675.00	$675.00
		Hazardous Waste Emergency Fund	$0.00	$1,843.00	$1,843.00	$0.00	$62,931.00	$62,931.00
	OK	Environmental Trust Fund	$136,473.27	$147,891.00	$284,364.27	$282,549.35	$0.00	$282,549.35
		Hazardous Waste Fund	$47,155.00	$546,198.96	$593,353.96	$138,964.00	$170,332.00	$309,296.00
	TX	Hazardous and Solid Waste Remediation Fee Account			$41,242,559.00			$26,990,271.00
		Spill Response Fund			$0.00			$6,650.00
7	IA	Hazardous Waste Remedial Fund			$650,391.00			$0.00
	KS	Drycleaning Trust Fund		$960,000.00				
		State Environmental Response Fund	$0.00	$516,000.00	$516,000.00			
		State Water Plan Contamination Remediation Account	$0.00	$1,000,000.00	$1,000,000.00			
	MO	Hazardous Waste Fund						
		Hazardous Waste Remedial Fund	$600,000.00	$2,100,000.00	$2,700,000.00	$5,000,000.00	$1,500,000.00	$6,500,000.00
	NE	None						
8	CO	Hazardous Substance Response Fund	$1,200,000.00		$1,200,000.00			$16,000,000.00
		Natural Resource Damages Fund			$0.00			
	MT	Direct PRP Fund	$6,491,160.00	$139,780.00	$6,630,940.00	$21,162.00	$15,878.00	$37,040.00
		Environmental Quality Protection Fund	$0.00	$664,721.00	$664,721.00	$0.00	$5,331.00	$5,331.00
		Hazardous Waste/CERCLA Account	$16,953.00	$0.00	$16,953.00			
	ND	Environmental Quality Restoration Fund						
	SD	Regulated Substance Response Fund						
	UT	Environmental Voluntary Cleanup Fund	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		Hazardous Substances Mitigation Fund	$0.00	$0.00	$500,000.00	$4,000,000.00	$10,000,000.00	$14,000,000.00

Table V-8: Expenditures and Obligations from State Cleanup Funds

Reg.	State	Fund Name	Expended for NPL	Expended for non-NPL	Total Expended	Obligated for NPL	Obligated for non-NPL	Total Obligated
8	WY	Trust and Agency Account Fund						
9	AZ	Emergency Response Fund		$139,545.00	$139,545.00			
		Water Quality Assurance Revolving Fund (1500)		$1,272,231.00	$1,272,231.00			
		Water Quality Assurance Revolving Fund (4000)			$3,076,790.00			
	CA	Chaptered Bond	$189,000.00	$39,000.00	$228,000.00			
		Hazardous Waste Control Account				$998,614.00	$590,265.00	$1,588,879.00
	HI	Brownfields Program			$0.00			
		Environmental Response Revolving Fund		$711,096.00	$711,096.00			
		Voluntary Cleanup Program			$0.00			
	NV	Hazardous Waste Management Fund	$0.00	$300,000.00	$300,000.00	$0.00	$500,000.00	$500,000.00
10	AK	Oil and Hazardous Release Response Fund (Prevention Account)			$19,822,684.00			$1,367,216.00
		Oil and Hazardous Release Response Fund (Response Account)			$1,007,528.00			$329,339.00
	ID	Governor's Trust Account	$120,000.00					
		State Appropriation	$520,000.00					
	OR	Dry Cleaner Fund	$0.00	$169,246.00	$169,246.00			
		Hazardous Substance Remedial Action Fund	$0.00	$5,889,847.00	$5,889,847.00	$0.00	$0.00	$0.00
		Orphan Site Account	$0.00	$5,021,735.00	$5,021,735.00			
	WA	Local Toxics Control Account	$3,533,389.00	$12,106,273.00	$15,639,662.00			$2,328,737.00
		State Toxics Control Account	$200,000.00	$26,843,320.00	$27,043,320.00	$0.00		$5,536,648.00
		Totals:	**$31,985,519.27**	**$136,538,032.92**	**$565,137,181.69**	**$48,811,483.35**	**$134,997,479.79**	**$447,984,880.46**

Table V-9: Sources of State Cleanup Funds

Summary

Significant sources of funds (greater than 20% of fund additions) are:

- Appropriations in 14 States (17 funds).
- Penalties and fines in 10 States (11 funds).
- Bonds in nine States (14 funds).
- Cost recoveries in 16 States (17 funds).
- Waste fees in 19 States (20 funds).
- Taxes in 14 States (19 funds).
- Interest in seven States (nine funds).
- Transfers in three States (four funds).
- Private funds in one State (one fund).
- User fees in 11 States (11 funds).

Table V-9: Sources of State Cleanup Funds

Reg.	State	Fund Name	A	PE	B	CR	WF	TX	I	TR	PF	UF	O
1	CT	State Superfund			S								
		Urban Sites Remedial Action Fund			S								
	ME	Uncontrolled Sites Bond Account			S								
		Uncontrolled Sites Fund	m			S			S				
	MA	Oil and Hazardous Material Response Loan			S								
	NH	Hazardous Waste Cleanup Fund		m		S	S		m				
	RI	Environmental Response Fund	S	S		m			m				
	VT	Environmental Contingency Fund		m		m		S	m				
		Petroleum Cleanup Fund				m		S	m				
2	NJ	1981 Discharge Bond Fund			S								
		1986 Hazardous Discharge Bond			S								
		1996 Hazardous Discharge Bond			S								
		Corporate Business Tax (Publicly Funded)						S					
		Hazardous Discharge Capital Fund			S								
		Hazardous Discharge Site Cleanup				S			m			S	S
		Spill Fund				m		S	m				m
	NY	1986 Environmental Quality Bond Act			S								
		1996 Clean Water/Clean Air Bond Act (brownfield sites)			S								
		Hazardous Waste Remedial Fund	m	m	m	m	S	S	m	S	m	m	
		State Capital Funds	S										
	PR	Environmental Emergencies Fund											
3	DE	Hazardous Substance Cleanup Fund		m		m		S	m			m	
	DC	None											
	MD	Brownfields Revitalization Incentive Fund	S										
		Hazardous Substances Control Fund	S	m		S							
		Voluntary Cleanup Fund										S	
	PA	Hazardous Sites Cleanup Fund		m		m	m	S	m			m	
		Industrial Sites Cleanup Fund							m	S			m
		Industrial Sites Environmental Assessment Fund							m	S			
	VA	State Environmental Emergency Response Fund		S		m			m				
		Voluntary Remediation Registration Fee Account										S	
	WV	Hazardous Waste Emergency Response Fund				m	S						
4	AL	Hazardous Substance Cleanup Fund	m			m	S						
	FL	Water Quality Assurance Trust Fund					m	S	m	m			
	GA	Hazardous Waste Trust Fund		S			S		m				m
	KY	Hazardous Waste Management Fund					S						
	MS	CERCLA Core	m										S
		CERCLA PA/SI	m										S
		Pollution Emergency Response Fund		S		S			m				
		State General Fund	S										
		Voluntary Evaluation Fund										S	

S = Significant funding source (>20%) m = Minor funding source (<20%)
A: Appropriations PE: Penalties B: Bonds CR: Cost Recoveries WF: Waste Fees
TX: Taxes I: Interest TR: Transfers PF: Private Funds UF: User Fees O: Other Source

Table V-9: Sources of State Cleanup Funds

Reg.	State	Fund Name	A	PE	B	CR	WF	TX	I	TR	PF	UF	O
4	NC	Cost Share Trust Fund	S			m			m				
		Emergency Response Fund							S				
		Inactive Hazardous Sites Cleanup Fund							S				
	SC	Appropriated Funds	S										
		Hazardous Waste Contingency Fund				m	S						
	TN	Dry Cleaner Environmental Response Fund	m	m		m			m			S	S
		Hazardous Waste Remedial Action Fund	S	m		S	S		m			m	
5	IL	Environmental Protection Fund											
		Hazardous Waste Fund	m	S	m	S	m	m	m	m	m	S	
	IN	Environmental Management Special Fund											
		Hazardous Substance Response Trust Fund				m	S		S				
	MI	Cleanup and Redevelopment Fund	S		m	m			m		m	m	m
		Environmental Protection Bond			S				m				
		General Fund	S	m									
	MN	Superfund - (MERLA)		m		S		S	m				m
	OH	Hazardous Waste Cleanup Fund		m		S	S						m
		Hazardous Waste Facility Management Fund					S						
		Voluntary Action Program Administration Fund				m						S	S
	WI	Bonding Authority			S								
		Environmental Fund	m	m		m	S					m	
6	AR	Emergency Response Trust Fund		S		m							
		Remedial Action Trust Fund		S		m	S		S				
	LA	Hazardous Waste Site Cleanup Fund		S		m		S	m				
	NM	Assessment & Abatement State General Fund	S	m							m		
		Hazardous Waste Emergency Fund		S									
	OK	Environmental Trust Fund						S					
		Hazardous Waste Fund		m						S			
	TX	Hazardous and Solid Waste Remediation Fee Account (Fund 550)				m	S		m			m	S
		Spill Response Fund	S										
7	IA	Hazardous Waste Remedial Fund				m	S						
	KS	Drycleaning Trust Fund						S					
		State Environmental Response Fund				S							
		State Water Plan Contamination Remediation Account						S					
	MO	Hazardous Waste Fund (VCP)										S	
		Hazardous Waste Remedial Fund		m		S		S	m				
	NE	None											
8	CO	Hazardous Substance Response Fund				S	S		m				
		Natural Resource Damages Fund							m				S

S = Significant funding source (>20%) m = Minor funding source (<20%)
A: Appropriations PE: Penalties B: Bonds CR: Cost Recoveries WF: Waste Fees
TX: Taxes I: Interest TR: Transfers PF: Private Funds UF: User Fees O: Other Source

Table V-9: Sources of State Cleanup Funds

Reg.	State	Fund Name	A	PE	B	CR	WF	TX	I	TR	PF	UF	O
8	MT	Direct PRP Fund										S	
		Environmental Quality Protection Fund				S			S				
		Hazardous Waste/CERCLA Account							S				
	ND	Environmental Quality Restoration Fund		S		m			m				
	SD	Regulated Substance Response Fund		S					m				
	UT	Environmental Voluntary Cleanup Fund									S	S	
		Hazardous Substances Mitigation Fund	S						m		m		S
	WY	Trust and Agency Account Fund											
9	AZ	Emergency Response Fund	S										
		Water Quality Assurance Revolving Fund	S										
		Water Quality Assurance Revolving Fund		m		S	S		m			m	
	CA	Chaptered Bond			S								
		Hazardous Waste Control Account	S	m		m	m						
	HI	Brownfields Program											S
		Environmental Response Revolving Fund		m		m		S				m	
		Voluntary Cleanup Program											S
	NV	Hazardous Waste Management Fund		m		m	S		m				
10	AK	Oil and Hazardous Release Response Fund (Prevention Account)				S		S	S				
		Oil and Hazardous Release Response Fund (Response Account)				S		S					
	ID	Governor's Trust Account											S
		State Appropriation	S										
	OR	Dry Cleaner Fund											S
		Hazardous Substance Remedial Action Fund		m		S	S		m			S	
		Orphan Site Account			S				S				
	WA	Local Toxics Control Account						S					
		State Toxics Control Account		m		m	S	S	m	m		m	

S = Significant funding source (>20%) m = Minor funding source (<20%)
A: Appropriations PE: Penalties B: Bonds CR: Cost Recoveries WF: Waste Fees
TX: Taxes I: Interest TR: Transfers PF: Private Funds UF: User Fees O: Other Source

Table V-10: Uses of State Cleanup Funds

Summary

Authorized uses for funds are:

- Site Investigation in 46 States (74 funds).
- CERCLA Match in 44 States (59 funds).
- Studies and Design in 44 States (70 funds).
- Operations and Maintenance in 44 States (66 funds).
- Removals in 47 States (74 funds).
- Victim Compensation in eight States (nine funds).
- Emergency Response in 48 States (68 funds).
- Grants to Local Governments in 18 States (27 funds).
- Remedial Actions in 42 States (70 funds).
- Program Administration in 44 States (74 funds).
- Natural Resource Restoration in 21 States (27 funds).

Table V-10: Uses of State Cleanup Funds

Reg.	State	Fund Name	SI	CM	SD	O&M	RM	VC	ER	GLG	RA	PA	NRR	O
1	CT	State Superfund	X	X	X	X	X	X	X	X	X	X	X	
		Urban Sites Remedial Action Fund	X	X	X	X	X	X	X	X	X	X	X	
	ME	Uncontrolled Sites Bond Account	X	X	X	X	X		X	X	X	X	X	
		Uncontrolled Sites Fund	X	X	X	X	X		X	X	X	X	X	
	MA	Oil and Hazardous Material Response Loan	X	X	X	X	X		X	X	X	X	X	
	NH	Hazardous Waste Cleanup Fund	X		X	X	X	X	X	X	X	X		
	RI	Environmental Response Fund	X	X	X	X	X	X	X		X	X	X	
	VT	Environmental Contingency Fund	X	X	X	X	X		X	X	X	X		
		Petroleum Cleanup Fund	X		X	X	X	X	X		X	X		
2	NJ	1981 Discharge Bond Fund	X	X	X	X	X		X		X	X		
		1986 Hazardous Discharge Bond	X	X	X	X	X		X		X	X		
		1996 Hazardous Discharge Bond	X	X	X	X	X		X		X	X		
		Corporate Business Tax (Publicly Funded)	X	X	X	X	X				X	X		
		Hazardous Discharge Capital Fund	X	X	X	X	X		X		X			
		Hazardous Discharge Site Cleanup	X	X	X	X	X		X		X	X		
		Spill Fund	X	X	X	X	X	X	X		X	X		
	NY	1986 Environmental Quality Bond Act	X	X	X	X	X		X	X	X	X		
		1996 Clean Water/Clean Air Bond Act (brownfield sites)	X		X		X			X	X	X		X
		Hazardous Waste Remedial Fund				X						X		X
		State Capital Funds			X		X			X				
	PR	Environmental Emergencies Fund		X					X			X		
3	DE	Hazardous Substance Cleanup Fund	X	X	X	X	X		X		X	X	X	
	DC	None												
	MD	Brownfields Revitalization Incentive Fund									X			
		Hazardous Substances Control Fund	X	X	X	X	X		X		X	X	X	
		Voluntary Cleanup Fund									X	X	X	
	PA	Hazardous Sites Cleanup Fund	X	X	X	X	X	X	X	X	X	X	X	
		Industrial Sites Cleanup Fund	X				X			X	X	X		
		Industrial Sites Environmental Assessment Fund	X							X				
	VA	State Environmental Emergency Response Fund	X	X	X	X	X	X	X		X		X	X
		Voluntary Remediation Registration Fee Account										X		

SI: Site Investigation CM: CERCLA Match SD: Studies and Design O&M: Operations and Maintenance
RM: Removals VC: Victim Compensation ER: Emergency Response GLG: Grants to Local Governments
RA: Remedial Actions PA: Program Administration NRR: Natural Resource Restorations O: Other

Table V-10: Uses of State Cleanup Funds

Reg.	State	Fund Name	SI	CM	SD	O&M	RM	VC	ER	GLG	RA	PA	NRR	O
3	WV	Hazardous Waste Emergency Response Fund		X		X	X		X			X		
4	AL	Hazardous Substance Cleanup Fund	X	X	X	X	X		X		X	X		
	FL	Water Quality Assurance Trust Fund	X	X	X	X	X		X	X	X	X	X	
	GA	Hazardous Waste Trust Fund	X		X	X	X		X	X	X	X		X
	KY	Hazardous Waste Management Fund	X	X	X	X	X		X		X	X	X	
	MS	CERCLA Core										X		
		CERCLA PA/SI	X											
		Pollution Emergency Response Fund	X	X	X		X		X					
		State General Fund	X									X		X
		Voluntary Evaluation Fund												X
	NC	Cost Share Trust Fund		X	X	X	X		X		X			
		Emergency Response Fund							X					X
		Inactive Hazardous Sites Cleanup Fund	X		X		X		X		X			
	SC	Appropriated Funds	X	X	X	X	X		X		X			
		Hazardous Waste Contingency Fund	X	X	X	X	X		X		X	X		
	TN	Dry Cleaner Environmental Response Fund	X		X	X	X				X	X		
		Hazardous Waste Remedial Action Fund	X	X	X	X	X		X	X	X	X		
5	IL	Environmental Protection Fund	X		X	X	X				X	X		
		Hazardous Waste Fund	X	X	X	X	X		X		X	X		
	IN	Environmental Management Special Fund												
		Hazardous Substance Response Trust Fund	X	X	X	X	X		X		X	X	X	
	MI	Cleanup and Redevelopment Fund	X	X	X	X	X		X	X	X	X	X	
		Environmental Protection Bond	X	X	X	X	X		X	X	X	X		
		General Fund	X	X	X	X	X		X	X	X	X		
	MN	Superfund - (MERLA)	X	X	X	X	X	X	X	X	X	X	X	X
	OH	Hazardous Waste Cleanup Fund	X		X	X	X			X	X	X		
		Hazardous Waste Facility Management Fund		X					X			X		
		Voluntary Action Program Administration Fund										X		
	WI	Bonding Authority		X							X			
		Environmental Fund	X	X	X	X	X		X		X	X		

SI: Site Investigation CM: CERCLA Match SD: Studies and Design O&M: Operations and Maintenance
RM: Removals VC: Victim Compensation ER: Emergency Response GLG: Grants to Local Governments
RA: Remedial Actions PA: Program Administration NRR: Natural Resource Restorations O: Other

Table V-10: Uses of State Cleanup Funds

Reg.	State	Fund Name	SI	CM	SD	O&M	RM	VC	ER	GLG	RA	PA	NRR	O
6	AR	Emergency Response Trust Fund					X		X					
		Remedial Action Trust Fund	X	X	X	X	X				X	X		X
	LA	Hazardous Waste Site Cleanup Fund	X	X	X	X	X		X		X	X		
	NM	Assessment and Abatement State General Fund	X		X	X						X		
		Hazardous Waste Emergency Fund	X	X	X		X		X					
	OK	Environmental Trust Fund		X										
		Hazardous Waste Fund	X	X			X		X	X		X		
	TX	Hazardous and Solid Waste Remediation Fee Account (Fund 550)	X	X	X	X	X		X		X	X		
		Spill Response Fund					X		X					
7	IA	Hazardous Waste Remedial Fund	X	X	X	X	X		X	X	X	X		X
	KS	Drycleaning Trust Fund	X		X	X	X		X		X	X		
		State Environmental Response Fund										X		
		State Water Plan Contamination Remediation Account	X	X	X	X	X		X		X	X		
	MO	Hazardous Waste Fund (VCP)										X		
		Hazardous Waste Remedial Fund	X	X	X	X	X		X		X	X		X
	NE	None												
8	CO	Hazardous Substance Response Fund		X		X	X					X		
		Natural Resource Damages Fund											X	
	MT	Direct PRP Fund	X		X	X	X		X		X	X		
		Environmental Quality Protection Fund	X	X	X	X	X		X		X	X	X	
		Hazardous Waste/CERCLA Account	X	X	X	X	X		X		X	X	X	
	ND	Environmental Quality Restoration Fund	X		X		X		X		X			
	SD	Regulated Substance Response Fund	X		X	X	X		X		X		X	
	UT	Environmental Voluntary Cleanup Fund												X
		Hazardous Substances Mitigation Fund	X	X	X	X	X		X				X	X
	WY	Trust and Agency Account Fund							X					
9	AZ	Emergency Response Fund							X					
		Water Quality Assurance Revolving Fund (1500)	X	X	X	X	X				X			
		Water Quality Assurance Revolving Fund (4000)										X		

SI: Site Investigation CM: CERCLA Match SD: Studies and Design O&M: Operations and Maintenance
RM: Removals VC: Victim Compensation ER: Emergency Response GLG: Grants to Local Governments
RA: Remedial Actions PA: Program Administration NRR: Natural Resource Restorations O: Other

Table V-10: Uses of State Cleanup Funds

Reg.	State	Fund Name	SI	CM	SD	O&M	RM	VC	ER	GLG	RA	PA	NRR	O
9	CA	Chaptered Bond	X	X	X	X	X		X		X	X		
		Hazardous Waste Control Account	X	X	X	X	X		X		X	X		
	HI	Brownfields Program	X		X						X	X		
		Environmental Response Revolving Fund	X	X	X	X	X		X		X	X	X	
		Voluntary Cleanup Program										X		
	NV	Hazardous Waste Management Fund	X	X	X	X	X		X		X	X	X	
10	AK	Oil and Hazardous Release Response Fund (Prevention Account)	X	X	X	X	X		X	X	X	X		X
		Oil and Hazardous Release Response Fund (Response Account)							X					
	ID	Governor's Trust Account	X								X			
		State Appropriation	X								X			
	OR	Dry Cleaner Fund	X		X	X	X		X			X	X	
		Hazardous Substance Remedial Action Fund	X	X	X	X	X		X	X	X	X	X	
		Orphan Site Account			X	X	X			X	X	X		
	WA	Local Toxics Control Account	X		X	X	X			X	X	X	X	
		State Toxics Control Account	X	X	X	X	X		X		X	X	X	

SI: Site Investigation CM: CERCLA Match SD: Studies and Design O&M: Operations and Maintenance
RM: Removals VC: Victim Compensation ER: Emergency Response GLG: Grants to Local Governments
RA: Remedial Actions PA: Program Administration NRR: Natural Resource Restorations O: Other

Table V-11: State Cleanup Policies and Criteria

Summary

- Forty-seven (47) States employ risk assessment for carcinogens at specific sites, 22 by statute or regulation and 25 by policy or on an ad hoc basis.
- Forty-seven (47) States employ risk assessment for noncarcinogens at specific sites, 22 by statute or regulation and 25 by policy or on an ad hoc basis.
- Forty-four (44) States reference background levels, 24 by statute or regulation and 20 by policy or on an ad hoc basis.
- Forty-seven (47) States apply surface water quality criteria in determining cleanup levels, 39 by statute or regulation and eight by policy or on an ad hoc basis.
- Forty-eight (48) States apply MCLs and/or MCLGs, 40 by statute or regulation and eight by policy or on an ad hoc basis.
- Thirty-nine (39) States apply groundwater standards, 34 by statute or regulation and five by policy or on an ad hoc basis.
- Thirty-four (34) States apply soil standards to determine cleanup levels, 19 by statute or regulation and 15 by policy or on an ad hoc basis.
- Forty-one (41) States employ land-use based cleanup levels at specific sites, 20 by statute or regulation and 21 by policy or on an ad hoc basis.

Table V-11: State Cleanup Policies and Criteria

Reg.	State	Risk Assessment Carcinogens	Risk Assessment Noncarcinogens	Background Levels	Water Quality Criteria	MCLs/ MCLGs	Ground water Standards	Soil Standards	Land-use Based	Other Standards
1	CT	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	ME	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc	
	MA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	NH	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	
	RI	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	VT	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
2	NJ	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	
	NY	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
	PR									
3	DE	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	Stat./reg.	
	DC									
	MD	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.			
	PA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	VA	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.			Policy/ad hoc	
	WV	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	Stat./reg.	
4	AL	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Policy/ad hoc		Policy/ad hoc	
	FL	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	GA			Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	KY	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	
	MS	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			Policy/ad hoc	
	NC	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		Stat./reg.	
	SC	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
	TN	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.			Policy/ad hoc	
5	IL	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	IN	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	
	MI	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	MN	Policy/ad hoc	Policy/ad hoc		Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	OH	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	
	WI	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc		Stat./reg.	Stat./reg.	Stat./reg.	
6	AR	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.		Policy/ad hoc	Policy/ad hoc	Policy/ad hoc
	LA			Policy/ad hoc	Stat./reg.	Stat./reg.				Policy/ad hoc
	NM	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	Stat./reg.		
	OK	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	
	TX	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
7	IA	Policy/ad hoc	Policy/ad hoc			Stat./reg.	Stat./reg.			
	KS	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	Policy/ad hoc	
	MO	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc	
	NE									
8	CO	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.			
	MT	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	

Table V-11: State Cleanup Policies and Criteria

Reg.	State	Risk Assessment Carcinogens	Risk Assessment Noncarcinogens	Background Levels	Water Quality Criteria	MCLs/ MCLGs	Ground water Standards	Soil Standards	Land-use Based	Other Standards
8	ND	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	
	SD	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		
	UT	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	
	WY	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	Policy/ad hoc		
9	AZ	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.
	CA	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	Policy/ad hoc
	HI	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		
	NV	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
10	AK	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	
	ID	Policy/ad hoc	Policy/ad hoc		Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
	OR	Stat./reg.	Stat./reg.	Stat./reg.				Stat./reg.	Stat./reg.	Stat./reg.
	WA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.

Table V-12: State Cleanup Policies and Criteria for Voluntary Cleanup Programs

Summary

- Forty-four (44) States employ risk assessment for carcinogens at specific sites, 25 by statute or regulation and 19 by policy or on an ad hoc basis.
- Forty-four (44) States employ risk assessment for noncarcinogens at specific sites, 25 by statute or regulation and 19 by policy or on an ad hoc basis.
- Thirty-nine (39) States reference background levels, 25 by statute or regulation and 14 by policy or on an ad hoc basis.
- Forty-two (42) States apply surface water quality criteria in determining cleanup levels, 34 by statute or regulation and eight by policy or on an ad hoc basis.
- Forty-two (42) States apply MCLs and/or MCLGs, 34 by statute or regulation and eight by policy or on an ad hoc basis.
- Thirty-five (35) States apply groundwater standards, 29 by statute or regulation and six by policy or on an ad hoc basis.
- Thirty (30) States apply soil standards to determine cleanup levels, 18 by statute or regulation and 12 by policy or on an ad hoc basis.
- Forty-one (41) States employ land-use based cleanup levels at specific sites, 24 by statute or regulation and 17 by policy or on an ad hoc basis.

Table V-12: State Cleanup Policies and Criteria for Voluntary Cleanup Programs

Reg.	State	Risk Assessment Carcinogens	Risk Assessment Noncarcinogens	Background Levels	Water Quality Criteria	MCLs/ MCLGs	Ground water Standards	Soil Standards	Land-use Based	Other Standards
1	CT	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	ME	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc	
	MA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	NH	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	
	RI	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	VT	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
2	NJ	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	
	NY	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
	PR									
3	DE	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	Stat./reg.	
	DC									
	MD	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		Stat./reg.	
	PA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	VA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.			Stat./reg.	
	WV	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	Stat./reg.	
4	AL	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Policy/ad hoc		Policy/ad hoc	
	FL	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	GA									
	KY									
	MS	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			Policy/ad hoc	
	NC	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		Stat./reg.	
	SC	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
	TN	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.			Policy/ad hoc	
5	IL	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	IN	Policy/ad hoc	Policy/ad hoc		Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	
	MI	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	MN	Policy/ad hoc	Policy/ad hoc		Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	OH	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
	WI	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc		Stat./reg.	Stat./reg.	Stat./reg.	
6	AR	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.		Policy/ad hoc	Policy/ad hoc	Policy/ad hoc
	LA									
	NM	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	Stat./reg.		
	OK	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Policy/ad hoc	
	TX	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
7	IA	Stat./reg.	Stat./reg.	Stat./reg.			Stat./reg.	Stat./reg.		
	KS	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	Stat./reg.	
	MO	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc	
	NE	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	

Table V-12: State Cleanup Policies and Criteria for Voluntary Cleanup Programs

Reg.	State	Risk Assessment Carcinogens	Risk Assessment Noncarcinogens	Background Levels	Water Quality Criteria	MCLs/ MCLGs	Ground water Standards	Soil Standards	Land-use Based	Other Standards
8	CO	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Stat./reg.	
	MT	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc	Stat./reg.	
	ND									
	SD									
	UT	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Policy/ad hoc	
	WY									
9	AZ	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.
	CA	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	Policy/ad hoc
	HI	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		
	NV	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	
10	AK	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	
	ID	Policy/ad hoc	Policy/ad hoc		Stat./reg.	Stat./reg.	Stat./reg.		Policy/ad hoc	
	OR	Stat./reg.	Stat./reg.	Stat./reg.				Stat./reg.	Stat./reg.	Stat./reg.
	WA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.

Table V-13: Public Participation

Summary

- Forty-one (41) States use a form of public participation.
- Twenty-eight (28) States have statutory or regulatory requirements for some forms of public participation.
- Eighteen (18) States solicit some forms of public participation as a matter of policy or on an ad hoc basis.
- Five States receive authorization for public participation from both statutes or regulations and policies or on an ad hoc basis, while 23 States have only statutory or regulatory requirements, and 13 solicit public participation strictly as a matter of policy or on an ad hoc basis.
- Thirty-nine (39) States provide public notification during site handling.
- Thirty-eight (38) States have provisions for public comment.
- Thirty-seven (37) States report provisions for public hearings/meetings.
- Nine States make grants available to citizen groups.
- Eight States have additional public participation provisions, such as advisory groups or document availability, to assist in sight cleanups.

Table V-13: Public Participation

Reg.	State	Public Notice	Public Comment	Hearings/ Meetings	Citizen Groups Grants	Other	Other By
1	CT	Stat./reg.	Stat./reg.	Stat./reg.			
	ME						
	MA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		
	NH						
	RI	Stat./reg.	Stat./reg.	Policy/ad hoc			
	VT						
2	NJ	Stat./reg.	Stat./reg.	Stat./reg.		Advisory groups as needed	
	NY	Stat./reg.	Stat./reg.	Stat./reg.		Citizen participation plans	Stat./reg.
	PR						
3	DE	Stat./reg.	Stat./reg.	Stat./reg.			
	DC						
	MD	Stat./reg.	Stat./reg.	Stat./reg.			
	PA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		
	VA						
	WV						
4	AL		Stat./reg.				
	FL	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	GA	Stat./reg.	Stat./reg.	Policy/ad hoc			
	KY	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		
	MS	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	NC	Stat./reg.	Stat./reg.	Stat./reg.			
	SC	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	TN	Stat./reg.	Stat./reg.	Stat./reg.			
5	IL						
	IN	Stat./reg.	Stat./reg.	Stat./reg.			
	MI	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.	Can hold informational meetings and write press releases at any time	Stat./reg.
	MN	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Community Action Groups	Policy/ad hoc
	OH	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc		
	WI	Stat./reg.	Stat./reg.	Stat./reg.			
6	AR	Stat./reg.	Stat./reg.	Stat./reg.			
	LA	Stat./reg.	Stat./reg.	Stat./reg.			
	NM	Stat./reg.	Stat./reg.	Stat./reg.	Policy/ad hoc		
	OK						
	TX	Stat./reg.	Stat./reg.	Stat./reg./ad			
7	IA					Some ad hoc participation	Policy/ad hoc
	KS	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	MO	Stat./reg.	Stat./reg.	Stat./reg.			

Table V-13: Public Participation

Reg.	State	Public Notice	Public Comment	Hearings/ Meetings	Citizen Groups Grants	Other	Other By
7	NE						
8	CO	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	MT	Stat./reg.		Stat./reg.	Stat./reg.		
	ND	Policy/ad hoc					
	SD	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Disclosure law	Stat./reg.
	UT	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Document availability	Policy/ad hoc
	WY	Policy/ad hoc	Policy/ad hoc				
9	AZ	Stat./reg.	Stat./reg.	Stat./reg.			
	CA	Stat./reg.	Stat./reg.	Stat./reg.		Fact Sheets	Stat./reg.
	HI	Stat./reg.	Stat./reg.	Stat./reg.			
	NV						
10	AK	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		
	ID	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	OR	Stat./reg.	Stat./reg.	Stat./reg.			
	WA	Stat./reg.	Stat./reg.	Stat./reg.	Stat./reg.		

Table V-14: Public Participation for Voluntary Cleanup Programs

Summary

- Thirty-seven (37) States use some form of public participation within the voluntary cleanup program.
- Twenty-eight (28) States have statutory or regulatory requirements for some forms of public participation.
- Thirteen (13) States solicit some forms of public participation as a matter of policy or on an ad hoc basis.
- Four States receive authorization for public participation from both statutes or regulations and policies or on an ad hoc basis, while 24 States have only statutory or regulatory requirements, and nine solicit public participation strictly as a matter of policy or on an ad hoc basis.
- Thirty-six (36) States report public notification during site handling within the voluntary cleanup program.
- Thirty-four (34) States report provisions for public comment within the voluntary cleanup program.
- Thirty-one (31) States report provisions for public meetings or hearings within the voluntary cleanup program.
- Two States make grants available to citizen groups within the voluntary cleanup program.
- Seven States have additional public participation provisions, such as advisory groups or document availability, to assist in sight cleanups.

Table V-14: Public Participation for Voluntary Cleanup Programs

Reg.	State	Public Notice	Public Comment	Hearings/ Meetings	Citizen Groups Grants	Other	Other By
1	CT	Stat./pol.	Stat./reg.	Stat./reg.			
	ME						
	MA	Stat./pol.	Stat./reg.	Stat./reg.	Stat./reg.		
	NH						
	RI	Stat./pol.	Stat./reg.	Policy/ad hoc			
	VT	Stat./pol.	Stat./reg.				
2	NJ	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Advisory groups as needed	
	NY	Policy/ad hoc	Policy/ad hoc				
	PR						
3	DE	Stat./pol.	Stat./reg.	Stat./reg.			
	DC						
	MD	Stat./pol.	Stat./reg.	Stat./reg.			
	PA	Stat./pol.	Stat./reg.			Public Involvement Plans for certain cleanups using site-specific standards	Stat./reg.
	VA	Stat./pol.	Stat./reg.			Local government participation	Stat./reg.
	WV	Stat./pol.	Stat./reg.	Stat./reg.			
4	AL						
	FL	Stat./pol.	Stat./reg.	Stat./reg.			
	GA						
	KY						
	MS	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	NC	Stat./pol.	Stat./reg.	Stat./reg.			
	SC	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
	TN	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			
5	IL						
	IN	Stat./pol.	Stat./reg.	Stat./reg.			
	MI	Stat./pol.	Stat./reg.	Stat./reg.	Stat./reg.		
	MN	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Community Action Groups	
	OH	Stat./pol.	Policy/ad hoc	Stat./reg.			
	WI	Stat./pol.	Stat./reg.	Stat./reg.			
6	AR	Stat./pol.	Stat./reg.	Stat./reg.			
	LA			Stat./reg.			
	NM	Stat./pol.	Stat./reg.	Stat./reg.			
	OK	Stat./pol.	Stat./reg.	Stat./reg.		Citizen oversight committees	Policy/ad hoc
	TX	Stat./pol.	Policy/ad hoc	Policy/ad hoc			
7	IA	Stat./pol.					
	KS	Stat./pol.	Stat./reg.	Stat./reg.			
	MO	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc			

Table V-14: Public Participation for Voluntary Cleanup Programs

Reg.	State	Public Notice	Public Comment	Hearings/ Meetings	Citizen Groups Grants	Other	Other By
7	NE						
8	CO	Policy/ad hoc					
	MT	Stat./pol.	Stat./reg.	Stat./reg.			
	ND						
	SD						
	UT	Policy/ad hoc	Policy/ad hoc	Policy/ad hoc		Document availability	Policy/ad hoc
	WY						
9	AZ	Stat./pol.	Stat./reg.	Stat./reg.			
	CA	Stat./pol.	Stat./reg.	Stat./reg.		Fact sheets	Stat./reg.
	HI	Stat./pol.	Stat./reg.	Stat./reg.			
	NV						
10	AK						
	ID	Stat./pol.	Stat./reg.	Stat./reg.			
	OR	Stat./pol.	Stat./reg.	Stat./reg.			
	WA						

Table V-15: Liability Standards

Summary

General

- Forty-three (43) States have retroactive liability.
- Thirty-two (32) States have strict, joint and several liability.

Culpability Standards

- Forty-one (41) States have strict liability.
- Eleven (11) States have a liability standard other than strict or do not specify standards.

Allocation Standards

- Thirty-six (36) States have joint and several liability; eleven of these also allow responsible parties to seek apportionment.
- Five States have proportional liability.
- Eleven (11) States do not specify allocation standards or lack enforcement provisions.

Table V-15: Liability Standards

Reg.	State	Retroactive	Strict	Joint and Several	Proportional	Other	Not Specified
1	Connecticut	X	X	X			
	Maine	X	X	X			
	Massachusetts	X	X	X			
	New Hampshire	X	X	X			
	Rhode Island	X	X	X			
	Vermont	X	X	X	X		
2	New Jersey	X	X	X			
	New York	X	X	X			
	Puerto Rico	X	X				
3	Delaware	X	X	X			
	District of Columbia						X
	Maryland	X	X	X	X		
	Pennsylvania	X	X	X	X		
	Virginia	X	X				
	West Virginia						X
4	Alabama	X			X		
	Florida	X	X	X			
	Georgia	X	X	X			
	Kentucky	X	X	X			
	Mississippi	X	X	X	X		
	North Carolina	X	X	X			
	South Carolina	X	X	X			
	Tennessee	X			X		
5	Illinois	X	X	X	X		
	Indiana	X	X	X			
	Michigan	X		X	X	X	
	Minnesota	X	X	X			
	Ohio	X	X	X			
	Wisconsin	X		X			
6	Arkansas	X	X	X	X		
	Louisiana	X	X	X	X		
	New Mexico	X	X	X			
	Oklahoma	X		X			
	Texas	X	X	X	X		
7	Iowa	X	X	X			
	Kansas	X	X				
	Missouri	X	X				

Table V-15: Liability Standards

Reg.	State	Retroactive	Strict	Joint and Several	Proportional	Other	Not Specified
7	Nebraska		X				
8	Colorado						
	Montana		X	X	X	X	
	North Dakota	X		X	X		
	South Dakota	X	X	X			
	Utah		X		X		
	Wyoming						X
9	Arizona	X	X		X		
	California		X		X		
	Hawaii	X	X	X			
	Nevada	X	X				
10	Alaska	X	X	X			
	Idaho						X
	Oregon	X	X	X			
	Washington	X	X	X			

Table V-16: Penalties and Damages Available under State Superfund Statutes

Summary

- Twenty-five (25) States provide for punitive damages.
- Twenty-two (22) States provide for treble damages.
- One State provides for double damages.
- Two States provide for one and one-half times damages.
- Forty-eight (48) States provide for some type of civil penalty that relates to cleanup programs, although a number of these are more directly related to hazardous waste or water quality regulatory programs.

Table V-16: Penalties and Damages Available under State Superfund Statutes

Reg.	State	Punitive Damages	Civil Penalties
1	Connecticut	1 1/2 Times	$25,000 per day
	Maine	Treble	None
	Massachusetts	Treble	$25,000 per day
	New Hampshire	None	None
	Rhode Island	Treble	$10,000 per day
	Vermont	Treble	$50,000; $25,000 per day for continuing violations
2	New Jersey	Treble	$50,000 per violation
	New York	None	$25,000 per day
	Puerto Rico	None	$25,000 per day per violation
3	Delaware	Treble	$10,000 per day
	District of Columbia	None	$25,000 per day per violation
	Maryland	None	$25,000 per day per violation
	Pennsylvania	Treble	$25,000 per day maximum; $5,000 per day minimum
	Virginia	None	$25,000 per day per violation
	West Virginia	None	$25,000 per day per violation
4	Alabama	None	$25,000 per day per violation
	Florida	None	$50,000 per day for continued violations
	Georgia	Treble	$25,000 per day
	Kentucky	None	$25,000 per day
	Mississippi	None	$25,000 per day per violation
	North Carolina	None	$25,000 per day for hazardous waste violations
	South Carolina	Treble	$25,000 per day
	Tennessee	1 1/2 Times	$10,000 per day
5	Illinois	Treble	$50,000 for first violation; $10,000 per day for each day of continuing violations
	Indiana	Treble	$25,000 per day
	Michigan	Treble	$25,000 per day
	Minnesota	None	$20,000 per day
	Ohio	None	$25,000 per day
	Wisconsin	None	$5,000 per day
6	Arkansas	Treble	$25,000 per day
	Louisiana	Double (to PRPs): Treble (to State)	$25,000 per day for PRP failure to provide requested information
	New Mexico	None	$10,000 per day for water quality violations; $15,000 per day for discharge permit violations; $25,000 per day for compliance order violations
	Oklahoma	None	$25,000 per day per hazardous waste violation; $10,000 per violation for any other violation
	Texas	Treble	$25,000 per day
7	Iowa	Treble	$1,000 for failure to notify; $10,000 air and water violations

Table V-16: Penalties and Damages Available under State Superfund Statutes

Reg.	State	Punitive Damages	Civil Penalties
7	Kansas	None	$10,000 - $25,000 for hazardous waste; $10,000 for water pollution; $5,000 for solid waste pollution
	Missouri	Treble	$1,000 per day
	Nebraska	None	None
8	Colorado	None	None
	Montana	Double	$10,000 per day judicial penalties; $1,000 per day administrative penalties
	North Dakota	None	$25,000 per day
	South Dakota	None	$10,000 per day
	Utah	None	$10,000 per day
	Wyoming	None	$10,000 per day; $25,000 per day for willful and knowing violations
9	Arizona	Treble	$5,000 per day
	California	Treble	$25,000 per day per violation
	Hawaii	Treble	$50,000 per day
	Nevada	None	$25,000 per day
10	Alaska	None	$500 to $100,000 for first violation; No more than $10,000 per day for continued violations
	Idaho	None	$10,000 per day per violation
	Oregon	Treble	$10,000 per day
	Washington	Treble	$25,000.00 per day

Table V-17: Natural Resource Damages Authorities

Summary

- Thirty-two (32) States have authority under State laws to recover NRDs for hazardous substance sites.
- Seven States identify statutes of limitation applicable to NRD claims under State law.

Table V-17: Natural Resource Damages Authorities

Reg.	State	State Authority	NRD Citation	Statute of Limitations	Length
1	CT	Yes	Conn. Gen. Stat. Sec. 22a-6a		
	ME	Yes	38 MRSA 1367		
	MA	Yes	MGL c. 21E, Section 5	Yes	3 years
	NH	No			
	RI	Yes	RIGL 23-19.14 *et seq.* Also, 23-19.1 *et seq.*	No	
	VT	No			
2	NJ	Yes	NJSA 58:10-23.11 *et seq.* NJSA 50:10A-1 *et seq.*	Yes	10 years
	NY	Yes	Navigation Law, Environmental Conservation Law, Common Law and Nuisance Statutes	No	
	PR	Yes	Law 81, sec. 6; Law 9, sec. 16		
3	DE	Yes	7DEL C. Chapter 91, 7DEL C. Chapter 62	No	
	DC	No			
	MD	Yes	Ann. Code Md, Env. Art., Sec. 7-220(b)	No	
	PA	Yes	35 P.S. Sec. 6020.507	Yes	20 years
	VA	Yes	VA Constitution, Art XI; Virginia Stat, Ch. 3.1, Secs. 62.1-44.34:18 & 62.1-44.15:11 (water law)		
	WV	No			
4	AL	No			
	FL	Yes	Fla. Statutes: 403.141, .726, .727, & 121 (noncoastal oil spills); 253.04 (coral reefs); Ch. 376 (coastal oil spills and underground storage tanks)	Yes	4 years
	GA	No			
	KY	No			
	MS	Yes	Mississippi Code Annotated 49-17-43(c)		
	NC	No			
	SC	Yes	South Carolina Pollution Control Act		
	TN	Yes	68-211-117(b)(1), 68-212-114, 68-212-207 and 69-3-116		
5	IL	No			
	IN	No			
	MI	Yes	Part 201 of Act 451	Yes	6 years
	MN	Yes	115B.04	Yes	6 years
	OH	No			
	WI	Yes	Section 283.87		
6	AR	Yes	Arkansas Code Annotated Sections 8-4-103(b)(3) and (c); 8-6-204 (b)(3) & (c); 8-7-204 (b)(3) & (c)	No	

Table V-17: Natural Resource Damages Authorities

Reg.	State	State Authority	NRD Citation	Statute of Limitations	Length
6	LA	Yes	General provision in the Environmental Quality Act		
	NM	No			
	OK	Yes	OK Constitution Act 26 Section 4; 29 OK Statutes Section 7-401a (fish and wildlife damages)	No	
	TX	Yes	31 TAC 20.1-20.4, 20.10; OSPRA - Texas Natural Resources Code 40.107(c)(4)	No	
7	IA	Yes	Iowa Code 455B.392C		
	KS	Yes	KSA 65 - 171 u.	No	
	MO	Yes	Rev. Stat. Mo. 644.056	No	
	NE	No			
8	CO	No			
	MT	Yes	Mont. Code Ann. Sect. 75-10-715	No	
	ND	No			
	SD	Yes	SDCL 34A-2-75 & 34A-11-14 & 34A-10	No	
	UT	No			
	WY	No			
9	AZ	No		No	
	CA	Yes	California Health and Safety Code 25352	Yes	
	HI	Yes	H.R.S. 128D-4, 128D-5, 128D-6	Yes	3 years
	NV	No			
10	AK	Yes	Alaska Stat. 49.04.040(5)	No	
	ID	No			
	OR	Yes	Or. Rev. Stat. 465.255, 466.890, 468B.395	No	
	WA	Yes	70.1050 RCW, WAC 173-340-550(6)	No	

Table V-18: Natural Resource Damage Claims under State Law

Summary

- Ten (10) States reported having recovered NRDs under State law.
- Eleven (11) States reported having such claims currently pending under State law.

Table V-18: Natural Resource Damages under State Law

Reg.	State	Successful Claims	Amount Recovered	Pending Claims	Amount Pending
1	Connecticut				
	Maine	5	$1,500,000.00		
	Massachusetts	5	$23,600,000.00	4	
	New Hampshire				
	Rhode Island				
	Vermont				
2	New Jersey	1	$455,000.00	1	$340,000.00
	New York	18	$38,600,000.00	2	
	Puerto Rico				
3	Delaware	1	$5,000.00	3	$400,000.00
	District of Columbia				
	Maryland				
	Pennsylvania				
	Virginia				
	West Virginia				
4	Alabama				
	Florida				
	Georgia				
	Kentucky				
	Mississippi				
	North Carolina				
	South Carolina				
	Tennessee				
5	Illinois				
	Indiana				
	Michigan	2	$1,500,000.00	2	
	Minnesota	1	$91,000.00	3	
	Ohio				
	Wisconsin				
6	Arkansas	1	$1,650,000.00	1	$80,000.00
	Louisiana				
	New Mexico				
	Oklahoma				
	Texas				
7	Iowa				
	Kansas	15	$150,000.00	4	
	Missouri				
	Nebraska				
8	Colorado				

Table V-18: Natural Resource Damages under State Law

Reg.	State	Successful Claims	Amount Recovered	Pending Claims	Amount Pending
8	Montana	0	$0.00	1	$763,000,000.00
	North Dakota				
	South Dakota				
	Utah				
	Wyoming				
9	Arizona				
	California				
	Hawaii	0	$0.00	1	
	Nevada				
10	Alaska	1	$1,000,000.00		
	Idaho				
	Oregon				
	Washington	0	$0.00	1	

Table V-19: Natural Resource Damage Claims under CERCLA

Summary

- Seventeen (17) States reported having recovered NRDs under CERCLA.
- Fifteen (15) States have such claims pending under CERCLA.

Table V-19: Natural Resource Damages under CERCLA

Reg.	State	Successful Claims	Amount Recovered	Pending Claims	Amount Pending
1	Connecticut				
	Maine	4			
	Massachusetts	5	$23,600,000.00	4	
	New Hampshire				
	Rhode Island	2	$2,500,000.00	2	$500,000.00
	Vermont	0	$0.00	2	
2	New Jersey	8	$9,119,115.00	0	$0.00
	New York	0	$0.00	4	
	Puerto Rico				
3	Delaware	1	$600,000.00	2	$3,000,000.00
	District of Columbia				
	Maryland				
	Pennsylvania				
	Virginia				
	West Virginia				
4	Alabama	0		4	
	Florida				
	Georgia				
	Kentucky				
	Mississippi				
	North Carolina				
	South Carolina	1	$3,000,000.00		
	Tennessee				
5	Illinois				
	Indiana	12	$3,800,000.00		
	Michigan	6	$4,600,000.00	3	
	Minnesota	3	$220,000.00	0	$0.00
	Ohio	3	$2,983,500.00	2	
	Wisconsin				
6	Arkansas				
	Louisiana	1		0	
	New Mexico	2	$200,000.00	1	$210,000.00
	Oklahoma	2	$405,000.00	1	$71,000.00
	Texas				
7	Iowa				
	Kansas				
	Missouri			2	
	Nebraska				
8	Colorado	5	$5,700,000.00	2	

Table V-19: Natural Resource Damages under CERCLA

Reg.	State	Successful Claims	Amount Recovered	Pending Claims	Amount Pending
8	Montana	0	$0.00	1	$763,000,000.00
	North Dakota				
	South Dakota			1	
	Utah	1	$37,000,000.00	1	
	Wyoming				
9	Arizona				
	California				
	Hawaii				
	Nevada				
10	Alaska				
	Idaho	3	$65,000,000.00		
	Oregon				
	Washington	7	$50,000,000.00	0	

Table V-20: Natural Resource Restoration

Summary

- Fifteen (15) States reported at least 96 restoration activities underway, and at least 52 activities completed using recovered NRDs.
- Twenty-six (26) States reported that funds recovered under State laws could be used for restoration, twenty-four for replacement, and eighteen for protection of natural resources.
- Five States reported that they have mechanisms for public participation in connection with NRD assessment and selection of restoration activities.

Table V-20: Natural Resource Restoration

Reg.	State	Authorized Uses of Recovered Funds			Projects			Public Participation	
		Restoration	Replacement	Protection	Underway	Completed	Funds Expended	Assessment	Restoration
1	CT								
	ME	X	X						
	MA	X	X	X	2	0	$23,600,000.00		
	NH								
	RI	X	X	X	1	0	$500,000.00		
	VT								
2	NJ	X	X	X	17	6	$8,000,000.00		
	NY	X	X	X	18		$38,600,000.00	X	X
	PR								
3	DE	X	X	X	1	1	$400,000.00	X	X
	DC								
	MD								
	PA								
	VA								
	WV								
4	AL								
	FL	X	X	X					
	GA								
	KY								
	MS	X	X						
	NC								
	SC								
	TN	X		X					
5	IL								
	IN	X	X	X	6			X	X
	MI	X	X		19	20	$6,000,000.00		
	MN	X	X	X	1	0	$91,000.00		
	OH	X	X	X	3		$2,983,500.00		
	WI								
6	AR	X	X	X	3	1	$1,650,000.00		
	LA	X	X	X	1	0			
	NM	X	X		5	2	$165,000.00		
	OK								
	TX	X	X	X	6	3		X	X
7	IA								
	KS	X	X	X	0	15			
	MO	X	X	X					
	NE								

Table V-20: Natural Resource Restoration

		Authorized Uses of Recovered Funds			Projects			Public Participation	
Reg.	State	Restoration	Replacement	Protection	Underway	Completed	Funds Expended	Assessment	Restoration
8	CO	X	X	X				X	X
	MT	X	X						
	ND								
	SD								
	UT	X	X		0	0	$37,000,000.00		
	WY								
9	AZ								
	CA								
	HI	X	X	X					
	NV								
10	AK	X	X	X					
	ID	X			2		$65,000,000.00		
	OR								
	WA	X	X		10	4	$40,000,000.00		

Table V-21: Property Transfer Provisions

Summary

- Thirty-one (31) States report that they have mandatory property transfer provisions, up from 25 in 1995, 23 in 1993, and 18 in 1991. This total does not include States that simply maintain a database of contaminated sites, nor States that simply have residential transfer requirements, unless they also have some other property transfer provisions.
- Twenty (20) States have provisions that require deed recordations where hazardous sites have been either discovered, listed, or cleaned up.
- Twenty (20) States require disclosure by sellers to purchasers.
- Three States require cleanup or cleanup commitments in connection with transfers or sales of industrial establishments.
- Twenty-four (24) States have disclosure requirements that apply to conveyances of residential property.
- Twenty-six (26) States maintain a data base or data bases to assist purchasers and other parties to transactions in conducting environmental due diligence to determine whether sites have been contaminated.

Table V-21: Property Transfer Provisions

Reg.	State	Record On Deed	Disclosure Before Transfer	Disclosure Before Transfer Residential	Investigate Before Transfer	Cleanup At Transfer	Database
1	Connecticut		X	X	X	X	X
	Maine						
	Massachusetts						X
	New Hampshire						X
	Rhode Island			X			X
	Vermont						
2	New Jersey	X	X	X	X	X	X
	New York	X					X
	Puerto Rico						
3	Delaware	X		X			X
	District of Columbia						
	Maryland			X			
	Pennsylvania	X	X	X			
	Virginia			X			
	West Virginia	X	X				
4	Alabama						
	Florida						X
	Georgia	X					X
	Kentucky		X				X
	Mississippi		X	X			
	North Carolina	X	X	X			X
	South Carolina						
	Tennessee	X					X
5	Illinois	X	X	X			
	Indiana		X	X			
	Michigan	X	X	X	X		X
	Minnesota	X					X
	Ohio			X			
	Wisconsin			X			X
6	Arkansas	X					X
	Louisiana	X	X				X
	New Mexico						
	Oklahoma	X		X			
	Texas		X	X			
7	Iowa	X	X				
	Kansas						X
	Missouri	X	X				X

Table V-21: Property Transfer Provisions

Reg.	State	Record On Deed	Disclosure Before Transfer	Disclosure Before Transfer Residential	Investigate Before Transfer	Cleanup At Transfer	Database
7	Nebraska			X			
8	Colorado						
	Montana						X
	North Dakota						
	South Dakota		X	X			X
	Utah	X					
	Wyoming						
9	Arizona		X				X
	California	X	X	X			X
	Hawaii	X	X	X	X	X	
	Nevada						
10	Alaska			X			X
	Idaho			X			
	Oregon		X	X			X
	Washington	X	X	X			X

Table V-22: Voluntary Cleanup Authorities

Summary

- Forty-four (44) States have voluntary cleanup programs.
- Thirteen (13) States have established voluntary programs since 1995.
- The majority of State voluntary programs (approximately 33) were established by statute.
- Other States established their programs through regulations, policies, or guidance under existing statutory authority.

Table V-22: Voluntary Cleanup Authorities

Reg.	State	Established	Authority	VCP Citation
1	Connecticut	1995	Statute	Conn. Gen. Stat. Secs. 22a-133 (w)(x)(y) [P.A. 95-183 & P.A. 95-190]
	Maine	1993	Statute	38 MRSA 342 (15) and 38 MRSA 343-E *et seq.*
	Massachusetts	1993	Statute and regulations	MGL c. 21E (as amended in 1992) and the MCP, 310 CMR 40,0000
	New Hampshire		Statute	NHRSA 147-A, 147-B, 485
	Rhode Island	1993	Initially established administratively in 1993; established by statute in 1995	23-19.14
	Vermont			
2	New Jersey	1992	Oversight of the Remediation Contaminated Sites	NJAC 7-26C
	New York	1994	Guidance	
	Puerto Rico			
3	Delaware	1994	Initially as a policy in 1994; became a statute in July 1995	
	District of Columbia			
	Maryland	1997	Statute	7-501 *et seq.*, Annotated Code of Maryland, Environment Article
	Pennsylvania	1995	Statute	35 P.S. Sec. 6026.101 *et seq.*
	Virginia	1995	Statute	Code of Virginia, 10.1-1429.1 through 1429.3
	West Virginia	1996	Statute (July 1, 1996); Regulation (July 1, 1997); Guidance Manual (projected July 1, 1998)	
4	Alabama	1992	Informal; no VCP statute, regulation, or policy exists; site-specific settlement agreements used	No citation unique to VCP; covered under general authority of Hazardous Substance Cleanup Fund
	Florida		Informal	
	Georgia	1996	Statute	Provisions within OCGA 12-8-20 & OCGA 12-8-96.3 (amends OGCA 12-8-90; limits third party liability)
	Kentucky			
	Mississippi	1997	Statute	MS Code Annotated 17-17-54
	North Carolina	1987	Statute	NCGS 130A-310
	South Carolina	1988	Guidance; legislation submitted in 1998	If passed by legislature, will be part of SC Hazardous Waste Management Act (44-56-710 *et seq.* Article 7)
	Tennessee	1994	Statute	TCA 68-212-224
5	Illinois	1985	Statute	22.2(m) 1985, Section 58 1996
	Indiana	1993	Statute	IC 13-25-5
	Michigan	1994	Statute	Part 201 of Act 451
	Minnesota	1988	Statute	Minn. Stat. Ch. 115B.17 (14) and 115B.175
	Ohio	1994		Ohio Revised Code Ch. 3746
	Wisconsin	1994, 1997	Statute	Wis. Stat. Ch. 292.15 (Land Recycling Law); amended in 1997 Wisconsin Act 27, effective July 1, 1998
6	Arkansas		Informal	General authority of ADPC&E Regulation 23 Section 26 and the Remedial Action Trust Fund
	Louisiana	1996 (regulations in development)	Statute	R.S. 30:2285

Table V-22: Voluntary Cleanup Authorities

Reg.	State	Established	Authority	VCP Citation
6	New Mexico	1997 (program not operational)	Statute	Voluntary Remediation Act NMSA 74-4G-1
	Oklahoma	1996	Statute	27A O.S. Supp. 1997 Sections 2-15-101 *et seq.*
	Texas	1995	Statute	Chap. 361 of Health and Safety Code & Regulation Title 30 TX Administrative Code TAC Chapter 333
7	Iowa	1997	Statute; regulations under development	Iowa Code 455H
	Kansas	1996	Statute	KSA 65 - 34, 161 through 65 -34, 174
	Missouri	1994	Statute	Mo. Rev. Stat. 260.565
	Nebraska	1995	Statute	LB 1349
8	Colorado	1994	Statute	Colo. Rev. Stat. Sections 25-16-301
	Montana	1995	Statute	Mont. Code Ann. Sect. 75-10-730 to 75-10-738
	North Dakota			
	South Dakota			
	Utah	1997	Statute	Utah Code Ann. Sect. 19-8-101 *et seq.*
	Wyoming			
9	Arizona	1992	Statute	ARS 49-104(A)17, 49-282.05, 49-285(B)
	California	1993	Administratively established using existing statutory authority	
	Hawaii	1997	Statute	H.R.S. 128D
	Nevada		Informal	
10	Alaska	1996	Policy	
	Idaho	1996	Statute	Land Remediation Rules (IDAPA 16.01.18)
	Oregon	1991	Legislative budget approval	
	Washington	1993	Regulation	WAC 173-340-550 (7)

Table V-23: Voluntary Cleanup Programs

Summary

- Thirty-eight (38) States collect fees or seek reimbursement from voluntary program participants.
- Five States (Florida, Georgia, Illinois, Michigan, Nevada) do not collect fees or seek reimbursement but instead fund their programs through other sources, including their State general funds.
- Approximately 37 States define eligibility for their voluntary programs by types of volunteers and/or type of sites.
- Only seven States (Alaska, Michigan, Minnesota, Nebraska, Nevada, Oregon and Pennsylvania) do not categorically exclude certain types of sites or volunteers.
- Virtually all States provide incentives for participating in their voluntary programs. For example, at least 40 States provide some form of liability relief.

Table V-23: Voluntary Cleanup Programs

Reg.	State	State Funded By	Participation Fee	Eligibility	Incentives
1	CT	Fees, General Fund, Core Program, and VCP Funding.	$2,000 plus a flat amount based on value of property if the State oversees the cleanup.	Municipalities, owners on State list, and owners of establishments (as defined in property transfer law) are eligible to participate. Sites under State orders are ineligible.	Covenant not to sue [22a-133(aa)(bb)], which provides that the State will not take action to require remediation (or other action related to the discharge) provided that statutory conditions are met.
	ME	Fee for services.	$500 and any additional costs.	Virtually any entity, including responsible parties are eligible.	Under 38 MRSA 343-E(1) and (2), parties may receive protections from liability (enforcement and contribution) for contamination which is remedied to the satisfaction of the Department.
	MA	Permit fees, compliance fees, and other operating funds.	Varies, depending on the type of site.	Anyone is eligible. Any site that is not adequately regulated by a different cleanup program (such as NPL sites) are eligible.	Incentive is to be able to clean up a site as quickly as possible, ability to achieve clear endpoints, etc.
	NH			All non-NPL sites are eligible.	
	RI	General funds.	$1,000.	Any performing party is eligible. All types of non-NPL sites are eligible.	Covenant not to sue for non-responsible performing parties, as well as contribution protection.
	VT				
2	NJ	Remediating party pays Department oversight fees.	Direct billing dollars per hour.	Any interested party who wishes to remediate all or part of a site is eligible. Priority sites and sites under an enforcement action are ineligible.	Parties can set own schedule, parties may withdraw, upon completion the Department plus party enter into a covenant not to sue which carries with the property.
	NY	Volunteer pays oversight costs.	Negotiated.	Anyone other than a responsible party is eligible. All contaminated sites other than Class 2 inactive hazardous waste sites and NPL sites are eligible.	Cleanup to levels safe for intended use; protection from future liability for contaminants addressed (liability release).
	PR				
3	DE	Cost recovery from participants in the program.	Actual costs incurred in oversight, with initial fee of $5,000.	Any person is eligible -- owner, prospective buyer, developer, etc. The site must be financially viable. All sites are eligible except Corrective Action Sites. Sites that pose an imminent danger may not be eligible.	Release from liability for prospective buyers, provided that the site is cleaned up and the Department has issued a certificate of completion.
	DC				
	MD	User fees, State funds, and Federal funds.	$6,000, unused portion is refunded; over $6,000, the Department charges the user.	Purchasers with no previous connection to property are eligible. Persons convicted of violation of a hazardous waste law or regulation are ineligible. NPL sites, sites under active enforcement, and TSD facilities are ineligible.	Streamlined process, mandatory deadlines for agency determinations, no further requirements determination, certificate of completion. For inculpable persons: release of liability except for new or exacerbated contamination caused by the purchaser.
	PA	Hazardous Sites Cleanup Fund (HSCF).	$250.	Any landowner is eligible. All contaminated properties are eligible.	Relief from liability under State law for site remediation, including citizen suits and contribution actions.
	VA	EPA grant and registration fees.	$5,000 or 1% of remediation (lesser of the two).	Owners and operators of contaminated sites are eligible. All sites are eligible, except those where remediation is mandated under a Federal or State regulatory program.	No Further Action - Certificate of Satisfactory Completion of Remediation issued, which provides immunity from enforcement action under State law.
	WV	Initial fee and hourly rate multiplied by 2.5 overhead.	Flat fees of $1,000, $3,000 or $5,000; hourly fees after Voluntary Agreement is signed.	All sites are eligible, except those with unilateral orders or those on, or being proposed for, the NPL.	Predictability; Voluntary Remediation Agreement; Certificate of Completion.
4	AL	100% cost recovery guaranteed in enforceable settlement agreements.	Reimbursement of State's actual costs.	Anyone is eligible. Sites must have low enough contamination level that potential exists to achieve effective and efficient cleanup. Sites must be inactive and may not be on the NPL or have enforcement actions pending for a hazardous substance or waste issue. RCRA sites are ineligible.	Reduced regulatory oversight and cost. Increased speed. Possibility of earning "No Further Action" letter.

Table V-23: Voluntary Cleanup Programs

Reg.	State	State Funded By	Participation Fee	Eligibility	Incentives
4	FL	General budget.	None.	Anyone is eligible. NPL sites are ineligible.	None.
	GA	Hazardous Waste Trust Fund.	N/A.	RPs and persons affiliated with an RP or the site are ineligible. Anyone else is eligible. Sites must be in a state of disuse or abandonment and be on the Hazardous Site Inventory.	Limitation of liability; no cost recovery actions for monies previously spent by the State; limitation of liability to third party civil claims for pre-existing releases.
	KY				
	MS	$500 user fee; respondent pays all program costs.	$500 user fee and all of DEQ's direct & indirect costs.	Anyone not currently regulated under a Federally mandated program (*e.g.*, RCRA) is eligible. Sites must be polluted or potentially polluted uncontrolled sites.	Expedited site review; "No Further Action" letter when appropriate measures have been taken and approved.
	NC	Appropriations, $2,000 audit fee, and $500 fee for "No further Action" letter.	$2,000 audit fee (partially refundable if not used) and additional $500 for "No Further Action" letter.	The program is open to owners, operators, potential purchasers, RPs, and other interested parties. Sites regulated by another program are ineligible.	Property transfer, liability limit, "No Further Action" letter (costs $500).
	SC	Parties pay oversight costs.	Under Article 7, actual costs; currently, RPs must pay actual costs, but non-RPs' fees are negotiable.	No person is categorical excluded, but the agency has the discretion to reject contracts. All sites are eligible, except petroleum-only sites, NPL sites, and permitted sites where assessment and remediation is required by permit.	Covenant not to sue for successful completion of work; contribution protection for non-RPs.
	TN	Participation fee, EPA Core Grant, reimbursement of oversight costs by participant.	$5,000.	The program is open to any willing and able party, including PRPs, impacted third parties, banks having taken oversights, buyers, sellers, and lending institutions. NPL sites are ineligible. Petroleum sites may be handled through the program if another applicable hazardous substance is also present.	"No Further Action" letter; state will not promulgate lien or notice of hazardous substance on property deed; exemption from public hearings; site not placed on list; payment of orphan shares by State.
5	IL	Fees of hazardous waste treatment and disposal.		All sites, except NPL, RCRA, and LUST sites, are eligible.	Issuance of No Further Remediation Letter releasing PRP from both cost recovery and State enforcement.
	IN	Applicant reimbursement to IDEM.	$1,000 application fee.	Anyone who wants to enter -- owner, developer, or municipality -- is eligible except those under active enforcement. Sites that pose an imminent threat are ineligible.	IDEM issues a Certificate of Completion, Governor issues a Covenant Not to Sue.
	MI	Bonds and State General Fund.	N/A.	All PRPs and all sites are eligible.	Protection for historical releases once remedial action plan is complied with. No protection for new events.
	MN	State appropriation through Superfund and EPA cooperative agreement.	$92/hour.	Any party willing and able to conduct work in a timely manner and reimburse MPCA for oversight costs is eligible. All types of sites are eligible.	Technical assistance, a variety of liability assurances, and financial assistance.
	OH	User fees.	Range of fees depends upon the site.	NPL sites and sites are under Ohio enforcement actions are ineligible.	Covenant not to sue, variety of tax credits, low interest loans, and grants.
	WI	User fees.	$250.	Potentially Responsible Parties not being regulated under other authority are eligible. All contaminated sites are eligible, except NPL sites and large-scale cleanups.	Financial incentives and liability exemptions.
6	AR	Document review fee.	$63/hour.	The program is open to RPs, except those under enforcement action by ADPC&E.	Limitation of liability for program participants.
	LA	To be determined.	To be determined.	Eligibility will be limited to prospective purchasers, and responsible parties who remove all discharges and restore the site to residential risk levels. Site eligibility will be limited to contaminated commercial or industrial facilities.	Exemption of liability for disposal or discharge of hazardous substance or waste; certificate of completion issued by the Department.

Table V-23: Voluntary Cleanup Programs

Reg.	State	State Funded By	Participation Fee	Eligibility	Incentives
6	NM	Application fee and oversight fee.	Not yet calculated.	Eligibility is limited to current and prospective owners and operators. Individuals with a history of violating environmental laws are ineligible, as are sites or persons under existing permit or enforcement action (State or Federal) or pending enforcement action. Some heavily contaminated sites will be excluded.	Liability protection during and following the Voluntary Remediation Agreement; Certificate of Completion for owner/operator; covenant not to sue for third party purchaser; lender liability.
	OK	Reimbursed by participant.	Actual costs.	The program is open to anyone except individuals not in substantial compliance with a state or Federal order relating to regulated substances, persons with a history of uncorrected noncompliance, or persons under EPA cleanup order. Sites may not be on the NPL or under EPA cleanup order.	Certificate of completion, certificate of no action (includes liability protections for cleaned up portions of the site), tax incentives, job act incentives, advice/document review.
	TX	User fee.	$1,000 initial fee and $74/hour.	Anyone is eligible, but owners and operators still retain liability. The program is open to all types of commercial/industrial sites ranging from drycleaners to large petrochemical facilities, except those subject to commission permit or order.	Under the VCP, all non-responsible parties, including owners and lenders, are released from liability to the State for contamination occurring prior to the date of issuance of the completion certificate.
7	IA	Reimbursed by volunteer.	$7,500 cap on reimbursement; initial $750 application fee.	While eligibility criteria still under development, UST sites, NPL sites and AFOs will be eligible.	Letter of indemnification from State to volunteer for any future claims.
	KS	Reimbursement.	$200 application fee; up to $5000 initial deposit; 3 tiers - $1,000, $2,500, and $5,000 - based on extent of contamination.	All low to medium risk contaminated sites are eligible. NPL sites, RCRA sites, and sites under enforcement action are ineligible.	"No Further Action" letter.
	MO	Fees and appropriations.	$200 application fee and $5,000 deposit.	Anyone is eligible. All non-NPL or NPL-caliber sites and non-RCRA sites are eligible.	"No Further Action" letter, MOA with EPA.
	NE	$5000 application fee.	$5,000.	Anyone is eligible. All sites are eligible.	"No Further Action" letter.
8	CO	Application fees.	$2,000.	All property owners are eligible. A site is ineligible if it is: on or proposed for the NPL; RCRA permitted; and/or, subject to state RCRA , UST, or CWA orders.	Approval letter that states site does not pose risk. Possible letter from EPA.
	MT	Cost recovery.	Actual costs.	No person or entity is ineligible under the statute, but 75-10-732 gives the Montana DEQ the discretion to accept or deny applications. All non-NPL sites are eligible.	Successfully remediated properties may receive an enforcement stay and/or a "No Further Action" letter.
	ND				
	SD				
	UT	Application fees/additional participant funding.	$2,000.	Anyone is eligible. NPL, RCRA corrective action, and enforcement sites are ineligible.	Participants in the VCP who are not PRPs under the Hazardous Substances Mitigation Act may be eligible to receive a letter from the State acknowledging that the site has been cleaned, and providing a release from future liability.
	WY				
9	AZ	Reimbursement by volunteer for costs.	Fee.	Sites not subject to immediate regulation, NPL, or state-lead cleanup.	Expedited review of remedial actions and single point of contact.

Table V-23: Voluntary Cleanup Programs

Reg.	State	State Funded By	Participation Fee	Eligibility	Incentives
9	CA	By Project Proponent (fee for service).	Actual costs, not fee.	Federal facilities, Federal Superfund sites, State Superfund Sites, sites outside DTSC jurisdiction, and sites with known or suspected soil and/or groundwater contamination.	Streamlined Program Cooperative working relationship, tailored to each site/project (may terminate agreement with 30 days notice for any reason); "No Further Action" letter/Certificate of Completion.
	HI	Reimbursement by volunteer.	$1,000 nonrefundable application fee and $5000 deposit.	All releases or threats of releases are eligible for response under 128D-4. NPL sites, enforcement sites, corrective actions sites, imminent and substantial threats, and sites with significant public interest are ineligible.	Letter of completion issued with in 30 days after cleanup; completion recorded on property deed, and running with the land; completion letter sent to building permit agency; exemption from future liability.
	NV	Hazardous Waste Management Fund.	No.	Anyone is eligible. All sites are eligible.	State issues a "closure" or comfort letter with respect to the spill incident.
10	AK	Reimbursement by volunteer.	Reimbursement after state expenses exceed $1,000.	Anyone is eligible. All sites are eligible.	"No Further Action" letter.
	ID	Private parties conducting clean up pay for State.	$200 application fee.	Anyone is eligible except those who are regulated for clean up under Federal regulations.	Tax incentives and covenant not to sue.
	OR	Reimbursement by volunteer.	Initial $2,000 deposit if anticipated that PA will indicate "No Further Action"; $5,000 if action/inv likely.	Anyone is eligible.	"No Further Action" letter.
	WA	Participant reimbursement to State.	Hourly fee charged against initial $500 deposit, and thereafter.	Any PRP who submits a cleanup with a fee is eligible. All sites not in discussions or negotiations for, or under, an order or decree are eligible.	Site specific technical assistance with written opinions (effective 7/97) and "No Further Action" letters.

Table V-24: Brownfields Programs

Summary

- Twenty-eight (28) States have formal brownfields programs, an increase of 13 States since 1995.
- Most brownfields programs were established by statute, others were established through policies, guidance or regulations.
- Most States limit eligibility for their brownfields programs to underutilized or abandoned sites that have re-development potential, but the precise articulation of the standard varies from State-to-State.
- Seven States specifically exclude sites that are subject to State or Federal enforcement or regulatory actions (Arkansas, Arizona, Florida, New Hampshire, New Mexico, Vermont, and Virginia).
- Three States exclude certain parties responsible for contamination from participating in their programs (North Carolina, Florida, and West Virginia).
- Four States (Illinois, Minnesota, Oklahoma, and South Carolina) open their brownfields programs to any sites that are eligible for their voluntary programs.
- Three States have narrow brownfields programs that are limited to properties owned by local governments (Missouri, New York, and Texas).

Table V-24: Brownfields Programs

Reg.	State	Authority	Citation	Criteria for Inclusion in Brownfields Program
1	CT	Yes	Conn. Gen. Stat. Sec. 22a-133(m)	Sites in "distressed" communities and with high economic development potential. Also, sites acquired by State under program.
	ME	No		
	MA	No		Have pending legislation
	NH	Yes	NHRSA 147-F (July 1996)	Any contaminated property except: 1) one in violation of a corrective action or any other Federal/State order (unless participation will lead to substantial compliance); or 2) one eligible for Petroleum Reimbursement Funds.
	RI	Yes	RIGL 23-19.14	Any underutilized site where contamination issues inhibit redevelopment.
	VT	Yes	Vt. Stat. Ann., Title 10, Sec. 6615a	Vacant, abandoned, substantially underutilized, or acquired by a municipality. Excluded from participation are sites on the NPL, sites subject to RCRA corrective action requirements, and sites regulated under the LUST program.
2	NJ	Yes	NJSA 58:10-1	Any commercial or industrial site that is abandoned or underutilized and is/or may be contaminated with hazardous substances.
	NY	Yes	Article 56	Municipally owned for sites which are not Class 2 Inactive Hazardous Waste Disposal Sites for which the municipality is not a responsible party.
	PR			
3	DE	Yes	30 DEL C. Chapter 20, Section 2010 (Tax Code)	Any site which is cleaned up pursuant to 7 DEL C. Chapter 91 and where employment is created and investments are made for business.
	DC	No		
	MD	Yes	Ann. Code Md., Art 83A, Secs. 3-901 through 905	Extensive statutory eligibility criteria for financial incentives. For Brownfields Site Assessment Initiative, site may not be on CERCLIS, may not be seriously contaminated, and must be likely to be redeveloped.
	PA	No		
	VA	Yes	Policy (EPA grant)	Program targets sites falling under traditional definition of brownfields that are not being handled under another program. May be subject to priority criteria.
	WV	Yes	Statute	Applicant cannot be responsible for contamination.
4	AL	Yes	Informal alliance with EPA Region 4	EPA must designate a site as a brownfield and provide a grant to fund remediation activities. DEM will then provide assessment and oversight in lieu of oversight responsibilities at CERCLIS sites (established in another contract with EPA Region 4).
	FL	Yes	Brownfields Redevelopment Act (Florida Statutes 376.77-376.85)	The Brownfields program is open to any person who has not caused or contributed to site contamination since the date of enactment of the Brownfields Redevelopment Act (July 1, 1997). Certain restrictions apply to sites subject to Federal or State enforcement. Also, the statute establishes a process through which "brownfield areas" may be designated by local government by resolution with appropriate public notice and hearings. In designating a brownfield area, the local government must consider nine specific issues outlined in the statute.
	GA	No		
	KY	No		
	MS	Yes	Not yet codified; was S. 2989. Effective July 1, 1998	Not yet determined.

Table V-24: Brownfields Programs

Reg.	State	Authority	Citation	Criteria for Inclusion in Brownfields Program
4	NC	Yes	NCGS 130A-310.30 to 310.40	Sites bought or sold for redevelopment. Non-causative parties who are interested in buying or selling a brownfields property are eligible to enter into a consent agreement with DENR.
	SC	Yes	If passed by legislature, will be part of SC Hazardous Waste Management Act (44-56-710 *et seq.* Article 7)	Same as voluntary cleanup program.
	TN	No		
5	IL	Yes	Informal policy	All sites eligible for the voluntary remediation program.
	IN	Yes	P.L. 59-1997 Section 28 - uncodified	Sites potentially contaminated with hazardous substances or petroleum.
	MI	Yes	Part 201 of Act 451	Any site where there is a redevelopment interest by a new developer.
	MN	Yes	115B.17 (14) &115B.175	Any site with an investigation or clean up being conducted by a voluntary party.
	OH	No		
	WI	Yes	Wis. Stat. Ch. 292.15; Wisconsin Act 27, effective July 1, 1998	
6	AR	Yes	Arkansas Code Annotated sections 8-7-1101 *et seq.* (Act 125 of 1995, as amended by Act 1042 of 1997)	Abandoned industrial, commercial, and agricultural sites not under enforcement action. In general, properties with viable RPs are not qualified to participate in the program unless the Director of ADPC&E determines it is in the best interest of the State to proceed with a Brownfields cleanup while pursuing cost recovery or some other method of settlement with the RP(s) on a separate track.
	LA	No		
	NM	Yes	Voluntary Remediation Act NMSA 74-4G-1	All sites except those under existing permit or enforcement action (State or Federal) or pending enforcement action.
	OK	Yes	OAC 252:220; 27A O.S. Supp. 1997 Sections 2-15-101 through 110	Same as voluntary cleanup program.
	TX	Yes	Ad hoc through the VCP	No formal criteria. Sites owned by local government and local government interests are selected from EPA Brownfields Initiative pilot cities.
7	IA	No		
	KS	No		
	MO	Yes	Mo. Rev. Stat. 447.700	Same as voluntary cleanup program and must be owned by public entity and abandoned for three years.
	NE	No		
8	CO	No		
	MT	No		
	ND	No		
	SD	No		
	UT	No		
	WY	No		

Table V-24: Brownfields Programs

Reg.	State	Authority	Citation	Criteria for Inclusion in Brownfields Program
9	AZ	Yes	ARS 49-153 to 49-157	Up to 100 sites allowed to participate in pilot program. Volunteers may not include enforcement sites nor permitted sites where the release to the soil violates a permit condition, nor UST sites if monies from the UST trust fund are used.
	CA	No		
	HI	Yes	Policy	
	NV	No		
10	AK	No		
	ID	No		
	OR	No		
	WA	No		

Table V-25: Brownfields Sites

Summary

- Six States have identified more than 100 brownfields sites through their programs: Arkansas (262); Connecticut (144); Delaware (300); Illinois (1011); Michigan (164); and New York (105).
- The number of cleanups underway ranges from 0 in several States to 439 in Illinois.
- Four States reported more than 10 commitments for redevelopment: Michigan (144); Delaware (30); New York (20); and Montana (12).
- Most State brownfields programs facilitate redevelopment of sites by providing either liability relief or financial incentives.

Table V-25: Brownfields Sites

Reg.	State	Sites Identified	Cleanups Underway	Commitments for Redevelopment	Explanation of Redevelopment Facilitation
1	CT	144	44		Dedicated staff resources and $30.5 million in bond funds or expedited review of remediation plans and for hiring private contractors to perform remediation work. In addition, the Department of Economic Development can acquire polluted properties assume liability under State law for past pollution up to $15,000,000.
	ME				
	MA				Covenant not to sue and financial incentives (Massachusetts economic development incentive program).
	NH	12	7	8	Certain parties may receive covenants not to sue, which protect against liability under State law for contamination addressed by an approved remedial action program.
	RI	65			Covenant not to sue for non-responsible performing parties, as well as contribution protection. Funding authorized for facilitation of reuse/redevelopment, but no funds have been available.
	VT	3	2	2	Limited liability protection for redeveloper and successors under the Hazardous Waste Management Act. Some site assessment funds through HUD grants.
2	NJ				Loans, grants, tax incentives, remedial cost reimbursement, liability release, and variances for technical standards.
	NY	105	8	20	Provides a release from liability which is transferable to all future owners. Provides 75% of the costs associated with investment and cleanup.
	PR				
3	DE	300	30	30	Low interest loans, tax credit, grants.
	DC				
	MD	57	0	3	1) Brownfields Revitalization Incentive Program - property tax credits; grants and loans. 2) Free site assessments.
	PA				
	VA	2	0	0	
	WV	7	0		Revolving Loan Fund for site assessments and other related activities.
4	AL	2	0	2	
	FL	1	1		Liability protection for program participants (and lenders under certain conditions) from State and third party claims. Issuance of "No Further Action" letters. "Risk Based Corrective Action," whereby participants may be allowed to use alternative CTLs along with institutional and engineering controls to manage risk by controlling exposure. "Bonus Refund" whereby participants receive $2500 for each new Florida job created. Encouragement of local governments to offer redevelopment incentives such as streamlined permitting, tax credits, and low interest loans.
	GA				
	KY				
	MS	0	0	0	Not yet determined, but statute specifies that liability protection will be provided.
	NC	1	1	1	"No Further Action" letter and limit of liability (may not be granted in cases where program participants do not remediate contamination).

Table V-25: Brownfields Sites

Reg.	State	Sites Identified	Cleanups Underway	Commitments for Redevelopment	Explanation of Redevelopment Facilitation
4	SC	7	7	7	Covenant not to sue for successful completion of work and contribution protection for non-RPs.
	TN				
5	IL	1011	439		State tax credit (Environmental. Protection Act, Section 58. 58.14a). State brownfields grants (IEPA Section 58.13).
	IN	17	4	2	Tax rebate for nonpolluters. Voluntary program. Brownfield comfort letter. "No Further Action" letter under development. State revolving loan fund.
	MI	164	55	144	Grants to local governments for investigation and remedial action and protection against liability for historical contamination (if not party to the event). DEQ will undertake some investigations to help developer decide Baseline Environmental Assessment (BEA) provide exemptions from liability for past contamination for new owners who do BEA prior to 45 days after ownership.
	MN		300		Liability assurances and financial incentives.
	OH				
	WI				Liability protection and several financial incentives, including tax credits.
6	AR	263	2	2	Total release from State liability if order is properly executed, and low interest revolving loan program.
	LA				
	NM	0	0	0	New Mexico tries to educate anyone who might be interested in reusing a brownfield property about the Brownfields Program. Examples of potentially interested parties include realtors, redevelopers, and local governments that may own properties or consider condemning them.
	OK	7		1	Certificate of completion, certificate of no action (includes liability protections for cleaned up portions of the site), tax incentives for remediation and redevelopment, job act incentives, and advice/document review.
	TX	5	4	5	Education, technical assistance, state property tax abatements, issue letters for Federal income tax expensing of remediation costs.
7	IA				
	KS				
	MO	8	6	8	Grants, loans, loan guarantees and tax credits.
	NE				
8	CO				
	MT				
	ND				
	SD				
	UT				
	WY				
9	AZ	0	0		
	CA				

Table V-25: Brownfields Sites

Reg.	State	Sites Identified	Cleanups Underway	Commitments for Redevelopment	Explanation of Redevelopment Facilitation
9	HI	1	1	1	
	NV				
10	AK				
	ID				
	OR				
	WA				

Chapter VI: State Summaries

Region 1

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

CONNECTICUT

SITES

NPL Sites		State Sites	
Final:	16	Known and Suspected:	3029
Proposed:	0	Identified as Needing Attention:	668
Deleted:	2	On Priority List:	11

STATUTORY AUTHORITIES

Public Act 87-561, codified at Conn. Gen. Stat. §22a-114 and §§22a-133a through 133k (1987, as amended 1989 and 1995), authorizes the Department of Environmental Protection to clean up hazardous waste disposal sites and to use funds from the Emergency Spill Response Account or other accounts authorized by law for cleanup purposes. The law provides for enforcement; strict, joint and several liability; and cost recovery.

Public Acts 95-190 and 95-183 establish a voluntary cleanup program and the Licensed Environmental Professionals program. These provisions are codified at Conn. Gen. Stat. §§22a-133v through 133y.

The *Transfer of Hazardous Waste Establishments Program Law,* Conn. Gen. Stat. §§22a-134 through 134e (1985), creates a property transfer program. §22a-134 was amended by Public Act 95-183, Public Act 96-113 and Public Act 97-218.

The *Water Pollution Control Laws*, Conn. Gen. Stat. §§22a-432, 22a-433 (1967 and subsequent amendments), provide authority for administrative cleanup orders.

The *Urban Sites Remedial Action Program Law*, Conn. Gen. Stat. §229-133m (1992, amended 1993), provides funding to clean up urban industrial sites and addresses hazardous substance cleanup in connection with property transfers.

The *Emergency Spill Response Fund Law*, Conn. Gen. Stat. §22a-451(d) (1982, amended 1995), establishes the response fund, provides enforcement authorities, and allows for replacement of water supplies. The 1995 amendment, Public Act 95-208, transferred this fund to the State general fund as of July 1, 1995.

Conn. Gen. Stat. §22a-471 (1982, amended 1983-88, 1993-95), authorizes the Department of Environmental Protection to arrange for the short-term provision of potable drinking water where pollution of ground water creates an unreasonable risk for health or safety; to issue orders requiring the provision of such water supplies; and to advance to municipalities the cost of providing drinking water from the proceeds of any bonds authorized for that purpose.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Protection (DEP), Bureau of Water Management, Permitting, Enforcement and Remediation Division includes 42 FTE staff associated with remedial activities, 37 of whom work on non-NPL cleanups. The Attorney General's office provides legal support with 2-3 attorneys spending some portion of their time on State superfund and enforcement of remedial action orders; one FTE staff member at DEP provides legal support as well. Funds for staff and administration are from the State general fund (75%) and Federal grants (25%).

CLEANUP ACTIVITIES

Non-NPL sites currently being cleaned up number approximately 453. Of these, 11 are the State-funded sites that comprise the State priority list, 44 are being cleaned up under the brownfields program, and most of the rest are being cleaned up pursuant to the State's property transfer program. Cleanup activities have been completed at about 73 non-NPL sites since the start of the State program, 17 in FY97; of these, brownfields cleanups accounted for about 17 since the start of the

program and five during FY97. The State tracks cleanups under the voluntary and brownfields program, but does not separately track cleanups under a general voluntary remediation category.

A total of 3,029 sites in the State are in the discovery stage, under consideration for listing on State's Inventory of Hazardous Waste Disposal Sites. Of these, the State has listed 668 sites on the Inventory (as needing attention), although the State estimates that as many as 2,060 sites may potentially need attention.

CLEANUP FUNDING

The principal funding vehicles are the State superfund and the Urban Sites Remedial Action Fund. Sources for the two funds are general obligation bond funds. The State superfund had a balance of $8M at the end of the FY97. No funds were added to the State superfund for FY97. The amount spent during FY97 was not available, but the State obligated $1.3M. The fund monies may be used for site investigation, studies and design, removals, remedial actions, CERCLA match, operations and maintenance, emergency response, victim compensation, grants to local governments, program administration and natural resource restoration. In order to expend funds from the State superfund, DEP must determine that a threat is unacceptable, and DEP must be unable to determine the RP, or the RP must be in noncompliance with or appealing an order.

The Urban Sites Remedial Action Fund (USRAF) had a balance of $5.5M as of the end of FY97, and as of that date $30.5M had been obligated for non-NPL sites since the fund's inception. The USRAF is used primarily for site investigation, studies and design, operations and maintenance, removals and remedial actions.

Another bond fund, the Potable Water Grant Fund, is used for emergency actions to address potable water contamination. In FY97, this fund paid out approximately $2M, had about $2M in additions, and ended the fiscal year with a balance of $4.5M.

The Emergency Spill Response Fund (ESRF) was transferred into an identified account in the State general fund in 1995. The ESRF is administered in, and primarily used by, the Oil and Chemical Spills Response Division of the Waste Management Bureau. During FY97, the ESRF was funded by appropriations and cost recovery, and paid out close to $3.5M. The ESRF can be used for site investigation, studies and design, operations and maintenance, emergency response, removals, remedial actions, and natural resource restoration.

In 1996, the State enacted legislation creating a Special Contaminated Property Remediation and Insurance Fund. In February 1998, the Department of Environmental Protection was awarded $1M for establishment of the fund. The fund will be used by the DEP and the Department of Economic and Community Development for loans to municipalities, individuals or firms for environmental site assessments and site preparation of contaminated properties.

CLEANUP POLICIES AND CRITERIA

The State's Remediation Standard Regulations, which took effect January 30, 1996, set cleanup standards for hazardous substance sites and apply to State-ordered as well as voluntary cleanups. The regulations establish groundwater and soil cleanup standards. In the case of substances for which there are no numerical standards, the regulations include procedures for determining cleanup criteria, including risk-based criteria. The risk levels used for establishing cleanup standards are typically 10^{-6} (individual) and 10^{-5} (cumulative) for carcinogens with a Hazard Index of 1 for noncarcinogens. Background concentrations in excess of numeric criteria may be used in certain circumstances. Prior to adoption of the regulations, cleanup criteria were determined on a site-by-site basis, applying water quality criteria and MCLs where appropriate.

The Remediation Standard Regulations incorporate land use considerations. If cleanup standards are based on land use restrictions, an Environmental Land Use Restriction must be filed in the municipal land records.

PUBLIC PARTICIPATION

The State's voluntary cleanup law and the Remediation Standard Regulations require notice of voluntary cleanups and an opportunity for comment, as well as public hearings if there is substantial public interest in the remediation. The regulations also provide for public notice and an opportunity for a public hearing when the Commissioner is asked to approve a request by a property owner for an engineered control, such as a cap, to address instances where soil is polluted. For State-funded projects, DEP holds public meetings at various stages of the investigation and cleanup. DEP also keeps local officials informed of the status of State-funded projects.

ENFORCEMENT

Liability

Legal authorities include strict, joint, several and retroactive liability, orders for information and site access, subpoena authority, administrative and consent order authority, injunctive action and cost recovery authority. State law provides liability protection for "innocent landowners" as defined by law. Civil penalties of $25K per day are available under the hazardous waste program. Punitive damages (1½ times costs for negligent acts or two times costs for willful acts) are available in cost recovery actions. According to State law, any amounts paid by the State in cleanup costs shall be a lien against the property, and such liens take precedence over prior liens except in the case of residential property or property transferred pursuant to the State property transfer law. The preferred enforcement method is consent order, followed by administrative order or court action. The State is required to attempt cost recovery.

Natural Resource Damages

The Commissioner is authorized to pursue NRD claims, but a formal NRDs program has not been established. There have been no monies recovered under State law and few, if any, NRD cases under CERCLA.

Property Transfer

The property transfer law requires sellers to investigate and disclose the presence of hazardous substances on a contaminated site at the time of transfer and requires that a party to the transfer accept responsibility for implementing required remedial measures. The State's residential property transfer law also requires disclosure of known environmental hazards prior to transfer of certain residential properties. The State maintains a database of known or listed sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State has a voluntary cleanup program (established October 1, 1995, by Public Act 95-183, §3) in which owners of establishments (property transfer sites), sites on the State inventory of hazardous waste disposal sites, or municipalities can participate. The DEP decides whether the DEP or a Licensed Environmental Professional will oversee the investigation and cleanup. The program requires payment of an initial fee of $2K; if DEP oversight is involved, the participant must pay an additional fee based on the cost of the cleanup.

Public Act 95-190 (Section 2) provides separately for voluntary cleanups carried out by Licensed Environmental Professionals in connection with properties that are not under State order and are located in an area classified as GB or GC under the State's groundwater classification system.

In 1996, Public Act 96-113 authorized the State to enter into a covenant not to sue with certain owners or prospective purchasers of contaminated property subject to a remediation plan approved by the State.

The State's brownfields program is established by statute §22a-133m. To be included, sites must be in distressed communities, and must have a high economic development potential, as determined by the Department of Economic Development. Incentives for participation in the program include dedicated staff resources and bond funds for expedited review of plans and hiring of private contractors to perform remediation. In addition, the State is authorized to acquire sites and to assume liability under State law for up to $15M in cleanup costs. Thus far, 144 sites have been included in the program, and cleanup is underway at 44 sites.

MAINE

SITES

NPL Sites		State Sites	
Final:	12	Known and Suspected:	465
Proposed:	0	Identified as Needing Attention:	128
Deleted:	0	On Inventory or Priority List:	465

STATUTORY AUTHORITIES

The *Uncontrolled Hazardous Substance Sites Act*, Maine Rev. Stat., Title 38, §§1361 through 1371 (1983, as amended 1985, 1987, and 1990), establishes the Uncontrolled Sites Fund and authorizes the Department of Environmental Protection to clean up uncontrolled hazardous substances sites. The law provides for enforcement; strict, joint and several liability; cost recovery; and natural resources damages assessment and recovery.

Maine Rev. Stat., Title 38, §§343-E (1993), creates a program for voluntary cleanup of hazardous waste sites.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Protection (DEP), Bureau of Remediation and Waste Management, Division of Remediation has 26 FTE staff. One and one-half positions in the Attorney General's office are devoted to superfund-type enforcement activity. DEP also works with the Bureau of Health in conducting risk assessments and lab work. Funding for administration comes from Federal grants (61%), State cleanup funds (34%), and the State general fund (5%).

CLEANUP ACTIVITIES

During 1997, cleanup activities were completed at a total of 26 sites, 10 of which were under the State superfund program and 16 under the voluntary program. Voluntary cleanup activities are underway at about 98 sites. Cleanup has been completed at a total of about 140 non-NPL sites since the start of the agency's cleanup programs. Of these, 67 are under the State superfund program and 73 are under the voluntary program. Information is not available on the number of cleanup activities underway in the State superfund program.

CLEANUP FUNDING

Maine uses two accounts for cleanup funding: (1) the Uncontrolled Sites Bond Account, which contained approximately $3.8M as of the end of 1997; and (2) the Uncontrolled Sites Fund, which contained $3.6M as of December 1997. Expenditures from the Bond Account totaled $1.6M in 1997. Minimal, if any, funds were added to the Bond Account during FY97. The State spent $704.6K from the Uncontrolled Sites Fund during 1997, and $320.9K were added. The majority of monies from both funds were spent at non-NPL sites. No information was available concerning total monies obligated or encumbered for these funds. Both funds may be used for site investigation, emergency response, removals, studies and design, remedial actions, natural resource restoration, operations and maintenance, grants to local government, program administration, and CERCLA match. Cleanup of closed municipal landfills is financed through a separate bond fund and statutory authority.

CLEANUP POLICIES AND CRITERIA

Maine determines cleanup levels on a case-by-case basis. Future water uses, MCL/MCLGs, toxicity levels and risk to human health are all considered. The State uses a risk level of 10^{-5} (cumulative) for carcinogens and a Hazard Index of 1. At urban sites or rural areas where drinking water is not affected, Maine has applied background level cleanup standards for groundwater

contamination. In July 1997, Maine published draft soil cleanup guidelines. The guidelines describe cleanup scenarios based on different categories of exposure: residential, adult worker, and trespassers. Assumptions about future site-specific land use are based on current and future use, and the agency has authority to require deed restrictions to maintain the future land use.

PUBLIC PARTICIPATION

Maine has no formal requirements for public involvement. DEP policy is to keep local officials and residents informed.

ENFORCEMENT

Liability

Legal authorities include strict, joint and several, and retroactive liability; orders for information; site access and remediation orders; administrative order authority; cost recovery; liens and superliens; and punitive damages of treble the State's costs. The Commissioner must designate a site for a consent decree. Penalty authority is derived from the hazardous waste statute. DEP also has a property forfeiture provision.

Natural Resource Damages

Maine's program has existed since 1991 and has recovered $1.5M from 5 cases. All cases involved State law claims, and four of the cases involved claims under CERCLA as well. There are cases pending currently, but no further information about these cases is available. Recovered funds may be used for program administration, as well as NRDs assessment to restore or replace damaged resources.

Property Transfer

Maine has no property transfer provisions. Legislation enacted in 1993 requires auditors to disclose to a private requestor of an audit any discovery of a release or presence of hazardous substances on a site that may cause significant threats to public health or the environment; the property owner then has a duty to disclose their presence to DEP.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State's voluntary program is an alternative to the State's regular cleanup program. Some monies are dedicated to fund the State's participation, and participants pay a $500 application fee and are charged for time spent by the State. Site owners are able to get full or partial liability releases depending on the cleanup work carried out at the site. Incentives for participation include getting sites back into economic use and getting a certificate from the State indicating that cleanup was completed to the State's satisfaction.

The State is developing a brownfields program. An inter-agency team is identifying potential resources to promote brownfields redevelopment.

MASSACHUSETTS

SITES

NPL Sites		State Sites	
Final:	31	Known and Suspected:	2679
Proposed:	1	Identified as Needing Attention:	2679
Deleted:	1	On Priority List (Tier I sites):	428

STATUTORY AUTHORITIES

The *Massachusetts Oil and Hazardous Material Release Prevention and Response Act*, Mass. Gen. Law c. 21E (1983, as amended in 1986, 1992 and 1994), authorizes the Department of Environmental Protection to ensure the clean up of sites contaminated by oil or hazardous material. The law provides for enforcement; strict, joint and several liability; cost recovery; public participation; natural resources damages assessment and recovery; voluntary cleanups; and brownfields cleanups.

PROGRAM ORGANIZATION

The Department of Environmental Protection's (DEP) Waste Site Cleanup Program has a total of 203 FTE staff, 172 of which work on non-NPL sites. The Bureau of Waste Site Cleanup is the lead bureau administering the Waste Site Cleanup Program. The Bureaus of Waste Prevention and Resource Protection also have staff dedicated to the program. In addition, 14 FTE attorneys from DEP's Office of General Counsel and seven FTE attorneys in the Attorney General's office provide enforcement support. Scientists in DEP's Office of Research and Standards provide risk assessment support at specific sites and in regulation and policy development. In FY97, the program was funded by the State general fund (7%), the State cleanup fund (28%), Federal grants (19%), and a combination of other sources such as the State LUST Trust Fund and the State Clean Environment Fund.

CLEANUP ACTIVITIES

Cleanup activities have been completed at 1,732 sites since the State's cleanup program was redesigned in October 1993. Of those, cleanup activities were completed at 619 sites in FY97.

CLEANUP FUNDING

Bonds fund public response actions. A total of $7.1M were expended from the bond fund during FY97, $4M for non-NPL sites and $3.1M for NPL sites. DEP has spent about $100M since 1983. At the end of FY97, the bond fund had a balance of $86.3M. Bond funds may be used for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, operations and maintenance, and grants to citizen groups and local governments for technical assistance.

CLEANUP POLICIES AND CRITERIA

Permanent cleanup solutions must eliminate significant risk of harm to health, safety, public welfare and the environment; and cleanup to background conditions is required where feasible. Temporary solutions are required at all sites if a permanent solution is infeasible.

Regulations (the Massachusetts Contingency Plan) set out three methods for establishing cleanup standards at disposal sites. The first method relies on numeric cleanup standards for 105 chemicals in three groundwater categories and three soil categories. The second method allows modification of the Method 1 numeric standards based upon site-specific fate and transport information. The third method establishes cleanup goals based on site-specific conditions and a

quantitative risk assessment. For sites at which a quantitative risk assessment is used to determine cleanup standards, any applicable or suitably analogous Massachusetts health and environmental standard must be met, *and* Cumulative Receptor Risk Limits must be achieved. The cancer risk limit is a cumulative excess lifetime cancer risk of 10^{-5}. The noncancer risk limit is expressed as a Hazard Index of 1, and is calculated for groups of chemicals with the same mechanism of toxic action.

Restrictions on site use (Activity and Use Limitations) are required if the remediation goals are based upon anything less than the most sensitive (*i.e.*, residential) use. Use restrictions are implemented through a deed notice or deed restriction.

PUBLIC PARTICIPATION

The statute and regulations require public notice of all classifications of disposal sites and applications for Tier I permits for response actions. When citizens petition for community involvement in response actions, a Public Involvement Plan must be prepared. State technical assistance grants and public site inspections are also available. Local officials are informed of key site activities throughout the cleanup process. The person conducting the response action is required to implement required public involvement activities.

ENFORCEMENT

Liability

Massachusetts has strict, joint and several liability. Liability is also retroactive. DEP provides PRPs with an opportunity to clean up a site; if the party cannot or will not, DEP may clean up the site and recover costs. The rate of voluntary cleanups is high (95%), which program staff attribute to the statute's provisions for priority liens, punitive damages equal to treble the State's costs and annual compliance assurance fees, which are assessed for every year a site is in the cleanup process. The 1992 statutory amendments authorize DEP to issue an order to remedy an imminent hazard, which is enforceable immediately and not subject to judicial review except in a proceeding to collect penalties for violations of the order or to obtain reimbursement for the costs of complying with the order.

Natural Resource Damages

Massachusetts' NRDs program began in 1983. A total of $23.6M has been recovered by Federal and State trustees at 5 NPL sites, in cases brought under Federal and State law. Two joint restoration actions are underway.

Property Transfer

Massachusetts has no property transfer provisions. The State maintains a database of sites that is publicly available.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Massachusetts' statute authorizes voluntary cleanups as an integral part of the cleanup program. Anyone is eligible to participate in a voluntary cleanup. Incentives for participating in the program include a streamlined cleanup process, no waiting period for State oversight, and clear endpoints. Funding for the State's activities comes from permit fees (for "Tier 1" cleanups) and compliance fees.

The State's brownfields program is based on the authority to offer covenants not to sue to parties conducting voluntary cleanups. The State currently limits covenants not to sue to prospective purchasers and tenants planning to reuse sites in Economic Target Areas or to projects that provide "exceptional economic development opportunity." Covenants have been signed for 53 sites and 14 more are pending; all have redevelopment commitments. Some sites may qualify for financial assistance under the State's Economic Development Incentive Program, which was designed to encourage job creation in Economic Opportunity Areas.

NEW HAMPSHIRE

SITES

NPL Sites		State Sites	
Final:	18	Known and Suspected:	474
Proposed:	0	Identified as Needing Attention:	474
Deleted:	0	On Inventory or Priority List:	474

STATUTORY AUTHORITIES

The *New Hampshire Hazardous Waste Cleanup Fund Act* (HWCF), NHRSA Chapter 147-B (1981, as amended 1983, 1985, 1986, 1987, 1990 and 1991 and 1996), establishes the Hazardous Waste Cleanup Fund and authorizes the Department of Environmental Services to use the fund for expenses directly associated with cleanup of hazardous waste or hazardous materials. The law provides for enforcement; strict, joint and several liability; and cost recovery. NHRSA Chapter 147-B and Chapter 147-A (hazardous waste management), provide general authority for voluntary cleanups.

NHRSA Chapter 485 (1996) and the Groundwater Protection Rules, ENV-Ws 410, authorize the designation of groundwater management zones as a component of the remediation of contaminated groundwater and provide for the issuance of permits for the remediation. The law also requires recipients of a permit to record notice of the groundwater management zone with the registry of deeds.

NHRSA Chapter 147-F (1996), establishes the State's brownfields program.

PROGRAM ORGANIZATION AND FUNDING

The Waste Management Division of the Department of Environmental Services (DES) administers the Hazardous Waste Cleanup Fund (HWCF). As a result of a 1997 reorganization, the Division now has four bureaus. The new Hazardous Waste Remediation Bureau is primarily responsible for Federal and State Superfund work and has 25 FTE staff, 17 of whom work on non-NPL sites. This bureau includes the former Groundwater Protection Bureau, the State sites portion of the former Hazardous Waste Compliance Bureau, and the Federal Superfund sites portion of the former Waste Management Engineering Bureau. The Department of Justice (Attorney General's office) provides legal support through 4.5 FTE attorney positions and receives an annual appropriation from the HWCF. The program's funding comes from the HWCF (12%), the State general fund (8%) and Federal grants (80%).

CLEANUP ACTIVITIES

The State generally does not undertake remediation at non-NPL sites. About 83 non-NPL sites are currently being cleaned up. Approximately 136 sites have been cleaned up on a voluntary basis since the start of the program, with about 50 completed in the past fiscal year. In addition to staff and administration, the HWCF has been used for emergency removal activities and for various hydrogeological studies at sites in the preliminary stages of investigation.

CLEANUP FUNDING

The balance in the HWCF at the end of FY97 was $1.5M, with an additional $7.5M obligated for NPL sites. During FY97, $1.4M were added to the fund and $1.7M were paid out, mostly for non-NPL sites. The HWCF is derived primarily from quarterly fees paid by generators of hazardous waste, recovered costs, fines and penalties. An average of $1.4M is collected each fiscal year. The HWCF can be used for site investigation, operations and maintenance, studies and design, removals, emergency response, remedial action, program administration, and grants to local governments. State

law requires that the governor certify that circumstances require use of the fund. NHRSA Chapter 147-B provides for issuing bonds, to be paid from the HWCF, to fund remedial investigation and cleanup. A separate capital bond is appropriated for CERCLA match for each fiscal year.

CLEANUP POLICIES AND CRITERIA

Cleanup levels must meet or exceed any Federal standards. Sites must achieve existing Federal standards for groundwater and surface water. The State has developed a Risk Characterization and Management Policy for soils, which provides for a three-tiered approach to selecting cleanup standards. The first two tiers incorporate established values , while the third tier involves site-specific risk assessment. The State uses risk levels of 10^{-6} (individual) or 10^{-5} (cumulative) for carcinogens and a Hazard Index of 1.

Where land use assumptions are a basis for establishing cleanup standards, the State may require that Use and Activity Restrictions be recorded on the deed. In addition, NHRSA Chapter 485 authorizes the State to designate Groundwater Management Zones as a component of groundwater remediation, and the law requires that Groundwater Management Zones be recorded in the registry of deeds.

PUBLIC PARTICIPATION

There are no formal public participation requirements. The State sometimes holds information meetings and informally contacts local citizens and government officials.

ENFORCEMENT

Liability

State law provides for strict, joint and several liability. The State is authorized to issue administrative orders, including orders for information, site access, and site cleanup. The State also has subpoena and consent order authorities. New Hampshire may take injunctive action to induce a generator to clean up a site, may impose criminal penalties, and may bring an action to recover costs.

New Hampshire has a first priority lien (superlien) on: (1) real property (other than residential property) where hazardous waste or hazardous material is located; (2) the business revenues generated from the facility on the real property where the hazardous waste or hazardous material is located; and (3) all personal property located at this facility. A lien without priority, effective as of the date and time of recording and filing, can be established against all other property.

Natural Resource Damages

The State has no authority independent of Federal law to recover for NRDs.

Property Transfer

New Hampshire has no property transfer provisions. The State maintains a database of known or listed sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

New Hampshire law provides general authority for voluntary cleanups. The State considers voluntary cleanups to be an integral part of is program and essentially all non-NPL cleanups to be voluntary cleanups.

New Hampshire enacted legislation creating a brownfields program in July 1996. Any property contaminated with hazardous waste, hazardous materials or oil is eligible, except sites that are being cleaned up through one of the State's petroleum reimbursement funds and sites that are under an environmental or corrective order (unless participation in the program will bring about compliance). A covenant not to sue, which protects against liability under State law, may be issued to participants other than those who caused or contributed to the contamination. Cleanup is underway at seven sites included in the brownfields program.

RHODE ISLAND

SITES

NPL Sites		State Sites	
Final:	12	Known and Suspected:	400
Proposed:	0	Identified as Needing Attention:	100
Deleted:	0	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

The *Hazardous Waste Management Act*, R.I. Gen. Laws, §§23-19.1-1 through 23-19.1-33 (1978, as amended, 1979, 1984, 1987), establishes the Environmental Response Fund and authorizes the Department of Environmental Management to clean up abandoned, uncontrolled, and/or inactive sites. The law provides for enforcement; joint and several liability; cost recovery; natural resources damages assessment and recovery; and public participation.

The *Industrial Property Remediation and Reuse Act*, R.I. Gen. Laws §§ 23-19.14-1 through 23-19.14-19 (1995), provides for voluntary cleanup and brownfields cleanup, and clarifies enforcement authorities and public participation.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Management (DEM), Bureau of Environmental Protection, Office of Waste Management, has 20 FTE staff. Following a recent departmental reorganization, approximately 5 emergency response staff were moved to the DEM's Office of Compliance and Inspection. In-house legal support is provided by two FTE attorneys. Federal grants provide 60% of funding for staff and administration, with the remainder coming from State cleanup funds (10%) and the State general fund (30%).

CLEANUP ACTIVITIES

No information was available regarding cleanup activities.

CLEANUP FUNDING

At the end of FY97 the Environmental Response Fund had a balance of $50K. During the fiscal year, it received additions of $300K and paid out $300K, all for non-NPL sites. In addition, $681K were encumbered, all for non-NPL sites. There have been no new bonds issued, and the primary sources of the fund are now appropriations and penalties, with smaller contributions from cost recoveries and interest.

The fund may be used for site investigation, emergency response, removals, site evaluation, studies and design, remedial action, CERCLA match, temporary water supplies, operations and maintenance, program administration and resident relocation.

CLEANUP POLICIES AND CRITERIA

Cleanup levels are determined on a case-by-case basis, using water quality criteria, MCLs/MCLGs, groundwater standards, background levels, EPA guidelines and generic risk-based soil standards developed by the State. The State also uses site-specific risk assessment. Risk levels used for risk assessment are 10^{-6} for carcinogens and a Hazard Index of 1 for noncarcinogens.

The State considers assumptions about future land use in establishing cleanup levels. Where remediation standards are based on land use restrictions, the State requires that environmental land use restrictions be recorded with the title.

PUBLIC PARTICIPATION

State law and regulations require community involvement in investigation and remediation of contaminated sites, including notification to nearby residents of proposed site investigations, availability of records, and notice and comment on proposed settlement agreements. DEM policy is to expand public participation opportunities, and DEM has sought to implement this policy through the public notice and comment process, as well as through agency program planning meetings.

ENFORCEMENT

Liability

Rhode Island has strict, joint and several liability, as well as retroactive liability. The State has authority for subpoenas, administrative orders, injunctive action, civil and criminal penalties, cost recovery, and treble damages. Civil penalties of up to $10K per day are available.

Natural Resource Damages

The State has NRDs authority under R.I. Gen. Laws §§23-19.14-6 and 23-19.1-22(c). Approximately $2.5M has been recovered through two CERCLA claims, and two additional CERCLA claims totaling approximately $500K are pending. One natural resource restoration project is underway using over $500K of recovered monies.

Property Transfer

Rhode Island has no property transfer provisions other than requirements for disclosure of known deficient conditions upon transfer of certain residential properties. An inventory of sites is maintained.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Voluntary cleanups are handled under the regular cleanup program. Although anyone is eligible, non-PRPs may obtain a covenant not to sue and protection from contribution actions.

The brownfields program targets any underutilized site where contamination impedes development. Participating sites may receive liability protection. The *Industrial Property Remediation and Reuse Act* also authorizes the State Economic Development Corporation to use funds from the State's tire site remediation account for loans to facilitate remediation of sites of "critical economic concern." Such funds, however, have not been available since the law's enactment in 1995. The State estimates that at least 60-65 sites have been included in the brownfields program.

VERMONT

SITES

NPL Sites		State Sites	
Final:	8	Known and Suspected:	362
Proposed:	0	Identified as Needing Attention:	255
Deleted:	0	On Inventory or Priority List:	362

STATUTORY AUTHORITIES

The *Water Pollution Control Law*, Vt. Stat. Ann., Title 10, §§1282-1283, establishes the Environmental Contingency Fund for emergency responses, studies and design, and remedial actions.

The *Waste Management Act*, Vt. Stat. Ann., Title 10, §§6601-6618 (1977, as amended 1981, 1985, 1987, 1995and 1996), establishes the State's hazardous waste program and authorizes the Department of Environmental Conservation to take removal and remedial actions to clean up sites contaminated by the release of hazardous materials. The law provides for strict, joint and several liability for responsible parties, and for cost recovery. The law was amended in 1995 to establish a brownfields cleanup program (Vt. Stat. Ann, Title 10, §6615a).

An Act Relating to Administrative Enforcement of Specified Environmental Laws (Act 98), Vt. Stat. Ann., Title 10, §§8001-8221 (1989), provides additional enforcement authorities.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Conservation (DEC), Waste Management Division, Hazardous Materials Program has 14 FTE staff members. That section handles all hazardous waste work including CERCLA, RCRA, pre-remedial and State list work. Four attorneys in the Attorney General's office, two attorneys in DEC's Enforcement Division, and one Program Attorney work on hazardous waste cases, for a total of about three FTE positions. Staff and administrative costs come from Federal grants (75%), the State general fund (23%) and State cleanup funds (2%).

CLEANUP ACTIVITIES

Cleanup activities have been completed at 115 non-NPL sites since the start of the State program, 21 of these during 1997. Cleanups are underway at two brownfields sites. Outside of the brownfields program, the State does not track the number of non-NPL sites at which cleanup activities are currently underway. Two NPL sites are proposed for de-listing.

CLEANUP FUNDING

The Environmental Contingency Fund (ECF) had a balance of $1M at the end of FY97. Additions amounting to $400K were made to the fund during the fiscal year. A total of $500K was expended at non-NPL sites from the ECF. No monies were obligated or encumbered during FY97. A hazardous waste generator tax constitutes the major source of revenue for the fund, with minor revenue from cost recoveries and interest. The ECF may be used for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, operations and maintenance, grants to local government, and program administration.

The Petroleum Cleanup Fund (PCF) had a balance of $3.8M at the end of the 1997 calendar year, and the State had obligated another $800K for non-NPL sites. During 1997, Vermont spent $4.7M from the PCF on non-NPL sites. Additions to the fund totaled $5M in 1997. The PCF is generated by an annual tank assessment fee required to be paid by UST owners and by a one cent per gallon fuel license fee charged to distributors of gas or diesel fuel. It also receives cost recoveries and interest. The PCF may be used for site investigation, emergency response, studies and design,

remedial actions, removals, victim compensation, operations and maintenance, and program administration.

CLEANUP POLICIES AND CRITERIA

Cleanup standards are determined on a case-by-case basis. The State uses water quality criteria (based on the State groundwater statute), MCLs/MCLGs, and EPA guidelines (*e.g.*, soil cleanup standards) in conjunction with risk assessments. The State uses a risk level of 10^{-6} for excess cancer cases and a Hazard Index of 1 for noncarcinogens. The State considers assumptions about future land use in establishing cleanup standards. Zoning restrictions are used to support land use assumptions, and the State may require deed restrictions in individual cases.

PUBLIC PARTICIPATION

DEC meets with town officials and holds public meetings. The *Waste Management Act* requires that municipalities be notified of sites within their borders; site designation must be entered on the town's land record. The State brownfields law requires public notice of a proposed corrective action plan and a minimum 15-day public comment period.

ENFORCEMENT

Liability

DEC is required to give a "discharging party" an opportunity to clean up. DEC sends out letters, to be followed by an administrative order in the event of noncompliance. Ninety-five percent of sites are voluntarily cleaned by RPs. The State has strict, joint and several liability and treble damages provisions. Liability apportionment is available if an RP can prove apportionment. DEC has several order authorities, including authority to request information, subpoena documents, issue administrative orders, issue consent orders, and issue orders for entry. Civil penalties are $50K per violation in addition to $25K per day for continuing violations. Penalties and fines go to the State general fund; recovered costs go into the ECF.

Natural Resources Damages

Vermont does not have authority independent of Federal law to recover for NRDs.

Property Transfer

Vermont does not have any property transfer provisions.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Vermont does not have a voluntary cleanup program, although the State does encourage and support voluntary cleanups.

The State does have a brownfields program (established by Vt. Stat. Ann., Title 10, §6615a), which commenced in January 1996. Properties that are abandoned or substantially underutilized and where development is proposed by independent parties are covered by this program. NPL sites are excluded, as are sites subject to RCRA corrective action requirements and sites regulated under the LUST program. Thus far, three sites have been identified for participation in the program. Cleanup is underway at two of these sites, both of which have commitments for redevelopment. The program offers limited liability protection under the Hazardous Waste Management Act for redevelopers and successors. In addition, the State conducts some brownfields site assessments using HUD grant funds.

Region 2

New Jersey
New York
Puerto Rico

NEW JERSEY

SITES

NPL Sites		State Sites	
Final:	121	Known and Suspected:	15177
Proposed:	2	Identified as Needing Attention:	4915
Deleted:	14	On Inventory or Priority List:	1402

STATUTORY AUTHORITIES

The *Spill Compensation and Control Act*, N.J.S.A. §§58:10-23-11 separately *et seq.*, (enacted 1976, and amended almost annually thereafter), establishes a fund for cleanups and provides authority for emergency response, removals, remedial actions, enforcement, cost recovery, victim compensation, natural resources damages, and voluntary cleanup.

The *Industrial Site/Recovery Act* (ISRA) (1993), N.J.S.A. §§13:1K-6 *et seq.*, requires transferors of industrial facilities to clean up contamination.

The *Brownfield and Contaminated Site Remediation Act*, N.J.S.A. 58:10B, provides the basis for the remediation of contaminated sites and a brownfields program; it also amended site remediations standards to reflect land use restrictions.

The *Environmental Rights Act*, N.J.S.A. 2A:35A establishes a basis for filing citizen suits.

The *Water Pollution Control Act* (WPCA), N.J.S.A. 10A-1 *et seq.*, establishes the basis for the remediation of contaminated sites which impact the waters of the State.

PROGRAM ORGANIZATION AND FUNDING

The Site Remediation Program in the Department of Environmental Protection has 512 staff members. Of this number 335 are devoted to non-NPL cleanups. The Attorney General's Office (Department of Law and Public Safety, Division of Law, Hazardous Site Litigation Section) provides 18 attorneys for legal support of the program. Funding for staff and administration comes from the Spill Compensation Fund, Corporate Business Tax, and Bond funds (55%), PRP reimbursements (40%), and Federal grants (5%).

CLEANUP ACTIVITIES

Publicly funded cleanup priorities are to be established using the New Jersey Remedial Priority System (RPS) (NJAC 7:26F). The scoring system ranks sites based on risk to human health and the environment. The totals noted above exclude UST sites, but include other petroleum sites. At non-NPL sites, cleanup activities are currently underway at 4,363 sites; 2,591 were completed during the 1997 fiscal year, and 12,634 have been completed since the start of program.

At VCP sites, 2,313 are currently being cleaned up, 1,721 were completed during the last FY, and 4,454 have been completed since the program's inception.

CLEANUP FUNDING

New Jersey's Spill Compensation Fund is generated primarily by dedicated taxes. It had a balance of $1.3M at the end of FY97. Fund activities during FY97 consisted of $25.7M in additions, and $28.3M in expenditures. This Fund may be used for all categories of cleanup activities at non-NPL sites except for grants to local governments and natural resource restoration, and it is used for CERCLA match, and operations and maintenance at NPL sites. At this time the fund is only used for Victim Compensation, Emergency Response and Program Administration.

The Hazardous Discharge Site Cleanup Fund, consisting primarily of cost recoveries, user fees and direct billing, had a balance of $1.0M at the end of the fiscal year. During FY97 additions to the fund were $21.5M, and the total monies paid out were $21.3M.

A portion of a Corporate Business Tax authorized by referendum in November 1996 goes to support publicly funded cleanups. This account had a zero balance at the end of FY97, but revenues and expenditures of $14.8M (representing the one-half year the tax had been in effect). Annual revenues and expenses from this account should be $36.7M per year. In FY97 expenditures were $12.1M for non-NPL projects, and $2.7M for program staff and administration.

The 1981 Discharge Bond Fund had a balance of $2.5M at the end of FY97, and the total monies obligated or encumbered at the end of the FY were $55.9M.

The 1986 Hazardous Discharge Bond Fund had a balance of $26.4M at the end of the FY97. It is authorized for all cleanup categories except victim compensation, grants to local government, and natural resource restoration. $42.1M in encumbered funds also was in this account.

The 1996 Hazardous Discharge Bond Fund had a balance of $65M at the end of the FY. This funding source had not yet been used.

The Hazardous Discharge Capital Fund's balance was $18.5M at the end of FY97. The fund took in no new money but paid out $16.9M during the FY.

CLEANUP POLICIES AND CRITERIA

The State has statutory cleanup provisions with risk based goals, and also uses water quality criteria, MCLs and MCLGs, background levels, risk assessment, and the State's unpromulgated soil cleanup criteria (SCC) guidelines. The risk level set by the statute is 10^{-6} for carcinogens, and a Hazard Index of 1 or less for noncarcinogens. For soil cleanup, the State may use the SCC or determine case-specific levels by risk assessment. If SCC are determined to be below background levels, then the cleanup level is background. For sites where cleanup is based on restricted land uses, site specific deed notices must be recorded.

The same standards are used for voluntary program cleanups.

PUBLIC PARTICIPATION

The Spill Act specifies that actions should "to the greatest extent possible, be in accordance with the NCP." DEP policy is generally to follow NCP procedures and the Technical Rules. A State regulation provides for public notice of cleanup actions at all sites. Procedures for all high profile sites, including the voluntary cleanup program, provide for notice, comments, hearings and participation.

ENFORCEMENT

Liability

Liability is strict, joint and several, and retroactive. Civil penalties are authorized up to $50K per day per violation (and up to $1M for discharges, based on substance and quantity); treble damages may be assessed through the courts.

Natural Resource Damages

The Spill Act and WPCA provide State authority to seek NRDs. A formal program was inaugurated July 1, 1993. One State NRD recovery of $455K and eight CERCLA NRD recoveries (valued at over $9M) have occurred. There are no CERCLA NRD claims and 1 State-based NRD claim currently pending.

Property Transfer

New Jersey's *Environmental Cleanup Responsibility Act*, enacted in 1983, was the pioneering property transfer law. It required site assessment, disclosure, and cleanup of industrial sites upon transfer. The law was amended in 1993 and renamed the *Industrial Sites Recovery Act* (ISRA). Investigation, cleanup, and disclosure are still required. Sites are remediated according to property

use standards. Other cleanup sites must record a deed notice if sites are not cleaned up to unrestricted use standards.

New Jersey's Spill Act gives the State a priority (super)lien for its cleanup costs. The State maintains a database of sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State's voluntary cleanup program was established in 1992 as a subset of site remediation cases. It is fully integrated into its other programs. Participation is open to all parties with the exception of priority sites and sites under an enforcement action. DEP will provide a "No Further Action" letter, and a covenant not to sue for non-RPs upon completion of successful voluntary cleanup. Low interest loans and grants are available to parties interested in doing the work. The State charges an oversight fee that is case-dependent; the State may bill salary and overhead, but not its indirect costs.

The State also operates a brownfields program based on a State statute. It includes abandoned and underutilized sites that may contain hazardous substances. Cleanup standards for brownfield sites are identical to those for other sites and may include deed notices. Hundreds of sites are presently being cleaned up under this program, with commitments for reuse. The low interest loan fund is administered by the New Jersey Economic Development Authority.

NEW YORK

SITES

NPL Sites		State Sites	
Final:	90	Known and Suspected:	1567
Proposed:	2	Identified as Needing Attention:	769
Deleted:	11	On Inventory or Priority List:	906

STATUTORY AUTHORITIES

The *Environmental Conservation Law*, Articles 17, 19, 27, 71, provides general, comprehensive enforcement and cleanup authority. Article 27, title 13, is the *Abandoned Sites Act (1979, Chapter 282),* which mandates Statewide inventory and registry of hazardous waste sites, provides order and cleanup authority, and authorizes the State to provide alternative water supplies. It includes authority under which the State established a voluntary cleanup program.

The *State Superfund Act* (1982, Chapter 857; 1985, Chapter 38), establishes the Hazardous Waste Remedial Fund for cleanup of sites and State CERCLA match, and a State capital account for cleanups.

The *Environmental Quality Bond Act of 1986* (EQBA) (Ch. 511, Laws of 1986), authorized $1.2B in bonds to address inactive hazardous waste sites, $100M of which was later redirected for use in cleaning up nonhazardous waste landfills.

Part of the *Environmental Conservation Law,* Article 56, Title 5 (1997), sets forth a brownfields program, the environmental restoration project State assistance program.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Conservation (DEC) has approximately 309 authorized FTE staff members working on State and Federal Superfund activities. Most of the personnel work in the Division of Hazardous Waste Remediation. Legal support is provided by 17 attorneys in the Division of Environmental Enforcement and three attorneys in the New York Attorney General's Office.

Approximately 92% of funds for staff and administration are from the cleanup fund, 7% are from Federal grants, and 1% is from the State general fund.

CLEANUP ACTIVITIES

The State tracks registry sites based on a classification system. Sites are listed if they have a confirmed disposal of a hazardous waste (not substance), and if they present a significant threat to public health or the environment.

In FY97 cleanup actions were underway at 266 non-NPL sites. Actions have been completed at approximately 269 non-NPL sites, including 47 during FY97. A separate breakout of voluntary program actions is not available.

Of the sites needing attention, approximately 89 are municipal landfills, 118 are industrial landfills, and 651 are manufacturing and other sites.

CLEANUP FUNDING

In 1989, the State began selling EQBA bonds. $401M remains in the fund. During FY97, $102M were expended and $94M were obligated. The bond money may be used for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, operations and maintenance, grants to local government, and program administration.

The Hazardous Waste Remedial Fund had a balance of $7.3M as of March 31, 1997. During FY97, $61.6M were added to the fund and $56.8M were paid out. The bulk of this funding comes

from waste end taxes. The Fund is used for debt service of 1986 EQBA bonds. A small portion of the money is used for program administration.

In 1996, the Clean Water/Clean Air Bond Act authorized sale of bonds, a portion of which support brownfields ("environmental restoration projects"). This $200M bond authorization did not have any funds obligated in FY97, but funds have been obligated for the FY98.

The DEC also was appropriated capital funds with a balance of $3.7M used for studies and design, removals, and remediation. $1M were added to this fund and $17.8K were expended during the fiscal year. Encumbrances were $1.3M.

A substantial amount of cleanup funding is provided by PRPs. The State reports a total of 722 consent orders to date, valued at approximately $1.6B in cleanup commitments.

CLEANUP POLICIES AND CRITERIA

Cleanup levels are established considering risk and exposure assessments, water quality criteria, MCLs/MCLGs, background levels, groundwater standards, and land use considerations. The process starts with soil cleanup objectives based on unrestricted use and then uses the feasibility study to determine final soil cleanup levels. When the cleanup of a site to the predisposal condition is not possible or feasible, DEC specifies generic soil cleanup levels that, if attained, would eliminate all significant threats. The risk goal is set at 10^{-6}. Deed restrictions are used to control future land use where cleanup is not to residential standards.

PUBLIC PARTICIPATION

Statutes and regulations require the DEC to develop a citizen participation program at the start of RI/FS that includes a site-specific citizen participation plan, establishment of a local document repository, creation of a public contact list, and a mailing of a description of the proposed RI/FS field work. When the Proposed Remedial Action Plan (PRAP) is prepared, a description of the PRAP is sent to the people on the contact list inviting comments. The Department conducts a 30-day comment period, and will hold a public meeting to describe the PRAP and solicit public comments. The Department summarizes and responds to comments received during the comment period when the Record of Decision (ROD) is signed. The Department also conducts citizen participation activities when it implements interior remedial measures.

In addition, when the Department adds a site to its Registry of Inactive Hazardous Waste Sites, or reclassifies a site within the Registry, it must mail a notification to adjacent property owners and to town and county clerks. The Department must also publish a notice of a proposal to delete a site from the Registry, conduct a 30-day comment period, notify adjacent property owners by mail, and summarize public comments.

The voluntary cleanup program incorporates public notice and comment as a matter of policy rather than legal requirement. The Environmental Restoration Program (brownfields) incorporates citizen participation requirements within the statute and regulations.

ENFORCEMENT

Liability

State regulations defining responsible party result in strict, joint and several liability. The statute makes common law defenses available. Liability is retroactive. Legal authorities include orders for information and site access, subpoena authority, administrative order authority, consent order and injunctive action authority. Civil penalties are $25K per violation in addition to $25K per day for continuing violations. Criminal penalties of up to $25K per day and/or one year imprisonment are available. Cost recovery is also authorized.

Natural Resource Damages

Natural resource damages are recoverable under the *Navigation Law,* the *Environmental Conservation Law*, and common law. A formal NRDs program was authorized in 1990 within DEC and got underway in 1993. It has recovered more than $38.6M, mostly under CERCLA authority. Eighteen natural resource restorations are underway.

Property Transfer

New York is required to maintain a priority list of sites. Also, inactive hazardous substance sites must be recorded with the recorder of deeds.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State maintains a separate voluntary cleanup program, established in December 1994 by Organization and Delegation Memorandum 94-32. Site owners, prospective purchasers, municipalities, and (under some circumstances) operators may participate. Participation by class 2 inactive hazardous waste sites and NPL sites is not allowed. Cleanup levels are based on the intended use of the site; a release from liability is issued after the cleanup levels are reached. State oversight costs are paid by the volunteer.

The passage of the Clean Water/Clean Air Bond Act of 1996 established a $200M environmental restoration project fund. Known as the Brownfields Program, the fund provides grants to municipalities for the investigation and/or remediation of municipally owned contaminated properties. These properties may then be marketed for redevelopment by the municipality or used by the municipality for a variety of activities including industrial, commercial, or public use. In December 1997, the Department issued its final Administrative and Technical Guidance Memorandum (TAGM) entitled, "Environmental Restoration Projects." This document is for use by municipalities in applying for State assistance brownfield grants.

In January 1990, regulations were finalized addressing the provision of State financial assistance to municipalities to carry out the Brownfields Program. The State funding provides 75% of investigation and cleanup costs. Eighty-one (81) brownfields applications have been approved for funding under the Clean Water/Clean Air Bond Act. A total of $70M has been appropriated for Brownfields projects through fiscal year 97-98. Of that amount, approximately $14.5M has been committed for the 81 projects that have been approved.

PUERTO RICO

SITES

NPL Sites		State Sites	
Final:	12	Known and Suspected:	
Proposed:	0	Identified as Needing Attention:	
Deleted:	0	On Inventory or Priority List:	

STATUTORY AUTHORITIES

The *Environmental Emergencies Fund Act*, Law 81, 12 L.P.R. Ann. §§1271 *et seq.*, (1987) establishes the Environmental Emergencies Fund and authorizes the Environmental Quality Board to respond to emergencies and recover response costs from liable parties. The Act has no order or injunctive authorities; Puerto Rico relies on other authorities for these purposes, including the *Public Policy Environmental Act*, Law 9, 12 L.P.R. Ann., §§1121 *et seq.* (1970, as amended 1973, 1974, 1978, 1983, 1984, 1985, 1993 and 1997).

PROGRAM ORGANIZATION AND FUNDING

No information was provided on this subject.

CLEANUP ACTIVITIES

No information was provided on this subject.

CLEANUP FUNDING

According to Law 81, the Environmental Emergencies Fund may be used for emergency response, CERCLA match and program administration. No information was provided on fund balances and expenditures.

CLEANUP POLICIES AND CRITERIA

No information was provided on this subject.

PUBLIC PARTICIPATION

No information was provided on this subject.

ENFORCEMENT

Liability

Liability is strict and retroactive. Civil penalties are authorized up to $25K per day per violation; punitive damages are not available.

Natural Resource Damages

Law 9, Section 16(b) authorizes recovery for NRDs. Law 81, Article 6, authorizes recovery of any costs incurred in addressing environmental emergencies.

Property Transfer

There are no property transfer provisions.

VOLUNTARY AND BROWNFIELDS PROGRAMS

No information was provided on this subject.

Region 3

Delaware
District of Columbia
Maryland
Pennsylvania
Virginia
West Virginia

DELAWARE

SITES

NPL Sites		State Sites	
Final:	20	Known and Suspected:	600
Proposed:	0	Identified as Needing Attention:	185
Deleted:	3	On Inventory or Priority List:	90

STATUTORY AUTHORITIES

The *Hazardous Substance Cleanup Act*, DCA, Title 7, §§9101-9120 (1990, as amended 1995), establishes the Hazardous Substance Cleanup Fund and authorizes the Department of Natural Resources and Environmental Control (DNREC) to clean up sites contaminated by hazardous substances. The law provides for enforcement; strict, joint, and several liability; cost recovery; public participation; natural resource damage assessment and recovery; property transfer provisions; water replacement; and a voluntary cleanup program.

The *Delaware Regulations Governing Hazardous Substance Cleanup* (1993, revised 1995 and 1996), prohibit site cleanup at a property contemplated for transfer, or any other site, without the State's approval or oversight.

PROGRAM ORGANIZATION AND FUNDING

The DNREC, Division of Air and Waste Management, Site Investigation and Restoration Branch has 29 FTE staff, with 31 FTE staff authorized. Legal support is provided by the Department of Justice (Attorney General's office) with one attorney assigned to both State and CERCLA work.

Cost reimbursement has become a major source of staff and administrative funds, accounting for about 59% of the total. The remaining funds come from Federal grants (25%), the State general fund (6%), and the State cleanup fund (10%).

CLEANUP ACTIVITIES

The 90 non-NPL sites on the State's priority list were selected based on factors including risk to human health and the environment, as well as potential for redevelopment. Cleanup activities are currently underway at approximately 87 non-NPL sites, with 40 of those sites involving voluntary remediation. Since the start of the State cleanup program, cleanup activities have been completed at 56 non-NPL sites, 20 of which involved voluntary cleanups. Cleanup activities were completed at a total of 16 non-NPL sites during the FY97, nine of which involved voluntary cleanups.

CLEANUP FUNDING

The Hazardous Substance Cleanup Fund (HSCF) had a balance of $8.4M at the end of the FY97. Another $300K was obligated for non-NPL sites. Additions to the fund totaled $5.2M in FY97, and expenditures for activities at non-NPL sites totaled $2.7M.

The HSCF receives petroleum products tax receipts, penalties, cost recovery and interest. The fund is available for program administration, site investigation, studies and design, removals, remedial actions, emergency response, natural resource restoration, CERCLA match, and operations and maintenance.

CLEANUP POLICIES AND CRITERIA

The State's cleanup regulations specify that cleanup levels will be determined using a risk-based approach on a site-specific basis.

For groundwater cleanup levels, MCLs may be used if DNREC determines they will protect human health and the environment. Otherwise, when the natural background level exceeds the 10^{-5}

cancer risk level or a Hazard Index of 1, the natural background level is the cleanup level. When the background level is less than the 10^{-5} cancer risk level, then the 10^{-5} risk level or a level corresponding to the Hazard Index value of 1 is the cleanup level. If the PRP cannot perform risk assessment, the State allows the use of risk-based concentration values that comply with the risk-based approach. The State finalized a guidance in 1998 that establishes such risk-based concentration values. The same rule applies to soil cleanup levels. Surface water cleanup levels must meet the State's water quality standards.

The State's regulations provide that cleanup levels may be based on current and potential use conditions. For sites cleaned up to standards based on specific land use, deed restrictions and groundwater management zones are used to maintain the future land use restrictions.

PUBLIC PARTICIPATION

The *Hazardous Substance Cleanup Act* provides for public notice and opportunity for public comment on proposed consent decrees, settlement revisions, proposed and final remedial action plans; public hearings and meetings; and document availability.

ENFORCEMENT

Liability

The *Hazardous Substance Cleanup Act* establishes strict, joint and several liability and authorizes cost recovery. DNREC must attempt a settlement prior to initiating an enforcement action, unless an emergency exists. The State has injunctive action and administrative order authority. Civil penalties of up to $10K per day per violation are available. The State may recover punitive damages, treble the State's cleanup costs.

Natural Resource Damages

The State NRDs program is set forth in the Delaware Regulations Governing Hazardous Substance Cleanup. The program covers compensation and restoration or replacement requirements for NRDs. RPs are liable for all damages.

In 1990, $600K was recovered at an NPL site under the NCP, and $400K has been spent for natural resource restoration at one site. The State recently recovered $5K in one claim under State law. Currently, three claims ($400K) are pending under State law and two claims ($3M) are pending under CERCLA.

Property Transfer

The *Hazardous Substance Cleanup Act* (§9115) requires the property owner to place a notice of a release of a hazardous substance, determined by the Secretary to be a threat to public health or the environment, with the recorder of deeds. The owner must also file with the recorder of deeds a copy of the Certificate of Remedy. The Secretary is required to maintain a remedial decision record, which contains the final plan of remedial action and the basis for it, for a period deemed appropriate based on the remedy implemented and future use of the property .

Delaware's residential property disclosure law contains requirements for disclosing known material defects (including the presence of toxic substances) prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The 1995 amendments to the *Hazardous Substance Cleanup Act* included provisions for a voluntary cleanup program. Anyone may participate, but cleanups must comply with the Delaware Regulations Governing Hazardous Substance Cleanup. Participants receive a certificate of completion, and prospective purchasers receive a release from liability. To fund the State's oversight,

participants are required to remit an initial deposit up to a maximum of $5K. Additional deposits will be requested based on the oversight cost estimate as the site cleanup progresses. Any deposit funds not expended by the State are returned to the participant. Forty (40) sites are currently under the program. Cleanup has been completed at 20 sites thus far.

The State brownfields program is part of the voluntary cleanup program with added provisions for bringing business and employment to the site after the completion of cleanup. Participants receive tax credits based on the size of investment and number of new employees brought to the site. Grants of up to $25K are available for site investigation and cleanup. In addition, low interest loans up to $250K are also available for brownfields sites. About 300 sites have been identified for inclusion in the program, with cleanup underway at 30.

DISTRICT OF COLUMBIA

SITES

NPL Sites		State Site	
Final:	0	Known and Suspected:	
Proposed:	1	Identified as Needing Attention:	
Deleted:	0	Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

The District of Columbia does not have a formal program for cleaning up non-NPL contaminated sites. The *Hazardous Waste Management Act of 1978*, D.C. Code §§6-701 *et seq.*, (as amended in 1984, 1989, and 1991), establishes the District's hazardous waste management program. The law authorizes the mayor to revoke or suspend a permit and, if a responsible party fails to comply with an administrative order, directs the mayor to take corrective action necessary to alleviate or terminate a violation of the law, a threat to health or the environment or a release of hazardous waste. The law also authorizes the mayor to recover costs of the corrective action from the responsible person and provides for injunctions and civil and criminal penalties.

PROGRAM ORGANIZATION AND FUNDING

The District's hazardous waste management program has been housed in the Department of Consumer and Regulatory Affairs, Environmental Regulation Administration, Pesticides, Hazardous Waste and Underground Storage Tank Division. The Corporation Counsel provides legal support as needed. Pursuant to a 1998 governmental reorganization, the program is expected to move to a new office – the Bureau of Hazardous Materials and Toxic Substances, within the Department of Health's Environmental Health Administration.

CLEANUP ACTIVITIES

While the District of Columbia does not currently have a cleanup program for non-NPL sites, it plans to apply to EPA for a Core Superfund program grant in 1999. The District does not currently track the number of non-NPL contaminated sites within its jurisdiction.

CLEANUP FUNDING

The District does not have a fund for hazardous waste cleanup.

CLEANUP POLICIES AND CRITERIA

The District is developing hazardous substance cleanup standards.

PUBLIC PARTICIPATION

The District has no formal public participation requirements.

ENFORCEMENT

Liability

Under the *Hazardous Waste Management Act*, the District has civil penalty authority up to $25K per day per violation, no punitive damage authority, and no specified liability standards.

Natural Resource Damages

The District does not have authority independent of Federal law to recover for NRDs.

Property Transfer

The District does not have a property transfer provision, but it does require written notice and posting of a notice on a property where a release occurs and the responsible party is not known.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The District does not have a voluntary cleanup program or a brownfields program. The District has applied to the EPA for a Brownfields Pilot Project grant to develop a program.

MARYLAND

SITES

NPL Sites		State Sites	
Final:	17	Known and Suspected:	440
Proposed:	3	Identified as Needing Attention:	33
Deleted:	2	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

The Annotated Code of Maryland, Environment Art., Title 7—Hazardous Material and Hazardous Substances, Subtitle 2—Controlled Hazardous Substances, §§7-201 through 7-268 (1982, as amended 1984, 1985, 1986, 1987, 1989, 1991, 1992, and 1993), establishes the Hazardous Substance Control Fund and authorizes the Department of the Environment to clean up sites contaminated by hazardous substances. The law provides for enforcement; strict, joint and several, and proportional liability; cost recovery; public participation; and natural resources damages assessment and recovery.

The Annotated Code of Maryland, Environment Art., Title 7—Hazardous Material and Hazardous Substances, Subtitle 5—Voluntary Cleanup Program, §§ 7-501 through 7-516 (1997), establishes the State's voluntary cleanup program.

The Annotated Code of Maryland, Art. 83A, Subtitle 9, Brownfields Revitalization Incentive Program, §§ 3-901 through 905 (1997), establishes the State's brownfields financial incentives program.

PROGRAM ORGANIZATION AND FUNDING

The Department of the Environment (MDE), Waste Management Administration, Environmental Restoration and Redevelopment Program (ERRP) has three divisions involved in the State superfund process: the Site and Brownfield Assessment/State Superfund Division, with approximately nine FTEs; the Voluntary Cleanup Program, with six FTEs; and the Federal Facilities and NPL Division, with 13 FTEs (approximately 7.5 of whom work on non-NPL sites). The Core function is under the Waste Management Administration's Planning and Resource Management Program, and has approximately eight FTEs. The Attorney General's office has two attorneys located at MDE who work on hazardous substance cleanup.

Funding for the State's superfund program comes from the State general fund (10%), the State cleanup fund (10%) and from Federal grants (80%).

CLEANUP ACTIVITIES

The State's Hazardous Substances Response Plan guides the Department's activities. The ERRP oversees cleanups at Federal facilities, NPL sites, State superfund sites, State deferral pilot sites and Voluntary Cleanup Program sites.

There are 33 non-NPL sites at which cleanup is currently underway under the State superfund program; information was not available on completion of cleanup at such sites. Cleanup has been completed at three sites in the first year of the State's Voluntary Cleanup Program, and cleanup is underway at four additional sites.

CLEANUP FUNDING

Pursuant to State law, MDE is required to seek cost recovery for any State response costs funded by the Hazardous Substance Control Fund. The Fund includes monies used for activities outside the State superfund program, and information specific to State superfund activities is not available.

The Voluntary Cleanup Fund currently consists of user fees. In the first year of the program, 23 applications were submitted, and $138K in fees were placed in the fund. If the State does not use the entire $6K fee paid by a participant in its oversight role, it will refund the balance; conversely, if State oversight costs more than $6K, the balance will be collected from the participant.

The Brownfields Revitalization Incentives Fund received $500K in appropriations in the first year. The fund may be used to make low interest loans and grants for site remediation. Thus far, there have been no monies distributed from the fund.

CLEANUP POLICIES AND CRITERIA

Under the State superfund program, the Department applies water quality criteria, groundwater standards, MCLs/MCLGs, risk-based assessments, background levels and EPA guidelines, as appropriate. Site-based risk assessments are used in conjunction with any applicable regulatory criteria and are based on EPA published standards and Region 3 guidance as appropriate and available.

The State's voluntary cleanup law requires participants to select one or more of the following criteria that protect public health and the environment: uniform numeric risk-based standards; measurable standards based on site-specific risk assessment; background levels; Federal or State soil standards or water quality standards; Federal or State MCLs; or any other Federal or State standards. The Department is developing uniform numeric risk-based cleanup standards, based on industrial and residential uses. In cases where the Department approves a voluntary cleanup based on land use assumptions, the agency requires deed restrictions.

PUBLIC PARTICIPATION

There are statutory requirements for hearings, document availability, as well as regulatory requirements for notice and public comment. Community involvement is encouraged if there is interest. The voluntary cleanup law provides for notice and comment, as well as an opportunity for a public informational meeting to discuss proposed cleanup plans.

ENFORCEMENT

Liability

Maryland has strict, joint and several liability, but provides for apportionment where there is a reasonable basis for determining a party's contribution. Under State law, the State program may impose liability for cleanup of substances disposed of before the date the program was enacted. The State has civil penalty authority up to $25K per violation. Punitive damages are not available. Through the Voluntary Cleanup Program, certain purchasers who did not cause or contribute to contamination may limit their retroactive liability upon purchase of the property.

Natural Resource Damages

The State's NRDs program began in 1982. The State does not have any claims pending.

Property Transfer

The State does not have any property transfer provisions, other than residential property disclosure requirements.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Maryland's Voluntary Cleanup Program was established by statute in 1997. Any site that is contaminated or perceived to be contaminated is eligible for participation, other than NPL sites, sites under active enforcement or TSD facilities. Eligible applicants include "responsible persons" who have not knowingly or willingly violated any hazardous substance law, as well as "inculpable

persons," defined as purchasers with no previous connection to the property. An initial fee of $6K is collected from each participant, although the fee is ultimately based on the actual cost of State oversight. Program incentives include a streamlined process, determination of no further requirements and issuance of a certificate of completion, which releases the participant from State enforcement action and further liability for remediation approved by the State.

Maryland's brownfields program consists primarily of (1) the Brownfields Revitalization Incentive Program, a financial incentives program established by statute in 1997; and (2) the Brownfields Site Assessment Initiative, established by policy to provide free site assessments to sites that are likely to be cleaned up, sites that are not on CERCLIS, and sites that are not seriously contaminated. In addition, the State's Voluntary Cleanup Program includes some sites that meet the traditional definition of brownfields, but not the definition in either of the State's two formal brownfields initiatives.

The Brownfields Revitalization Incentives Program is open to sites that are not on the NPL list, not TSD facilities and not subject to active enforcement, provided those sites are owned or operated by an "inculpable" person. The State brownfields law lists several factors to be considered in determining eligibility for financial assistance, including location, type of site and economic development potential. As of the end of 1997, no sites had yet applied for participation. Fifty-seven (57) sites have been identified for participation in the Brownfield Site Assessment Initiative. In 1997, MDE conducted 30 brownfield site assessments at no cost to property owners.

PENNSYLVANIA

SITES

NPL Sites		State Sites	
Final:	111	Known and Suspected:	50
Proposed:	2	Identified as Needing Attention:	20
Deleted:	13	On Inventory or Priority List:	14

STATUTORY AUTHORITIES

The *Hazardous Sites Cleanup Act* (HSCA) (Act 1988-108), 35 P.S. §6020.101 *et seq.*, establishes the Hazardous Sites Cleanup Fund and authorizes the Department of Environmental Protection to clean up sites contaminated by hazardous substances. The law provides for enforcement, strict, joint and several liability, cost recovery, public participation, natural resource damage assessment and recovery, water replacement, and environmental disclosure upon property transfer.

The *Land Recycling and Environmental Remediation Standards Act*, (LR&ERSA) (Act 1995-2), 35 P.S. §6026.101 *et seq.*, establishes State-wide cleanup standards and a voluntary cleanup program, and addresses brownfield sites.

PROGRAM ORGANIZATION AND FUNDING

The Land Recycling and Cleanup Program in the Department of Environmental Protection (DEP) handles hazardous substance cleanup and has 120 FTE staff. Legal support is provided by the DEP Office of Chief Counsel with approximately 12 FTE attorneys. The State cleanup fund provides 100% of administrative costs.

CLEANUP ACTIVITIES

Exclusive of voluntary cleanups, cleanup activities are underway at 10 non-NPL sites, and cleanup activities have been completed at 90 non-NPL sites since the start of the State program, 12 of those during FY97. Voluntary cleanup activities have been completed at an additional 300 or so sites since the start of the voluntary cleanup program, with 75 of those completed during FY97. Voluntary cleanup activities are underway at about 150 sites currently, although this number changes often as new sites are added to the program. Pennsylvania uses criteria similar to NPL criteria for placing sites on the State's priority list.

CLEANUP FUNDING

The Hazardous Sites Cleanup Fund (HSCF) had a balance of $105M at the end of FY97. Additions to the HSCF during FY97 totaled $77M. Of the $35M paid out during FY97, approximately $30M were for non-NPL sites. Of the $40M obligated at the close of FY97, approximately $39M were for non-NPL sites. A significant source for the HSCF was a capital stock and franchise tax, which generated $39M. Other sources were hazardous waste transportation and management fees, interest, penalties, and cost recoveries. Fund monies may be used for site investigation, studies and design, removals, remedial actions, program administration, CERCLA match, emergency response, victim compensation, and natural resource restoration.

The Industrial Sites Cleanup Fund (ISCF) provides grants and low interest loans to innocent parties for the cleanup of sites. At the end of FY97, the ISCF had a balance of about $13.6M, and an additional $1.2M had been obligated. Approximately $15.7M were added to the fund during FY97, and close to $1.9M were paid out. The Industrial Sites Environmental Assessment Fund (ISEAF) provides grants to municipal authorities, nonprofit agencies and others for investigation of sites located in municipalities that have been designated as distressed communities. At the close of FY97,

the ISEAF had a balance of just over $1.4M, and an additional $2.14M had been obligated. During the fiscal year, $2M were added to the fund and just over $502.5K were paid out.

CLEANUP POLICIES AND CRITERIA

The LR&ERSA, along with its implementing regulations adopted in 1997, establish State-wide cleanup standards. The party undertaking cleanup must select one or a combination of the standards set out in the law and regulations. The three general remediation standards are: background; generic State-wide health standards (concentrations of regulated substances associated with a specific environmental medium, which take into account land use factors); and site-specific risk assessment. The levels used for risk assessments are 10^{-4} to 10^{-6} for carcinogens and a Hazard Index of 1 for noncarcinogens.

The regulations implementing LR&ERSA also provide a remediation standard for "special industrial areas" (brownfields). The requirements include a remediation plan that provides for (a) addressing "all immediate, direct or imminent threats to public health and the environment which would prevent the property from being occupied for its intended purpose" and compliance monitoring; and (b) preventing access to contaminated areas not required to be remediated.

For sites cleaned up to standards based on a specific land use, deed notice is the primary mechanism use by the State to maintain future land use restrictions. In some cases, deed restrictions are used.

PUBLIC PARTICIPATION

The HSCA establishes requirements relating to public notice, public comment, hearings and meetings, document availability, and grants to citizen groups. The State provides public notice of the analysis of a selected response action and alternatives. The public notice is followed by a 90-day comment period. A public hearing is held within the 90-day comment period. HSCA also has a citizen suit provision.

The LR&ERSA and its regulations contain public participation requirements for parties proposing remediation under one of the law's cleanup standards. These include public notice and comment, as well as the development of public involvement plans where the site-specific standard is used and the affected municipality requests to be involved.

Community Relations Coordinators perform additional public participation functions on an ad hoc basis.

ENFORCEMENT

Liability

HSCA provides for comprehensive order and injunctive authorities; orders for information and access; criminal and civil penalties; and punitive damages equal to treble the State's costs. Civil penalties are a minimum of $5K per day and a maximum of $25K per day. Liability is strict, joint and several, and retroactive. HSCA also provides for NBARs, *de minimis* settlements, legal presumptions of culpability for contamination, and whistleblower protection.

There is a 120-day notice period before a site may be placed on the State list to encourage responsible party cleanup prior to listing. There is also a 120-day moratorium on enforcement at multi-party sites if RPs seek to negotiate shares. For remedial actions extending beyond interim actions, HSCA §1301 requires DEP to initiate action against owners or operators under other State laws (*e.g., Clean Streams Law* and the *Solid Waste Management Act*) before taking HSCA enforcement or cost recovery actions.

Natural Resource Damages

Pennsylvania has natural NRDs authority, however no formal NRDs program or policy exists at present. There have been no NRDs monies recovered under State law and minimal, if any, monies recovered under CERCLA. The Department of Environmental Protection is the designated trustee for natural resources.

Property Transfer

HSCA §512 requires disclosure on the deed, or with the recorder of deeds, that the site was or is being used for the disposal of hazardous substances. The seller must also disclose the presence of hazardous substances on the site before transfer. This requirement is waived if cleanup is completed to State-wide standards. Pennsylvania's residential property transfer law requires disclosure of known material defects prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

LR&ERSA established the voluntary cleanup program in 1995. Since then, the program has accounted for a substantial majority of cleanup activities in the State. The program is open to all sites and maintains Statewide standards for cleanup. Loans from the Department of Commerce are available for site assessment. State participation is funded by the State general fund and by a $250 participant fee.

Cleanups of brownfields are voluntary cleanups that take place in "special industrial areas," defined as orphan sites or sites within State-designated enterprise zones. The regulations implementing LR&ERSA establish a remediation standard for these sites. Other facets of the brownfields program are identical to the voluntary cleanup program.

VIRGINIA

SITES

NPL Sites		State Sites	
Final:	27	Known and Suspected:	2015
Proposed:	2	Identified as Needing Attention:	411
Deleted:	2	On Inventory or Priority List:	88

STATUTORY AUTHORITIES

The *Waste Management Act*, Va. Code §§10.1-1400 through -1457 (1986, as amended 1987, 1988, 1990, 1993, 1994, 1995 and 1996), authorizes the Department of Environmental Quality to contain or clean up sites where hazardous wastes have been improperly managed. The law provides for enforcement, strict liability and cost recovery. The 1995 amendments created a voluntary remediation program.

The *Virginia Environmental Emergency Response Fund Act*, Va. Code §§10.1-2500 through -2502 (1992) establishes the State fund.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Quality (DEQ), Division of Special Programs, Office of Federal Facilities Restoration and Superfund, has 17 FTE staff. At the State Attorney General's office, one full time attorney handles all waste cases for DEQ, and a small fraction of that attorney's time is spent on superfund-related work. Federal grants provide 90% of program administration costs and the State general fund provides the remaining 10%.

CLEANUP ACTIVITIES

State activity at non-NPL sites consists primarily of oversight of Federal facility and voluntary cleanups. Virginia's priority list/inventory of sites contains 88 non-NPL sites (Federal facility and voluntary remediation sites) at which cleanup activities are currently underway and for which State oversight and guidance have been requested. Of the 88 sites, 64 are being cleaned up under the voluntary remediation program. To date, 44 non-NPL sites have been cleaned up, 11 of those on a voluntary basis.

The 88 sites on Virginia's priority list include 3 municipal landfills, 4 industrial landfills, 31 manufacturing sites, 24 military sites, and 37 various other types of sites, with some sites falling under more than one category.

CLEANUP FUNDING

The Virginia Environmental Emergency Response Fund (VEERF) was established in 1992 for emergency response actions. It had a balance of approximately $3.5M at the end of FY97, with another $500K obligated for non-NPL sites. Additions of about $1.1M were made to the fund during FY97, and a total of $123.4K were paid out during FY97 to non-NPL sites. Penalties are the principal source of revenue for the VEERF, with smaller contributions from cost recovery and interest. Monies from the VEERF may be authorized for site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, remedial actions, natural resource restoration and small business environmental compliance assistance.

Virginia also has a Voluntary Remediation Registration Fee Fund, consisting of fees paid by participants in the voluntary cleanup program. At the end of FY97, the balance was $24.2K, all of which had been added during the fiscal year. These monies may be used for administration of the program.

State appropriations were used to pay out just over $2M in State CERCLA matching funds and over $11K in State Core Grant matching funds in FY97.

CLEANUP POLICIES AND CRITERIA

In establishing cleanup levels, the State uses water quality standards, MCLs/MCLGs, background level data and EPA risk assessment guidelines, as appropriate.

The State's voluntary cleanup law requires the establishment of methodologies to determine site-specific, risk-based standards that are "no more stringent than" Federal standards for soil, sediments and groundwater. The voluntary remediation program regulations employ a three-tiered approach to establishing cleanup standards. Tier One uses background levels; Tier Two uses regulatory levels (such as MCLs or water quality standards) or risk-based concentrations; and Tier Three uses site-specific risk assessment. Risk levels used for risk assessments are 10^{-6} (individual) and 10^{-4} (multiple) for carcinogens and a Hazard Index of 1 for noncarcinogens.

To obtain a cleanup based on a restricted land use, the party must commit to placing a restriction on the property deed. Where contamination of off-site groundwater is involved, DEQ requires a letter from the local health department stating that wells may not be permitted in the area of contamination.

PUBLIC PARTICIPATION

Virginia uses the Federal Superfund regulations for notice and comment concerning the analysis of NPL site cleanup alternatives. State law specifies public notice and participation requirements only where a State permit is required for a cleanup. State regulations establish public notice and comment requirements for the voluntary remediation program.

ENFORCEMENT

Liability

The State's enforcement authority is limited to sites where waste has been "improperly managed." The law provides limited exemptions from liability, including certain cases where the damages were caused by third parties, and the State considers liability to be strict. The State has the authority to issue unilateral administrative consent orders, take injunctive action and impose civil penalties up to $25K per day per violation of an order.

Natural Resource Damages

In addition to general authority under the State Constitution, the State Water Law provides authority for NRDs. The State may bring an action to recover costs incurred in investigating the killing of fish and replacing fish where fish are killed as a result of discharges into State waters. The State estimates that it carries out six fish replacements per quarter throughout the State.

Property Transfer

The State has no property transfer provisions or restrictions, other than residential property disclosure requirements.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Since July 1995, the State has had a program for voluntary cleanups of contaminated sites (Va. Code, §§10.1-1429.1 - 1429.3). Regulations provide a framework for selecting cleanup standards under the voluntary program. Eligibility is limited to sites where remediation is not mandated pursuant to a Federal or State regulatory program. Incentives for participation in the program include the issuance of a certification of satisfactory completion of remediation, which

constitutes immunity to a State enforcement action. State oversight is funded in part by a fee of $5K or 1% of remediation, whichever is less.

Virginia's brownfields program is established by policy, in connection with a 1997 EPA grant. The program may include any site that meets the traditional definition of brownfields and that is not being handled under another program. Thus far, two sites have been identified for participation.

WEST VIRGINIA

SITES

NPL Sites		State Sites	
Final:	7	Known or Suspected:	600
Proposed:	1	Identified as Needing Attention:	150
Deleted:	1	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

The *Hazardous Waste Management Act*, W.Va. Code §§22-18-1 through 22-18-25 (1981, as amended 1985, 1989, 1991, and 1994), establishes the State's hazardous waste management program and includes property transfer disclosure requirements. The law provides for enforcement and authorizes the Department of Commerce, Labor and Environmental Resources to protect public health and the environment in cases where the "handling, storage, transportation, treatment or disposal of any hazardous waste may present an imminent and substantial endangerment to public health, safety or the environment."

The *Hazardous Waste Emergency Response Fund Act*, W.Va. Code §§22-19-1 through 22-19-6 (1984, as amended 1994), establishes the Hazardous Waste Emergency Response Fund for responding to hazardous waste emergency and funding CERCLA match, and authorizes cost recovery.

The *Groundwater Protection Act*, W.Va. Code §§22-12-1 through 22-12-14 (1991, as amended 1993 and 1994), establishes groundwater standards which may be used by the State to determine cleanup levels.

The *Voluntary Remediation and Redevelopment Act,* W. Va. Code §§22-22-1 (1996), establishes the State's voluntary cleanup and brownfields programs.

PROGRAM ORGANIZATION AND FUNDING

The Office of Waste Management, within the Division of Environmental Protection (DEP) in the Department of Commerce, Labor, and Environmental Resources, administers emergency response, site assessment for Federal Superfund and Hazardous Waste/RCRA activities. The Office of Environmental Remediation was created in the fall of 1997 to administer the LUST, corrective action and voluntary cleanup programs. This new office employs 10 FTEs, of which 5 are devoted to underground storage tanks. One attorney in DEP's Office of Legal Services provides legal support. Staff and administrative costs come from Federal grants (90%) and Voluntary Cleanup Reimbursement (10%).

CLEANUP ACTIVITIES

Cleanup activities have been completed at 111 non-NPL sites since the start of the State program, 39 of which were completed during the calendar year 1997. Six cleanups are underway as part of the voluntary cleanup program. No cleanups are underway at brownfields sites.

CLEANUP FUNDING

The Hazardous Waste Emergency Response Fund had a balance of $1.8M at the end of FY97. A total of $758.6K was obligated or encumbered during the fiscal year. Additions amounting to $488K were made to the fund during FY97. Waste fees constitute the major source of revenue for the Fund, with minor revenue from cost recovery. The Fund may be used for CERCLA match, operations and maintenance, removals, and program administration.

CLEANUP POLICIES AND CRITERIA

The State uses risk assessment for carcinogens and noncarcinogens, background levels, water quality criteria, MCLs/MCLGs, soil standards and land use to establish cleanup levels. The State uses risk levels between 10^{-4} and 10^{-6} for excess cancer cases and a Hazard Index of 1 for noncarcinogens. The default risk levels are 10^{-5} for industrial sites and 10^{-6} for residential sites, with flexibility to clean up to lower standards than these if the responsible party goes through the public participation process. The State uses a three-tiered approach for selecting and applying standards and criteria for the voluntary cleanup program. This approach consists of *de minimis*, uniform and site-specific contamination standards.

Future site specific land use assumptions are disclosed in the application and negotiated in the Voluntary Remediation Agreement. As institutional controls to support land use assumptions, the State uses a land use covenant enforceable by the State and a GIS/Public Empowerment database on the World Wide Web. Furthermore, State law requires that tax assessors notify the State of any changes in land use.

PUBLIC PARTICIPATION

Formal requirements for public participation exist only under the voluntary cleanup program, under which public notice, provisions for public comment, and hearings and meetings are required by statute. By participating in the public participation process, an RP may move off of the default risk level to a less stringent cleanup level. Public participation always takes place under the State brownfields program.

ENFORCEMENT

Liability

The State's liability standards are not specified. Civil penalties are authorized for violations of orders; punitive damages are not available.

Natural Resource Damages

West Virginia does not have authority independent of Federal law to recover for NRDs.

Property Transfer

State law and regulations require disclosure on the property deed, lease, or any other instrument, that property or surface of property was used for the storage, treatment or disposal of hazardous waste.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State has separate voluntary cleanup and brownfields programs. The voluntary cleanup program was established by statute in July 1996 and by regulation in July 1997. A guidance manual is projected for July 1998. All sites are eligible for the program, except for those with unilateral orders and those on (or being proposed for) the NPL, provided the release was not created by gross negligence or willful misconduct. Incentives for participating in the voluntary program include predictability, the Voluntary Remediation Agreement, and a Certificate of Completion. The State's participation is funded by flat fees of $1K, $3K, or $5K, depending on the age of the site and the SIC code. Hourly fees are charged after the Voluntary Remediation Agreement is signed. Volunteers must use a State-licensed remediation specialist.

The State's brownfields program, also established by statute in 1996, includes seven identified sites. Cleanup is not currently underway at any of these sites. An applicant to the brownfields program cannot be responsible for the contamination. State law creates a Brownfields Revolving Loan Fund for site assessments and other related activities, as incentive for participation in the program; however, the Fund contains no monies at this time.

Region 4

Alabama
Florida
Georgia
Kentucky
Mississippi
North Carolina
South Carolina
Tennessee

ALABAMA

SITES

NPL Sites		State Sites	
Final:	13	Known and Suspected:	700
Proposed:	0	Identified as Needing Attention:	125
Deleted:	1	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

The Code of Alabama §22-30A-1 *et seq.* (1988), authorizes the *Hazardous Substances Cleanup Fund* and provides general authority for enforcement and voluntary cleanups.

PROGRAM ORGANIZATION AND FUNDING

The Hazardous Waste Branch, Land Division of the Alabama Department of Environmental Management (ADEM) employs 28 FTE staff, although 30 are currently authorized. In addition, ADEM's Office of General Counsel provides one attorney who devotes approximately 10% of time to the hazardous substance cleanup program. Funding for staff and administration comes from Federal grants and cooperative agreements (50%), the State Cleanup Fund (40%), and the State general fund (10%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 30 non-NPL sites, three of which are being remediated under the State's voluntary cleanup program. Another 33 sites are either under evaluation to determine the extent of cleanup required or are in post cleanup monitoring and review. During FY97, cleanups were completed at 27 non-NPL sites, none of which were handled under the voluntary program. Since the start of the program, cleanup activities have been completed at 100 non-NPL sites, four of which were remediated under the State's voluntary cleanup program.

There is no State priority list separate from the CERCLIS list. If a site is inspected and contamination is found, it is usually placed on the CERCLIS list. However, sites which have only one or two 55-gallon drums are not discovered under CERCLA if they are cleaned up under State provisions.

CLEANUP FUNDING

The Hazardous Substance Cleanup Fund (HSCF) had a balance of $615.6K at the end of FY97. During the fiscal year, $199.3K were paid out: $22.3K toward NPL sites and $177K toward non-NPL sites. No monies were obligated or encumbered at the end of FY97. Additions to the fund during FY97 totaled $336K. The HSCF's most significant source of funding is waste fees, and additional minor funding support was provided by cost recovery and appropriations. Authorized uses of the fund include site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, remedial actions, and program administration.

CLEANUP POLICIES AND CRITERIA

ADEM uses Federal statutory authority and guidelines to establish cleanup standards. The selection and application of standards and criteria is media dependent. Risk assessment, background levels, water quality criteria, MCLs/MCLGs, ground water standards and land use based considerations are used to determine cleanup standards. The State has adopted clean water standards as required by the Clean Water Act and EPA rules. With the exception of MCLs/MCLGs, the remaining standards are prescribed by policy and/or implemented on an ad hoc basis. ADEM uses EPA Region 3 soil screening levels to determine the need for further cleanup. If this method reveals a

risk equal to or below 10^{-6}, there is usually no requirement for further cleanup. Exceptions exist when a regulatory driver is in place. If a risk above 10^{-6} is revealed, cleanup standards may be selected on a site-specific basis using risk assessment and/or land use considerations. Because no legal instrument is available to enforce specific land uses, assumptions about future use are based on the best professional judgement of the ADEM, local governments, developers, or facility proprietors, as subject to ADEM approval. As an alternative to risk assessment, thorough removal actions may be conducted where cost savings apply. Numerical risk goals range from 10^{-4} (for industrial sites) to 10^{-6} (for residential properties). Identical cleanup standards apply under the State's voluntary cleanup program.

PUBLIC PARTICIPATION

Alabama does not require public participation in cleanup decisions if the public participation would increase the threat to public health. At smaller drum sites, the increased threat to the public involved with public participation is not deemed worthwhile. At more significant cleanups that have the potential to be of public interest, a 30 day comment period is provided by law. A new voluntary cleanup program will use provisions similar to those from the State RCRA law.

ENFORCEMENT

Liability

Liability is proportional and retroactive. Civil penalties are authorized up to $25K per day per violation of an order. Parties may be charged for multiple violations; however, on occasion the State has grouped several violations together in one order and applied only one penalty. No punitive damages are available.

Natural Resource Damages

The State lacks authority independent of Federal law to recover for NRDs; however, four claims are pending under CERCLA. The ADEM, the Department of Conservation and Natural Resources, and the State Oil and Gas Board are designated as trustee agencies.

Property Transfer

Alabama does not have any legal provisions governing the transfer of contaminated property.

VOLUNTARY AND BROWNFIELDS PROGRAMS

In 1992, Alabama began using legally binding site-specific settlements as a means for conducting voluntary cleanups. This methodology remains in place today and continues to be used under general authority of the Hazardous Substances Cleanup Fund. All inactive sites except those on the NPL are eligible provided there is no enforcement action pending for a hazardous substance or waste issue. The site must also have a contamination level low enough that an effective and efficient cleanup is achievable. All parties are eligible to participate. Incentives for participation include reduced regulatory oversight and cost, increased speed, and the possibility of a "No Further Action" letter. As specified in the settlement agreements, participants reimburse the State's actual costs including staff salaries, travel, and overhead.

The State also implements an informal brownfields program through an alliance with EPA Region 4. EPA must designate a site as a brownfield and provide a grant to fund the remediation activities. ADEM then provides assessment and oversight in lieu of oversight responsibilities at CERCLIS sites (established in another contract with Region 4). Cleanup standards are the same as under the State's voluntary cleanup program. To date, two sites have been identified for the program and have committed to redevelopment.

FLORIDA

SITES

NPL Sites		State Sites	
Final:	64	Known and Suspected:	1900
Proposed:	1	Identified as Needing Attention:	1094
Deleted:	12	On Inventory or Priority List:	44

STATUTORY AUTHORITIES

The *Pollutant Discharge Prevention and Removal Act*, Fla. Stat. §§ 376.30 through 376.85, authorizes the Water Quality Assurance Trust Fund and a priority list. The statute also provides authority for enforcement, voluntary cleanups, and water replacement. Sections 376.77 through 376.85, the *Brownfields Redevelopment Act*, establish the State's brownfields program, eligibility criteria, and the process by which an area may be designated a brownfield. Florida Statutes, Chapter 403 establishes general authority for enforcement, citizen suits and natural resource damage claims.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Protection (DEP), Division of Waste Management, Bureau of Waste Cleanup employs 71 FTE staff. Of the 71, approximately 35 work on non-NPL superfund-type cleanup issues. In addition to the 35 FTEs in the Bureau's headquarters office, the DEP's six district offices employ a total of 37 FTEs in their Waste Cleanup sections who also work on non-NPL superfund-type cleanup issues. The district staff includes six Brownfields Coordinators (one per district) who oversee voluntary cleanup of brownfields sites. Legal support is provided by two attorneys in DEP's Office of General Counsel. Funding for staff and administration comes from the State cleanup fund (90%) and Federal grants/cooperative agreements (10%).

CLEANUP ACTIVITIES

Cleanup activities are underway at approximately 1,094 non-NPL sites. During FY97, cleanup activities were completed at 67 non-NPL sites. Since the start of Florida's program, cleanup activities have been completed at 555 non-NPL sites. It is unknown how many of these cleanups were or are being handled through the State's informal voluntary cleanup program.

Cleanup activities have increased dramatically during the past few years due to the recent inception of the Drycleaning Solvent Cleanup Program, which offers State-funded cleanups at contaminated drycleaning sites. In the past several years, DEP has determined over 900 applications to be eligible for the program and hired 10 contractors to begin remediating those sites.

Four criteria are used for listing a site on the State's priority list and spending State funds on remediation: (1) the site is not on the NPL (exceptions apply if Federal funding limitations require State monies to complete the activity or when Federal cleanup activities are not prompt enough to alleviate an impending danger to the environment or public health); (2) the site has been given a score by use of the existing Mitre Model; (3) enforcement and permitting actions have resulted in technically inadequate or delayed cleanup; and (4) the expenditure of funds could eliminate or minimize further environmental degradation and/or existing public health threats.

CLEANUP FUNDING

The Water Quality Assurance Trust Fund (WQATF) had a balance of $24.5M at the end of FY97. The Fund's balance has increased significantly during the past few years, because the former Hazardous Waste Management Trust Fund was consolidated into the WQATF and the new Drycleaner Solvent Cleanup Program began contributing revenues. The current balance includes monies used to fund activities other than hazardous substance cleanup programs. A total of $10.6M

was obligated at the end of FY97. No additions were made to the fund during the fiscal year, but $22.2M were paid out. The most significant source of funding was taxes, and additional minor funding came from interest, fees, and transfers. DEP receives an appropriation from the Florida Legislature for each fiscal year, which is the authority to spend the revenues granted. Authorized uses of the Fund include site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, grants to local governments, remedial actions, program administration, and natural resource restoration.

CLEANUP POLICIES AND CRITERIA

For GI and GII aquifers, State drinking water and groundwater standards apply since they are considered potable resources. Soil cleanup target levels are generally based on default levels established for residential and industrial uses that incorporate exposure assessment and leachability. Instead, parties may conduct a site-specific risk assessment to derive alternative cleanup target levels. However, DEP's authority to apply site-specific cleanup levels has come into question as a result of the new *Brownfields Redevelopment Act*, which specifically authorizes the use of site-specific criteria at brownfields sites. Since there is no statutory authority to use the same methodology at other sites, the legality of doing so has become a point of concern.

Cleanup criteria for the hazardous substance cleanup program are based on risk assessment, background levels, water quality criteria, MCLs/MCLGs, groundwater standards, soils standards, and land use considerations. Each of these criteria is prescribed by law as well as policy or ad hoc decisions. Cleanup criteria for the voluntary cleanup program are based on background levels, water quality criteria, MCLs/MCLGs, groundwater standards, and soil standards. Each of these criteria is prescribed by policy or ad hoc decisions. Land use assumptions are based on local planning board determinations, current and projected use, and individual site characteristics. Specified land use may be ensured through deed restrictions, use restrictions, and restricted zoning. Numerical risk goals are set at 10^{-6} for carcinogens and a Hazard Index of 1 or less for noncarcinogens.

PUBLIC PARTICIPATION

The *Brownfields Redevelopment Act* includes specific public participation requirements including public hearings/meetings, public notice of certain agency decisions, and provisions for public comment. For nonbrownfield sites, citizen participation is not required by statute but exists on an ad hoc basis. Citizen involvement varies on a site-specific basis as per request by individual parties, and may include door-to-door outreach, public meetings, and public comment opportunities. Additionally, Chapter 119 of the Florida Statutes, requires that all State records, including site cleanup documentation, be open at all times for personal inspection by any person.

ENFORCEMENT

Liability

Legal authorities include retroactive, strict, joint and several liability. Civil penalties of up to $50K per day are available for continued violations under the *Resource Recovery and Management Act*, Chapter 403, Fla. Stat.. Punitive damages are not available. The Department does not have unilateral order authority. The enforcement process includes warning notices, consent orders, notices of violations, civil suits, and appeals.

Natural Resource Damages

Independent State authority for NRD claims is specifically provided by Fla. Statutes 403.141, .726, .727, 403.121 (noncoastal oil spills), Chapter 376 (coastal oil spills and underground storage tanks), and 253.04 (coral reefs). The statute of limitations runs for four years from the date of

discovery unless there is a continuing source, in which case no statute of limitation applies. DEP is designated as the trustee agency.

The State has been seeking NRDs since 1980. The measure of damages sought varies on a case-by-case basis and is determined using contingency valuation and other specific methods. Natural resource damages penalties and cost recoveries are generally placed in the Ecosystem Management and Restoration Trust Fund (EMRTF), for restoration, replacement, and protection actions. Monies awarded from an individual claim are not necessarily used to fund restoration projects associated with that claim. Expenditures from the EMRTF must be approved by the State legislature. While public participation in natural resource damage assessment or restoration is not required by law, DEP often provides notice of restoration decisions and allows parties to become involved in the decision-making process.

Property Transfer

Florida does not require notice of on-site contamination prior to property transfer. Under Fla. Stat. 376.308, the State provides a limited "due diligence" exemption from liability for sites contaminated with drycleaning solvents that are purchased after July 1, 1994. The potential purchaser has the burden of investigating past uses and ownership of the property. Parties with more knowledge and experience with contamination are held to higher standards for the extent of inquiry. The State also maintains a database of known or listed sites. Institutional controls include deed restrictions, use restrictions, and restricted zoning.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State conducts an informal voluntary cleanup program whereby parties are referred to the appropriate district staff for cleanup assistance. Informal negotiations are then conducted and a consent order may be signed. Parties are required to follow technical guidance documents throughout cleanup. There are no restrictions on eligibility of persons, nor are there any incentives for participation. All sites except those on the NPL are eligible to participate. Funding for the State's participation comes out of the State's general budget.

Florida also has a brownfields program, enacted by statute on July 1, 1997. The *Brownfields Redevelopment Act* permits any person who has not caused or contributed to the contamination of a brownfield site after enactment of the law to participate in the program. Certain restrictions apply to sites subject to Federal or State enforcement. Also, the statute establishes a process through which "brownfield areas" may be designated by local government by resolution with appropriate public notice and hearings. In designating a brownfield area, the local government must consider nine specific issues outlined in the statute. The Brownfields Cleanup Criteria Rule (presently undergoing rulemaking) establishes default cleanup target levels (CTLs) and authorizes alternative CTLs on a site-specific basis. Regulatory incentives for participation include liability protection for program participants (and lenders under certain conditions) from State and third party claims, issuance of "No Further Action" letters, and "Risk Based Corrective Action" whereby participants may be allowed to use alternative CTLs along with institutional and engineering controls to manage risk by controlling exposure. Economic incentives include a "Bonus Refund" whereby participants receive $2.5K for each new Florida job created in a brownfield area. The Brownfields Act also encourages State and local governments to offer redevelopment incentives such as tax credits, low interest loans, and streamlined permitting. Further incentives such as a loan guarantee program and a tax credit incentive for private sector participants are currently being proposed in the legislature.

GEORGIA

SITES

NPL Sites		State Sites	
Final:	16	Known and Suspected:	1012
Proposed:	2	Identified as Needing Attention:	126
Deleted:	2	On Inventory or Priority List:	375

STATUTORY AUTHORITIES

The *Hazardous Site Response Act of 1992* (HSRA), O.C.G.A. 12-8-90 *et seq.* as amended, establishes a cleanup fund, enforcement authorities, strict, joint and several liability, punitive damages, property transfer provisions, and a priority list. O.C.G.A. 12-8-96.3, a 1996 amendment to the HSRA, limits the liability of third parties engaged in voluntary cleanups for pre-existing releases.

The *Hazardous Site Reuse and Redevelopment Act of 1996* (HSRRA), O.C.G.A. 12-8-200, as amended 1998, limits liability for non-responsible parties who voluntarily enter into consent decrees with the Environmental Protection Division to clean sites listed on the hazardous site inventory to State standards.

PROGRAM ORGANIZATION AND FUNDING

The Georgia Department of Natural Resources, Environmental Protection Division (EPD), Hazardous Sites Response Program had 39 FTEs at the end of FY97. A total of 42 FTEs are currently authorized. The State Law Department provides legal support with one FTE attorney. All funding for staff and administration came from the State cleanup fund.

CLEANUP ACTIVITIES

Cleanup activities are underway at 244 non-NPL sites, 205 of which are being handled through the voluntary program. During FY97, cleanup activities were completed at 34 non-NPL sites, 11 of which were handled through the voluntary program. Since the start of Georgia's program, cleanups have been completed at 91 non-NPL sites, 39 of which were handled through the voluntary cleanup program. Cleanup activity has increased dramatically during the past few years, because the State adopted corrective action rules and cleanup standards, began enforcing them, and spent $42M on site remediation.

Listing criteria for the State's priority list are based on a reportable quantity screening method that mathematically integrates data on contaminant release and exposure to generate a numerical score for the site. If the score is above a determined threshold, the site is then placed on the priority list. Of the 56 operational facilities identified as needing attention, 41 are manufacturing sites, 7 are municipal landfills, and 7 are industrial landfills.

CLEANUP FUNDING

The Hazardous Waste Trust Fund had a balance of $1.1M at the end of FY97. A total of $13.8M was obligated or encumbered: $9.7M for NPL sites and $4.1M for non-NPL sites. Additions to the fund during the fiscal year totaled $19.1M. A total of $17.6M was paid out: $6.2M to NPL sites and $11.4M to non-NPL sites. Significant sources of funding include solid waste fees and civil penalties. Minor funding was provided by hazardous substance reporting fees, hazardous waste fees, and interest. In other years, hazardous waste fees were a significant source of funding, but this year their respective contribution to the fund's balance was dwarfed by unusually high civil penalty revenues. All fund additions must be authorized by the General Assembly and deposited through the General Treasury. Authorized uses of the fund include site investigation, studies and design,

operations and maintenance, removals, emergency response, grants to local government, remedial actions, program administration and pollution prevention.

CLEANUP POLICIES AND CRITERIA

EPD uses statutory authority and guidelines to establish cleanup standards. State law prescribes background levels, water quality criteria, MCLs/MCLGs, groundwater standards, soil standards, and land-use based considerations. Land use assumptions are based on reasonably anticipated future use, and realized through restrictive covenants, enforcement orders, and deed notices. Cleanup standards are based on whether the site will be used for residential or commercial purposes. Responsible parties have the option of applying standardized or site-specific cleanup levels for the appropriate land use. Groundwater use is presumed to be for human consumption. Although risk assessment is not formally integrated in the Hazardous Sites Cleanup Program, it is frequently used in site-specific exposure evaluations based on standardized exposure assumptions. Risk goals used to determine cleanup standards are 10^{-5} for cancer risks and 10^{-4} for Class C carcinogens.

PUBLIC PARTICIPATION

State law requires that public notice and opportunities for public comment be provided for cleanup decisions. Hearings/meetings are also provided on an ad hoc basis.

ENFORCEMENT

Liability

The *Hazardous Site Response Act* establishes strict, joint and several, and retroactive liability. Civil penalties up to $25K per day may be assessed, and treble punitive damages are available.

Natural Resource Damages

The State has no authority independent of Federal law to recover for NRDs. However, the Environmental Protection Division is designated as a natural resource trustee.

Property Transfer

The owner of any site designated by EPD as needing corrective action is required to disclose on the deed or with the recorder of deeds that the site was or is contaminated with a hazardous substance. The State maintains a database of listed sites; a lien may also be placed on the property when State funds are expended. Land use institutional controls include deed notices, restrictive covenants, and enforcement orders.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State provides an informal mechanism for voluntary cleanups. The *Hazardous Site Reuse and Redevelopment Act* of 1996, as amended 1998, provides limited liability for non-responsible parties who voluntarily enter into consent decrees with the Environmental Protection Division to clean Hazardous Site Inventory sites to State standards. This provision is limited to prospective purchasers of Hazardous Site Inventory sites. Until recently, the provision was limited further to sites that are in a State of disuse or abandonment, but the State expanded the mechanism in FY98 by deleting this restriction. While responsible parties are ineligible for voluntary cleanups under the *Hazardous Site Reuse and Redevelopment Act*, they may engage in voluntary cleanups through a component of the *Hazardous Site Response Act* of 1992. Incentives for voluntary cleanups include protection from cost recovery actions for monies already spent by the State on site cleanup, and limited third party liability for pre-existing releases. The State does not charge a fee for its services in voluntary cleanups, as its participation is funded by the Hazardous Waste Trust Fund.

KENTUCKY

SITES

NPL Sites		State Sites	
Final:	20	Known and Suspected:	1900
Proposed:	0	Identified as Needing Attention:	850
Deleted:	4	On Inventory or Priority List:	1350

STATUTORY AUTHORITIES

Kentucky Rev. Stat. Ann. 224.46-580 establishes the Hazardous Waste Management Fund and includes provisions for expenditures. KRS 224.01-400 establishes release notification, reportable quantities, and enforcement authorities.

PROGRAM ORGANIZATION AND FUNDING

The Department for Environmental Protection (DEP), Division of Waste Management, Superfund Branch employs 29 FTE staff who work on Federal sites, State sites, petroleum cleanups, and radioactive disposal sites. Non-NPL sites are handled by approximately 13 FTEs from the State Superfund Section and the Federal Superfund Section. Municipalities and county governments handle some cleanups without State involvement; in most cases, such cleanups take place at brownfield sites. Legal support for State activities is provided by 2.5 FTE attorneys from the Office of Legal Services. Funding for staff and administration comes from Federal grants (60%) and the State's general fund (40%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 300 non-NPL sites. During FY97, 50 cleanup activities were completed at non-NPL sites. Since the start of Kentucky's program, approximately 600 cleanups have been completed at non-NPL sites. Because Kentucky does not have a formal voluntary cleanup program, all cleanup activities have been initiated by the State.

Any site that is reported as having contamination is added to the State priority list; later evaluation determines if a release actually occurred and if work is needed. Of the 850 sites identified as needing attention, approximately 30 are municipal landfills, 12 are industrial landfills, 53 are former landfills, and 755 are manufacturing sites.

CLEANUP FUNDING

The Hazardous Waste Management Fund (HWMF) had an approximate balance of $4M at the end of FY97. The fund's balance is capped at $6M. During the fiscal year, $4.4M were added to the fund, $1.8M were paid out to non-NPL sites, and $2.1M were obligated for use at non-NPL sites. All fund revenues come from waste fees. The HWMF may be used for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, operations and maintenance, program administration, and natural resource restoration.

CLEANUP POLICIES AND CRITERIA

State law permits responsible parties to select either a risk-based standard or background levels as the basis for cleanup. The risk-based standards are based on a target risk level of 10^{-6} for carcinogens and a Hazard Index of 1 for noncarcinogens. If the risk is less than 10^{-6}, "No Further Action" is required. Parties who wish to employ a risk standard less stringent than 10^{-6} must justify to the risk assessment group within the Department of Environmental Services that the proposed remedy will adequately protect human health and the environment. In some cases, RPs may implement engineering and/or institutional controls (*e.g.*, deed restrictions) as alternatives to

thorough cleanups. Remedies that are less protective than 10^{-6} are generally only acceptable with respect to soil; usually water must be cleaned up to 10^{-6}. Ultimately, cleanup criteria will depend on whether the property is used for residential or commercial purposes. Land use determinations are based on past and future use, as well as the location of the property.

PUBLIC PARTICIPATION

Kentucky has a Public Information Repository for NPL and State priority list sites. It is standard practice for the State to give public notice, provide opportunities for public comment, hold public hearings or meetings, and provide grants to citizen groups.

ENFORCEMENT

Liability

Kentucky has strict, joint and several, and retroactive liability standards. Punitive damages are not available, but the State has authority to invoke civil penalties up to $25K per day for violation of a cleanup order.

Natural Resource Damages

Kentucky does not have a NRDs program, but the Natural Resources and Environmental Protection Cabinet is designated as a natural resource trustee.

Property Transfer

General provisions of the State's real estate law require that sellers disclose the presence of hazardous substances on site before transfer. While not specified by statute, Kentucky may also require deed disclosure of on-site contamination through the remedy selection process. Liens are available for removal and remedial costs incurred by the State. The State maintains a database of sites where a known release has occurred.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Kentucky has no formal voluntary cleanup program, but anyone is welcome to initiate a party lead cleanup through DEP. Since there is no special voluntary program, cleanups initiated by private parties will be handled through the regular cleanup program and no incentives will be offered.

However, under Senate Bill 219, if a municipality buys a property and cleans it up to the standards established in KRS 224.01-400, it can receive a "No Further Action" letter. Two or three sites have used this provision. The State is currently using existing legislation to develop guidelines for a formal voluntary cleanup/brownfields program.

MISSISSIPPI

SITES

NPL Sites		State Sites	
Final:	2	Known and Suspected:	960
Proposed:	3	Identified as Needing Attention:	500
Deleted:	2	On Inventory or Priority List:	200

STATUTORY AUTHORITIES

The *Solid Waste Disposal Act of 1974* (amended numerous times, most recently in 1990), Miss. Code Ann. §17-17-29(4) and (6), establishes a cleanup fund, authorizes the Voluntary Evaluation Program (§17-17-54), and provides enforcement authorities.

The 1988 Amendments to the *Air and Water Pollution Control Act*, Miss. Code Ann, §§49-17-1 *et seq.*, authorize response actions, establish natural resource damage provisions, and create the Pollution Emergency Response Fund (Miss. Code Ann. §49-17-68).

The *Brownfields Voluntary Cleanup Act* (S. 2989), effective July 1, 1998 but not yet codified, directs the Department of Environmental Quality (DEQ) to promulgate implementing rules by January 1, 1999, and to survey 49 States about their voluntary cleanup incentives and recommend incentives for the Mississippi brownfields program to the legislature for promulgation by January 1, 1999.

PROGRAM ORGANIZATION AND FUNDING

The Superfund Section of the Office of Pollution Control's Hazardous Waste Division employs 10 FTE staff, although 11 are authorized. Legal support is provided by four FTE attorneys from DEQ's legal staff and the Mississippi Attorney General's Office. Staff and administrative costs are funded through the State general fund (50%) and Federal grants/cooperative agreements (50%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 60 non-NPL sites, two of which are voluntary. During FY97, cleanup activities were completed at 20 non-NPL sites, two of which were voluntary. Since the start of Mississippi's program, cleanup activities have been completed at 112 non-NPL sites, two of which were handled through the voluntary program.

Mississippi does not have an official priority list, but the Superfund Section maintains a ranking for internal management purposes. Priority is given to sites with releases of hazardous substances above target cleanup levels. The State considers the type of release that has occurred, the type of contaminants involved, and whether or not human health is directly impacted by the release. Of the 90 sites under active review, three are municipal landfills, four are industrial landfills, four are manufacturing sites, two are recycling sites, and 77 are classified as "other" site types.

CLEANUP FUNDING

The Pollution Emergency Response Fund (PERF) was created in 1988 and had a balance of $600K at the end of FY97. During the fiscal year, $1.5M were paid out: $250K to non-NPL sites and $1.25M to build a new laboratory. The PERF may be used for site investigation, studies and design, removals, emergency response, and CERCLA match. The PERF receives significant funding from cost recovery and civil penalties from the pollution regulatory programs. Interest is a minor funding source.

The State General Fund had a balance of $0 at the end of FY97, but $300K were paid out from the fund to non-NPL sites during the fiscal year. The fund is authorized to cover site investigation, program administration costs, and the State's oversight function; in practice, it funds

four environmental engineers to work on uncontrolled sites that would not be addressed otherwise. All fund monies come from State appropriations.

The Voluntary Evaluation Fund paid out $80K during FY97 to non-NPL sites. The fund may only be used to cover the State's oversight function. All fund monies come from voluntary program user fees.

Mississippi's CERCLA PA/SI Fund had a balance of $50K at the end of FY97. During the fiscal year, $100K were added to the Fund and $100K were paid out to non-NPL sites. Fund monies come from Federal appropriations (80%) and State appropriations (20%). The fund may only be used for site investigation.

The State's CERCLA Core Grant Fund had a balance of $100K at the end of FY97. During the fiscal year, $300,000 were spent on staff and administrative costs. The Fund's only authorized use is program administration. Fund monies come from Federal appropriations (80%) and State appropriations (20%).

CLEANUP POLICIES AND CRITERIA

Mississippi selects the higher concentration of background levels, detection limits, generic risk calculations, and published pollution standards such as MCLs and TSCA PCB levels; alternatively, responsible parties may seek approval of a site-specific risk assessment. Land use may be considered if a legally agreed order requiring a deed restriction is in place to limit future use. If no order is in place, it is assumed that the property will be used for residential purposes. Numerical risk goals are 10^{-6} for carcinogens and U.S. EPA's Hazard Index for noncarcinogens. The same standards apply under the Voluntary Evaluation Program.

PUBLIC PARTICIPATION

State policies provide for public notice via direct mailings, a public comment period, and public meetings during the remediation process. Additionally, local governments and the governor are notified when an emergency order is issued. The same public participation provisions apply under the Voluntary Evaluation Program.

ENFORCEMENT

Liability

Mississippi has strict, joint and several, and retroactive liability, but proportional liability may be applied where practicable. Cost recovery is authorized by State law. The State may impose civil penalties of $25K per day per violation plus the cost of removal and/or remediation and the cost of restocking and/or replenishing killed fish. Punitive damages are not available.

Natural Resource Damages

Since 1972, State law has allowed DEQ, in consultation with the Mississippi Commission on Wildlife, Fisheries and Parks, to recover costs of restocking and/or replenishing lost fish and wildlife. The State began seeking NRDs in 1993. Information on claims awarded and pending is not available. The Department of Environmental Quality is designated as the State's natural resource trustee.

Property Transfer

The *Property Transfer Act* (1993), Mississippi Code Ann. §89-1-501 to 523 requires written disclosure of the presence of hazardous or toxic waste when property is transferred with the aid of real estate brokers or salespersons.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Mississippi's Voluntary Evaluation Program was established by statute (§17-17-54) during FY97. The program is open to anyone not subject to regulation under a Federally mandated program. Polluted or potentially polluted uncontrolled sites are considered eligible properties for participation. The primary incentive for participation is expedited site review; a "No Further Action" letter may also be earned when appropriate measures have been taken and approved. Respondents must pay all direct and indirect costs of the State's involvement as well as a $500 fee for entrance into the program. The State's administrative costs are also funded through EPA grant money.

The Brownfields Voluntary Cleanup Act (not yet codified) goes into effect on July 1, 1998. The statute directs DEQ to promulgate implementing rules by January 1, 1999, and to survey 49 States about their voluntary cleanup incentives and recommend incentives for the Mississippi brownfields program to the legislature for promulgation by January 1, 1999. The only program details specified in the statute are that risk assessment will be used to determine cleanup standards and that liability protection will be provided.

NORTH CAROLINA

SITES

NPL Sites		State Sites	
Final:	24	Known and Suspected:	1040
Proposed:	1	Identified as Needing Attention:	793
Deleted:	1	On Inventory or Priority List:	197
Vacated:	1*		

STATUTORY AUTHORITIES

The *Inactive Hazardous Sites Response Act of 1987*, N.C. Gen. Stat. §§130A-310 *et seq.* (1987, as amended 1989, 1991, 1994, 1995), authorizes the Inactive Hazardous Sites Cleanup Fund, provides authority to recover costs and order RPs to conduct assessments and cleanups, and establishes a priority list and requirements for filing notices with registers of deeds. Recent amendments affect the State's existing voluntary cleanup program.

The *Brownfields Property Reuse Act of 1997*, N.C. Gen. Stat. §§130A-310.30 through 310.40, establishes the State's brownfields program.

The *Solid and Hazardous Waste Management Act*, N.C. Gen. Stat. §130A-290 *et seq.*, (1969, as amended 1973, 1975, 1977, 1979, 1981, 1983, 1985, 1987, 1989, and 1991), provides limited enforcement authorities and authorizes the Emergency Response Fund for emergency hazardous waste cleanup.

PROGRAM ORGANIZATION AND FUNDING

The Superfund Section of the Department of Environment and Natural Resources' (DENR') Division of Waste Management employs 29.75 FTE staff; of these, approximately five FTE staff work exclusively on non-NPL sites. Legal support is provided by 1.5 attorneys and one paralegal from the North Carolina Attorney General's Office. Funding for the Superfund Section comes from Federal grants/cooperative agreements (79%) and the State's general fund (21%). The five FTE staff who work exclusively on non-NPL sites are funded through the State's general fund.

CLEANUP ACTIVITIES

Cleanup activities are currently underway at approximately 85 non-NPL sites, 50 of which are voluntary. During FY97, cleanups were completed at approximately 15 non-NPL sites, all of which were voluntary. Since the start of North Carolina's program, cleanup activities have been completed at approximately 250 non-NPL sites; all of these were handled through the voluntary program.

DENR has chosen to dedicate its limited resources to facilitating voluntary cleanups instead of pursuing enforcement and litigation. This is the primary reason why almost every cleanup activity undertaken in North Carolina has been voluntary. Also, because the property value of contaminated sites in North Carolina often exceeds the cost of cleaning them up, many parties are interested in taking responsibility for cleaning up their sites.

CLEANUP FUNDING

The Inactive Hazardous Sites Cleanup Fund (IHSCF) had a balance of $2.7M at the end of FY97. No funds were added during the fiscal year, but $180K were paid out to non-NPL sites and

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* By its own request, EPA removed one site from the NPL via court order without deleting it. The site never went through a cleanup process.

another $180K were encumbered for non-NPL sites. The IHSCF originally received most of its money from appropriations, but no appropriations have been made to the fund since FY88-89. From FY89 through FY95, penalties were the most significant source of funding, because the IHSCF received RCRA penalty money when the Emergency Response Fund exceeded its $500K cap. However, a school board recently discovered a State law that earmarks all penalty money collected in a county for that county's education system. As a result, the only source of funding for the IHSCF is interest, which contributed approximately 5-6% of the current fund balance in FY97. While cost recoveries are authorized, there were no successful claims during FY97. The IHSCF may be used for site investigation, studies and design, removals, emergency response, remedial actions, and the cost of recording deed notices on inactive hazardous substance or waste disposal sites.

The Cost Share Trust Fund (CSTF) had a balance of $1.6M at the end of FY97. During the fiscal year, $800K were added, $752.3K were paid out to NPL sites, and $5.5M were encumbered for NPL sites. The CSTF is funded primarily through appropriations of $800K per year, but cost recovery and interest are minor sources of funding. New language was recently instituted to authorize the fund for use as needed for State priority sites. As such, the authorized uses have expanded to include CERCLA match, studies and design, operations and maintenance, removals, victim compensation, emergency response, and remedial actions.

The Emergency Response Fund (ERF) is available for emergency response and alternate water supply provisions. Although it is administered by the Hazardous Waste Section of the Waste Management Division, it is also used by the Superfund Section. The ERF is capped at $500K and had the maximum balance at the end of FY97. During the fiscal year, approximately $6K was paid out to non-NPL sites; all other expenditures were on RCRA sites. Like the IHSCF, the ERF's primary source of funding used to be penalty money that is now earmarked for the education system. Currently, the ERF's sole source of funding is interest, which contributed approximately 5% of the fund balance in FY97.

CLEANUP POLICIES AND CRITERIA

As required by statute, the Secretary of DENR will ascertain cleanup levels in conformance with CERCLA and SARA requirements. North Carolina also requires consistency with the NCP. Cleanup levels are calculated for each contaminant by environmental media based on site-specific risk assessment. Background levels, water quality criteria, MCLs/MCLGs, groundwater standards, and land-use based considerations are also used where appropriate. Determinations about land use are based on deed recordations and restrictions; if there is no deed restriction in place, it is assumed that a property could be used for residential purposes. Numerical risk goals are 10^{-4} to 10^{-6} for carcinogens and a Hazard Index of 1 for noncarcinogens. Cleanup standards under the voluntary cleanup program are identical to those under the hazardous substance cleanup program.

PUBLIC PARTICIPATION

By law, North Carolina requires that public notice, opportunity for public comment, and hearings/meetings be provided for cleanup decisions at sites under enforcement action. The same requirements apply for sites being cleaned up through the voluntary program.

ENFORCEMENT

Liability

North Carolina has strict, joint and several, and retroactive liability. Under the *Inactive Hazardous Sites Response Act*, the Secretary of DENR must seek voluntary action by RPs before issuing orders or spending State funds. However, the State has authority to issue orders for cleanup, order monitoring and assessment, and seek injunctions to conduct assessments and correct imminent hazards. Although the *Inactive Hazardous Sites Response Act* has no provision for civil penalties,

civil penalties of up to $25K per day for a first-time hazardous waste violation and $5K per day for a solid waste violation are available. The State cannot impose punitive damages.

Natural Resource Damages

North Carolina has no State law authorizing NRD claims, but DENR is designated as a natural resource trustee.

Property Transfer

Property owners must register a notice of on-site contamination with the grantor index in the deeds office when requested to do so by the State (via mail). At the next property transfer, the notice will appear on the deed. Also, under N.C. Gen. Stat. Chapter 47E Article 1, sellers of residential property are required to disclose the presence of hazardous or toxic materials before transfer. The State maintains a database of known and listed sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

In 1987, the North Carolina legislature included voluntary cleanup provisions in the *Inactive Hazardous Response Act*. Under recent statutory amendments enacted to accommodate the fluctuating volume of voluntary cleanups, the State privatized the oversight function through the use of registered environmental consultants. DENR approves private contractors whom program participants must pay to oversee cleanup activities and certify the site as clean. Participants also pay the State a $2K audit fee, which is deposited into a fund DENR uses to audit some sites; any unused portion of the audit fund is refunded to the contributors. Apart from the audit fee, participants are not responsible for the State's costs; any State services other than audits are funded through appropriations. When sites are certified as clean, program participants may purchase a "No Further Action" letter from DENR for $500. Other incentives for participation are property transfer and liability limitations. Any person or site is eligible to participate except those being regulated under other programs. Remedial action costs for volunteers are capped at $3M, as provided by law.

In 1997, North Carolina passed the *Brownfields Property Reuse Act*, which establishes a brownfields program independent of the voluntary cleanup program. The brownfields program is open to non-responsible parties who are interested in buying or selling contaminated property. The program differs from the voluntary cleanup program in its focus on redevelopment, as opposed to remediation. Because the intent of the program is to return sites to productive use, participants are only required to manage contamination to the extent necessary to adequately protect human health and the environment. Cleanup is not required if exposure pathways can be removed through alternate means. In cases where cleanup is not necessary, DENR may require participants to conduct long-term monitoring of the contamination or further research for the Department's use in pursuing cost recovery actions against RPs. Numerical risk levels used to determine the extent of contaminant management required are 10^{-4} to 10^{-6} for carcinogens and a Hazard Index less than 1 for noncarcinogens. Participants pay a $2K "filing fee," which covers DENR's costs of evaluating the site and negotiating a cleanup agreement. Once cleanup is complete, participants have the option of purchasing a "No Further Action" letter for $500. A liability limitation is also available for participants who remediate on-site contamination prior to redevelopment. To date, one site has entered into the program; cleanup is underway and it has a commitment for redevelopment.

SOUTH CAROLINA

SITES

NPL Sites		State Sites	
Final:	27	Known and Suspected:	603
Proposed:	0	Identified as Needing Attention:	150
Deleted:	1	On Inventory or Priority List:	150

STATUTORY AUTHORITIES

The *Hazardous Waste Management Act*, South Carolina Code Ann. §44-56-10 *et seq.*, establishes general enforcement authority, a cleanup fund, and provisions governing contaminated property transfer.

PROGRAM ORGANIZATION AND FUNDING

South Carolina's superfund program is handled principally by the Department of Health and Environmental Control (DHEC), Bureau of Land and Waste Management, Division of Site Assessment and Remediation (DSAR). The Division of Hydrogeology (DH) also employs staff who provide support to DSAR and other offices. Between the DSAR and the DH, the State superfund program employs a total of 45 FTEs. Legal support is provided by 1.5 FTE attorneys from the DHEC Office of General Counsel, funded entirely through the agency's overhead. Funding for program staff and administration comes from Federal grants (77%), the State cleanup fund (17%), and the State's general fund (6%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 53 non-NPL sites, 44 of which are being handled through the voluntary cleanup program. During FY97, cleanup activities were completed at seven non-NPL sites; each of these was handled through the voluntary cleanup program. Since the start of the program, cleanups have been completed at approximately 36 non-NPL sites, 35 of which were handled through the voluntary program.

South Carolina has a "projects list," which includes all sites that have been identified as having contamination and possibly needing cleanup. Most applicable sites are identified using the CERCLIS list and the NPL. Once a site is listed, it undergoes a State scoring process (that emphasizes risk, exposure, and human health endangerment) to determine its eligibility for State funds. PRP capacity and willingness to finance cleanup activities also affect a site's eligibility for State funds. Of the sites identified as needing attention, 135 are manufacturing sites, seven are municipal landfills, four are industrial landfills, and four are recycling sites.

CLEANUP FUNDING

The Hazardous Waste Contingency Fund (HWCF) had a balance of $25M at the end of FY97. During the fiscal year, $526.6K were paid out to non-NPL sites. At the end of FY97, a total of $20.7M were obligated or encumbered: $1.3M for NPL sites and $19.4M for non-NPL sites. Additions during the fiscal year totaled $1M. The HWCF's only significant source of funding was waste fees. Cost recovery was a minor source. Authorized fund uses include site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, remedial actions, and program administration.

South Carolina had a balance of $104K in appropriated funds at the end of the fiscal year. During FY97, a standard appropriation of $104K was added to the fund and the same amount paid out, all to non-NPL sites. Another $104K were encumbered for use at non-NPL sites. The Fund's positive balance is unusual, because the State generally spends the entire yearly appropriation in the

fiscal year it is provided; FY97's positive balance is a result of unspent monies rolled over from FY96. Authorized uses include site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, and remedial actions.

CLEANUP POLICIES AND CRITERIA

The State uses statutory authority and guidelines to establish cleanup standards. State law prescribes water quality criteria, MCLs/MCLGs, and groundwater standards. Policy/ad hoc guidelines prescribe risk assessment of carcinogens and noncarcinogens, background levels, and land use based considerations. For the selection and application of standards, DHEC evaluates the feasibility of reaching a baseline risk goal. Adjustments to cleanup standards may be made based primarily on land use and also on technical practicability. To make land use determinations, DHEC looks at current land use and evaluates the likelihood that mechanisms such as zoning requirements and deed restrictions will maintain that use in the future. DHEC may require permanent deed notices, and mechanisms such as zoning requirements and deed restrictions may be implemented through other entities. Numerical risk goals are 10^{-6} and a Hazard Index of 1.

PUBLIC PARTICIPATION

The State has no formal public participation requirements, but it follows the NCP and provides public notice, opportunities for public comment, and hearings/meetings on an ad hoc basis. A proposed statute (Article 7 of the *Hazardous Waste Management Act*) addresses public notice requirements under the voluntary cleanup program.

ENFORCEMENT

Liability

The State uses strict, joint and several, and retroactive liability. The State may asses civil penalties of $25K per day and treble damages for failure to clean up a site as ordered.

Natural Resource Damages

NRDs may be assessed under the *South Carolina Pollution Control Act*, but this authority has not been used for hazardous substance sites. The Department of Natural Resources, DHEC and the Governor's office are designated as natural resource trustees.

Property Transfer

South Carolina does not have any law governing the transfer of contaminated properties. However, in cases where properties are remediated to substandard levels because of land use considerations, the agency may require deed notices to be implemented through RODs. Institutional controls such as zoning requirements and deed restrictions may be implemented through entities other than DHEC.

VOLUNTARY AND BROWNFIELDS PROGRAMS

South Carolina's voluntary cleanup program is a component of the hazardous substance cleanup program. It was established as a procedure in 1988, and legislation to incorporate the program into the *State's Hazardous Waste Management Act* is currently pending. The program does not categorically exclude anyone from participation, but the agency has discretion to reject any contract for reasons such as financial inability to comply. All sites are eligible to participate with the exception of petroleum-only sites, NPL sites, and permitted sites where assessment and remediation is required by permit. Incentives for participation include covenants not to sue for successful completion of work and contribution protection for non-RPs. State oversight costs are funded by participants. RPs must pay actual costs, but non-RPs' fees are negotiable.

The State's brownfields program is included in the voluntary cleanup program guidance. Criteria for inclusion are the same as those under the voluntary program. Cleanup standards are also identical to those of the voluntary program, although non-RPs are not necessarily required to remediate sites to extent that RPs must. In some cases, non-RPs are exempted from certain media actions. However, for required media actions, non-RPs are held to the same standards imposed on RPs. Incentives for participation in the program include a covenant not to sue for successful completion of work and contribution protection for non-RPs. To date, seven sites have been identified for the program and committed to redevelopment. Cleanup is currently underway at all of those sites.

TENNESSEE

SITES

NPL Sites		State Sites	
Final:	18	Known and Suspected:	1360
Proposed:	2	Identified as Needing Attention:	234
Deleted:	5	On Inventory or Priority List:	141

STATUTORY AUTHORITIES

The *Hazardous Waste Management Act of 1983* (as amended 1986, 1988, 1989, 1990, 1991, 1994, and 1995), Part II, Tenn. Code Ann. §68-212-201 *et seq.*, establishes a State superfund program, authorizes the Hazardous Waste Remedial Action Fund, provides authority to take or compel remedial actions, establishes a priority list, and requires a deed notice for any listed site. Recent amendments allow the State to spend fund monies on sites not on the priority list provided that an order is in place, and to fund orphan shares of cleanups handled through the voluntary cleanup program. A voluntary cleanup oversight and assistance program and a dry cleaner environmental response program were added by amendment in 1994. The Dry Cleaner Environmental Response Fund was established by legislation effective June 13,1995, and rules put into place on October 15, 1997.

PROGRAM ORGANIZATION AND FUNDING

The Tennessee Department of Environment and Conservation's (DEC's) Division of Superfund employs 65 FTE staff, although 74 are currently authorized. Of the 65 employed, seven FTEs are dedicated to the States' Dry Cleaner Environmental Response Program, which covers non-NPL sites contaminated with petroleum-based or VOC-based compounds. Legal support is provided by approximately two FTE attorneys from DEC's Office of General Counsel and the State Attorney General's office. Staff and administrative costs are funded by the State general fund, the State cleanup fund, and Federal grants/cooperative agreements. Together, the cleanup fund and the general fund cover 77.6% of staff and administrative costs. It is not possible to distinguish each fund's respective contribution. Federal grants/cooperative agreements contribute the remaining 22.4%.

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 141 non-NPL sites, 43 of which are voluntary. During FY97, cleanup activities were completed at 22 non-NPL sites, five of which were voluntary. Since the start of Tennessee's program, cleanup activities have been completed at 138 non-NPL sites, 18 of which were handled through the voluntary program.

The State's priority list is the subset of sites identified as needing attention where cleanup activity is currently underway. To qualify for listing, a site must have a hazardous substance present and a release to the environment must have occurred. Sites may be added to the priority list voluntarily or by State promulgation. In addition to the priority list, Tennessee maintains both a State inventory and a registry, but sites added voluntarily to the priority list do not automatically appear on either of these two lists; most sites promulgated to the priority list by the State also appear in the inventory or the registry. The inventory, which is analogous to the CERCLIS list, includes 1360 inactive sites where a hazardous substance may be present and may have been released into the environment. The registry, which is analogous to the NPL, includes 136 inactive sites where a hazardous substance is present and either there has been a release or there is potential for a release into the environment. Not all of the sites in the registry are being addressed actively at this time.

Of the 234 sites identified as needing attention, 19 are municipal landfills, three are industrial landfills, 64 are manufacturing sites, four are recycling sites, and 144 are classified as other site types.

CLEANUP FUNDING

The Hazardous Waste Remedial Action Fund (HWRAF) had a balance of $7.6M at the end of FY97. During the fiscal year, $5.3M were added to the fund and $7M were paid out. Fund expenditures have increased significantly during the past two years, because many sites have progressed from investigation to remediation. The HWRAF may be used for program administration, site investigation, emergency response, removals, remedial actions, studies and design, operations and maintenance, CERCLA match, and grants to local governments. Significant sources of funding include appropriations, cost recovery, and fees imposed on generators, transporters, and treaters of hazardous waste. Interest, penalties, and voluntary program user fees are minor funding sources.

The Dry Cleaner Environmental Response Fund had a balance of $2M at the end of FY97. During the fiscal year, $1.6M were added to the fund, $6K were encumbered for future use, and $249.8K were paid out. Authorized uses of fund monies include program administration, site investigation, removals, remedial actions, studies and design, and operations and maintenance. In FY97, most expenditures covered program setup costs, salaries, and private contractors. Significant sources of funding include voluntary program user fees and a solvent surcharge paid by dry cleaners and suppliers as an annual business registration fee.

CLEANUP POLICIES AND CRITERIA

Tennessee superfund rules allow the liable party to propose cleanup levels, subject to Department approval, based on risk assessment, background levels, water quality criteria, and MCLs/MCLGs. Land use considerations are also considered as a component of the risk characterization. Assumptions about land use are based on the current use of the site and surrounding property, the type of business located on the property, and local zoning. Specified land use may be guaranteed through deed restrictions and security measures, which are both required by regulation. Risk goals are 10^{-5} for carcinogens and a Hazard Index of 1 for noncarcinogenic compounds with the same endpoint. Cleanup criteria under the voluntary program are identical to those under the hazardous substance cleanup program.

PUBLIC PARTICIPATION

Tennessee's public participation requirements include public notice provisions, opportunities for public comment, and public meetings. A public meeting is required at the end of the RI/FS stage for input in the development of the ROD, and rulemaking hearings must be held prior to any site(s) being added or deleted from the State's priority list. Because Tennessee's public participation requirements are tied to placement of sites on the priority list, unlisted sites handled through the voluntary cleanup program are not subject to the same requirements.

ENFORCEMENT

Liability

The State statute establishes proportional and retroactive liability. DEC is responsible for apportioning liability. The Commissioner of DEC is authorized to issue orders for site information, access, and remedial response, to assess civil penalties up to $10K per day per violation or failure to pay fees or file reports, and to impose punitive damages of up to 150% of the State's costs.

Natural Resource Damages

Tennessee has been seeking NRDs under State law since the early 1970s. Specific figures for the number and value of claims awarded and pending are not available, but DEC estimates that hundreds of claims have been awarded under State water and solid waste laws. Information on claims filed under CERCLA is not available. Tennessee bases the measure of damages and the value of claims on the cost of restoration and/or lost use value of natural resources. Recovered funds are used for restoration and protection of natural resources. Although public participation is not required in the assessment or restoration process, it is encouraged in both cases. The Commissioner of DEC is designated as the natural resource trustee.

Property Transfer

Tenn. Code Ann. §68-212-209 requires disclosure on the property deed or with the recorder of deeds that listed sites were or are being used for disposal of hazardous substances. The State maintains a database of properties known to have on-site contamination.

VOLUNTARY AND BROWNFIELDS PROGRAMS

In 1994, the legislature established a voluntary cleanup program open to all inactive hazardous substance sites not listed on the NPL. Petroleum sites may be handled through this program if they are also contaminated by another hazardous substance. Any willing and able party is eligible to participate; typical participants include PRPs, affected third parties, buyers, sellers, and lending institutions. Incentives for participation include release of liability pursuant to performance under a consent order, "No Further Action" letter, payment of orphan shares, and exemption from liens, deed notices, public hearings, and placement on the State's priority list. The State's services are funded through a $5K participation fee, an EPA Core Grant, and full reimbursement by liable parties of State oversight costs associated with site investigation and cleanup.

There is no formal brownfields program, but the State is working with businesses and local governments to bring brownfield sites into the voluntary cleanup program.

Region 5

Illinois
Indiana
Michigan
Minnesota
Ohio
Wisconsin

ILLINOIS

SITES

NPL Sites		State Sites	
Final:	39	Known and Suspected:	5000
Proposed:	5	Identified as Needing Attention:	140
Deleted:	1	On Inventory or Priority List:	70

STATUTORY AUTHORITIES

The *Environmental Protection Act*, Title XVIII Section 58 (1970, amended every year from 1983-93, and 1995, 1996), establishes the Hazardous Waste Fund for State site cleanups and provides for enforcement, contaminated property transfer, and voluntary cleanups.

The *Responsible Property Transfer Act*, Public Act §86-679 (1988), mandates a seller to disclose information regarding contamination on sites.

PROGRAM ORGANIZATION AND FUNDING

The Illinois Environmental Protection Agency, Bureau of Land, Division of Remedial Management administers the State superfund program. The Bureau has 105 FTE staff, the number authorized in FY97. The Division of Legal Counsel provides legal support for the program with seven FTE attorneys. The State cleanup fund provides 66% of funding for the State cleanup program, and Federal grants provide 34%.

The Voluntary Site Remediation Unit within the Division of Remedial Management administers the voluntary cleanup program in Illinois.

CLEANUP ACTIVITIES

Cleanup activities are underway at 479 non-NPL sites, and cleanup activities at 78 sites were completed during FY97. Since the beginning of the program, cleanup activities have been completed at 323 sites.

Of the total number of cleanup activities underway, 439 are at voluntary sites. In FY97, 71 voluntary cleanup activities were completed. Since the beginning of the voluntary program, 283 voluntary cleanup activities have been completed.

Illinois maintains a priority list based on risks to human health and environment, project costs, carry-over of previous year's projects, and benefits of an investigation and/or cleanup.

The State has categorized a portion of the sites it has identified as needing attention as follows: 13 municipal landfills, 44 manufacturing sites, one mining site, and 25 "other types" of sites.

CLEANUP FUNDING

The Hazardous Waste Fund had a balance of $10.5M at the end of FY97. Funds paid out during FY97 totaled $5M with $1.1M spent on NPL sites, $2.4M spent on non-NPL sites, and the remainder on program administration. The total amount obligated or encumbered during FY97 was $3.2M, with $2.5M obligated to non-NPL sites, and $153K obligated to NPL sites. Additions to the Fund during FY97 totaled $6.8M. Significant sources of this Fund are penalties, user fees, and cost recovery. Appropriations, bonds, waste fees, taxes, interest, transfers, and private funds are minor contributors. The State uses the Fund for site investigation, CERCLA matches, studies and design, operations and maintenance, removals, emergency response, remedial actions, and program administration.

The Environmental Protection Fund had a balance of $11.4M at the end of FY97. Total funds paid out during FY97 were $3.8M with $2.1M allocated to NPL sites and $1.7M allocated to non-

NPL sites. The total amount obligated or encumbered during FY97 was $2.5M. Appropriations are the only source of this Fund. The Fund is used for site investigation, studies and design, operations and maintenance, removals, remedial actions, and program administration.

CLEANUP POLICIES AND CRITERIA

The State employs background levels, water quality criteria, MCLs/MCLGs, groundwater standards, soil standards, and land-use based standards in conjunction with risk assessments to determine cleanup levels. The State uses a Tiered Approach to Corrective Action Objectives (TACO). The first tier employs traditional NPL standards such as State promulgated soil standards and MCLs. The second tier provides for consideration of cutoff pathways while the third tier consists of risk-based standards. Cleanup standards are based on relative risks to human health using TACO with a 10^{-6} risk goal.

The State uses deed restrictions and no further remediation letters as institutional controls to ensure that specified land uses are maintained in the future.

PUBLIC PARTICIPATION

Illinois does not have formal requirements for public participation in the cleanup process and determines public participation on an ad hoc basis.

ENFORCEMENT

Liability

Liability standards are strict, joint and several, and retroactive liability. Proportional liability is used at some sites. The State may impose civil penalties up to $50K per day for the first violation and $10K per day for each subsequent day of violation. Triple punitive damages may also be imposed.

Natural Resource Damages

The State does not have authority independent of Federal law to recover NRDs.

Property Transfer

The *Responsible Property Transfer Act* (Illinois Public Act 86-679) mandates environmental disclosures by sellers. The State's residential property transfer law contains requirements for disclosure of the presence of all environmental hazards prior to transfer of property containing one to four residential units.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The *Illinois Environmental Protection Act* (as amended in 1996) established a voluntary cleanup program in 1986. Sites with a release of hazardous waste into soil or groundwater are eligible for the program, except for NPL, RCRA, and LUST or sites with other enforcement proceedings pending. The State issues a no further remediation letter releasing the party who performs the cleanup from future liability as the main incentive to participate in the program. Fees on hazardous waste treatment/disposal fund State participation. In addition, the State charges fees for overhead, personnel, and lab costs.

The State brownfields program was established by policy in 1995. Any site that is eligible for the voluntary program may be considered a brownfields site. Illinois offers tax credits and State Brownfields Grants as incentives to participate in the program.

INDIANA

SITES

NPL Sites		State Sites	
Final:	36	Known and Suspected:	
Proposed:	1	Identified as Needing Attention:	
Deleted:	7	On Inventory or Priority List:	61

STATUTORY AUTHORITIES

The *Hazardous Substances Response Trust Fund*, IC §13-25-4 (1986, as amended 1987, 1988, 1989, and 1991), establishes a State cleanup fund and authorizes enforcement actions, and recovery of NRDs.

The *Responsible Property Transfer Law*, IC §13-25-3 (1990), establishes disclosure requirements for contaminated property transfers.

The *Voluntary Remediation of Hazardous Substances and Petroleum*, IC §13-25-5 (1993), establishes a voluntary cleanup program.

The *Brownfields Revitalization Zone Tax Abatement*, IC §6-1.1-42 (1997), provides for tax rebates under the brownfields program.

The *Environmental Legal Actions Act*, IC §13-30-9 (1997), establishes citizen suit authority.

PROGRAM ORGANIZATION AND FUNDING

The Office of Environmental Response in the Indiana Department of Environmental Management (IDEM), employs 58 FTE staff, but only 20 FTE work on non-NPL sites. Legal support is provided by two FTE attorneys in the Office of Legal Counsel. Staffing and administration are funded by the State general fund, the State cleanup fund, and Federal grants/cooperative agreements.

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 250 sites. In FY97, cleanup activities were completed at 15 sites. Cleanup activities have been completed at 30 sites since the beginning of the program.

Approximately 200 of the cleanups underway are at voluntary sites. During FY97, voluntary cleanup activities at 10 sites were completed. Cleanup activities at 20 voluntary sites have been completed since the beginning of the program.

The State's priorities list is composed of sites that have been evaluated using the Indiana Scoring Model, which examines sources, pathways, and targets.

CLEANUP FUNDING

At the end of FY97, the Hazardous Substance Response Trust Fund had a balance of $24.5M. The State reported fund obligations of $9.6M with $288.5K obligated for NPL sites and $9.3M obligated for non-NPL sites. Funds paid out totaled $4.3M with $400K spent on NPL sites and $3.9M spent on non-NPL sites. Indiana also reported fund additions of $6.8M for the fiscal year.

Funding information for the Environmental Management Special Fund is not available.

CLEANUP POLICIES AND CRITERIA

Indiana employs water quality criteria, background levels, and MCLs/MCLGs in conjunction with risk assessments to determine cleanup levels. Groundwater and soil standards are under development.

For voluntary cleanup sites, the State employs water quality criteria, MCLs/MCLGs, groundwater standards, and soil standards in conjunction with risk assessment to determine cleanup levels.

Land use is considered in determining cleanup levels for State and voluntary cleanups. Future land uses are considered either residential or nonresidential. A party must control the site to select nonresidential use. Indiana uses environmental notices recorded on deeds as institutional controls for maintaining specified land uses.

PUBLIC PARTICIPATION

The State requires public notice, public comment, and hearings and meetings for both State and voluntary cleanups.

ENFORCEMENT

Liability

Indiana imposes strict and joint and several liability standards where appropriate, and imposes retroactive liability. The State may impose civil penalties up to $25K per day per violation. Triple punitive damages may be imposed.

Natural Resource Damages

The State does not have authority independent of Federal law to recover for NRDs. IDEM and the Indiana Department of Natural Resources are the designated State trustees for natural resources. Indiana began seeking NRDs in 1993 under CERCLA. A 1993 Memorandum of Agreement between the U.S. Fish and Wildlife Service, the Department of Natural Resources, and the Department of Environmental Management requires collaborative efforts in recovering NRDs from private parties. The State uses recovered funds for the restoration of natural resources, replacement at other locations, and protection of other natural resources. Over $3M has been spent on natural resource restoration, and six restoration projects are currently underway.

Property Transfer

Indiana requires the seller to disclose the presence of hazardous substances on the site before transfer, if a site has underground storage tanks, is subject to CERCLA Title III reporting, or is on the CERCLIS list. The State's residential property transfer law contains requirements for disclosure of environmental hazards prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State voluntary cleanup program was established in 1993 (IC §13-25-5). Any party is eligible to participate. Sites that pose an imminent threat or that are currently subject to enforcement proceedings are not eligible. The IDEM issues a certificate of completion, and the Governor's Office issues a covenant not to sue as incentives for participation in the program. The program is funded through application fees of $1K per site and through applicant agreements to pay additional State costs. State costs for voluntary cleanups range from $5K-$20K.

Indiana has a brownfields program for any site that is potentially contaminated with hazardous substances or petroleum. The State provides tax rebates for nonpolluters, brownfields comfort letters, and State loans as incentives to reuse or redevelop sites. The program includes 17 sites, and cleanups are underway at four of these sites. Reuse or redevelopment commitments have been made at two sites.

MICHIGAN

SITES

NPL Sites		State Sites	
Final:	81	Known and Suspected:	N/A
Proposed:	3	Identified as Needing Attention:	2789
Deleted:	13	On Inventory or Priority List:	2789

STATUTORY AUTHORITIES

The *Michigan Natural Resources and Environmental Protection Act*, Public Act 451 of 1994, Part 201, establishes a State cleanup fund and provides for enforcement authorities, a priority list, NRDs recovery, citizen suits, water replacement, contaminated property transfer requirements, and voluntary cleanups.

PROGRAM ORGANIZATION AND FUNDING

The Environmental Response Division of the Department of Environmental Quality (DEQ) administers the hazardous substance cleanup program. The division employs 234 FTE staff, and legal support is provided by eight FTE attorneys in the Department of the Attorney General, Natural Resources Division. Funding for staff and administration is provided by the State general fund (75%), the State cleanup fund (10%), and Federal grants (15%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 361 sites, and cleanup activities at 363 sites have been completed since the beginning of the program. In FY97, cleanups were completed at 101 sites.

Of the total number of cleanup activities underway, 165 are at voluntary sites. Voluntary cleanups were completed at 47 sites during FY97.

Michigan maintains a priority list based on known or suspected releases, contaminant concentrations in excess of Michigan generic residential cleanup criteria, and observed releases.

CLEANUP FUNDING

The Environmental Protection Bond (EPB) had a fund balance of $7.6M at the end of FY97. During the year, $12.7M were obligated or encumbered and $40.1M were spent. The State also reported additions of $21.5M. Bonds are a significant source of the Fund, and interest is a minor contributor. The State uses the EPB for site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, grants to local government, remedial actions, and program administration.

The General Fund (GF) had $10M in additions during FY97. State appropriations are a significant funding source, and penalties are a minor source. The State uses the GF for site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, grants to local government, remedial actions, and program administration.

The Cleanup and Redevelopment Fund (CRF) had $14.6M in additions during FY97. State appropriations are the major source of the Fund; bonds, cost recovery, interest, private funds, user fees, and bottle return escheats are minor contributors. The State uses the CRF for site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, grants to local government, remedial actions, and program administration.

CLEANUP POLICIES AND CRITERIA

The State employs background levels, water quality criteria, MCLs/MCLGs, groundwater standards, and soil standards as generic cleanup levels, or uses site-specific risk assessment to

determine cleanup levels. The State uses a risk goal of 10^{-5} for carcinogens and a hazard quotient of 1 for noncarcinogens.

Future land use assumptions are made based on probability of continued current use, current zoning, and future zoning or intended use as indicated by local governments. The State uses deed restrictions and ordinances as institutional controls to maintain specified future land uses.

PUBLIC PARTICIPATION

Michigan requires public notice, public comment, hearings/meetings, and provides for citizen groups where appropriate. The State also allows for informational meetings and press releases for a specific site when necessary.

ENFORCEMENT

Liability

The State enforces joint and several liability standards. Proportional liability is imposed where appropriate. In addition, provisions for orphan shares and liability limits are available. The State imposes retroactive liability when it can be proved that a party has caused or contributed to a release. Michigan may impose civil penalties up to $25K per day per violation for failure to comply with an administrative or court order, $1K per day per violation for failure to comply with a director request, and $10K per day per violation for violation of law or administrative rules. Treble damages are available for failure to comply with an order to abate an imminent and substantial danger from a release.

Natural Resource Damages

The State may recover NRDs under Michigan law (Public Act 451 of 1994, Part 201). The Attorney General and DEQ are joint trustees for the NRDs program. The statute of limitations for recovering damages is six years from Department approval of remedial action. Michigan has recovered $1.55M for two successful claims under State law and has recovered $4.6M for six successful claims under CERCLA. Currently, two NRD claims are pending under State law, and three are pending under CERCLA. The State measures damages using permanent loss of use costs and restoration costs. NRDs assessments are used to determine the value of claims. Recovered funds are used for restoration of natural resources, replacement at other locations, and protection of other natural resources. Currently, 19 projects are underway, and 20 projects have been completed for $6M. Michigan conducts public participation in the NRDs program on an ad hoc basis.

Property Transfer

The State requires a seller to disclose the presence of hazardous substances in the deed before a property may be transferred, and that the seller investigate the property to determine if hazardous substances exist on the site. In addition, the State maintains a database of known or listed sites. The State's residential property transfer law contains requirements for disclosure of the presence of environmental hazards prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The Michigan voluntary cleanup program was established in 1994 (Public Act 451 of 1994, Part 201). All sites and potentially responsible parties are eligible for the program. The State provides liability protection for historical releases once the remedial action plan is completed as an incentive to participate in the program. The voluntary program is funded by the Environmental Protection Bond and the General Fund. The cost of cleanups ranges from $10K-$20M depending upon the site.

The State brownfields program, the Site Redevelopment Program, was established in 1994 (Public Act 451 of 1994, Part 201). A brownfields site is any site where there is a redevelopment

interest on the part of a developer. Currently, 144 sites have commitments for reuse and redevelopment in Michigan. Approximately 164 sites have been identified and/or included in the program, and cleanup is underway at approximately 55 sites. Incentives for participation in the program include: grants for investigation and remedial action, protection against liability for historical contamination, and State initiated investigation to facilitate decisions for future land use.

MINNESOTA

SITES

NPL Sites		State Sites	
Final:	44	Known and Suspected:	3000
Proposed:	0	Identified as Needing Attention:	219
Deleted:	18	On Inventory or Priority List:	138

STATUTORY AUTHORITIES

The *Minnesota Environmental Response and Liability Act* (MERLA), Minn. Stat. §§115B.01 - .24 (1983, as amended 1984, 1985, 1986, 1987, 1990, 1992, 1994,1995, 1997, and 1998), establishes a State fund and provides for enforcement authorities, a State priority list, NRDs, victim compensation, contaminated property transfer, and voluntary cleanups. The *Hazardous Substance Injury Compensation Fund,* §§115B.25-.37, is available for victim compensation.

PROGRAM ORGANIZATION AND FUNDING

The Site Response Section in the Groundwater and Solid Waste Division of the Minnesota Pollution Control Agency administers the State superfund program. This section has a total of 82 FTE staff who work on Superfund and the Voluntary Investigation and Cleanup Programs. Minnesota's Attorney General's Office provides legal support for the program with two FTE attorneys. The State program receives funding from the State Cleanup Fund (65.5%) and Federal grants (34.5%). Minnesota's Federal grants include a Defense Summary Memorandum of Agreement for Federal facility cleanups.

CLEANUP ACTIVITIES

Minnesota currently has cleanup activities underway at 628 sites. In FY97, cleanups were completed at 121 sites, and cleanups have been completed at 540 sites since the start of the program. Voluntary investigations constitute 500 of the total number of cleanup activities currently underway. Voluntary actions were completed at 100 sites in FY97, and at 500 sites since the start of the program.

Minnesota maintains a priority list based on a hazard ranking system.

CLEANUP FUNDING

The MERLA fund balance was $5.3M at the end of FY97. Approximately $70.6K were obligated or encumbered during the fiscal year. Total monies paid out during the fiscal year amounted to $5.1M, including $203.1K for NPL sites and $4.9M for non-NPL sites. Approximately $4.3M were added to the Fund in FY97. The major sources of MERLA funds are cost recovery and taxes, while minor sources are penalties, interest, and occasional special appropriations. The MERLA fund may be used for site investigation, CERCLA match, studies and design, operations and maintenance, removals, victim compensation, emergency response, grants to local government, remedial actions, program administration, natural resource restoration, and cost recovery.

CLEANUP POLICIES AND CRITERIA

Minnesota employs surface water quality standards, State drinking water standards, and MCL/MCLGs in conjunction with risk assessments to determine cleanup levels. Minnesota uses a three tiered system to conduct site-specific, media-based exposure pathway assessments to select and apply cleanup standards for sites. A 10^{-5} risk level is used for carcinogens , and a hazard quotient of .2 is used for noncarcinogens. The same standards apply to State voluntary cleanups.

Whenever possible, local governments are consulted to determine future land use. Otherwise, future land use will be kept consistent with surrounding land uses or will be cleaned up to residential use standards. A formal guidance document (Guidance on Incorporation of Planned Property Use into Site Decisions) identifies appropriate institutional controls (ICs) for specific sites with residual contamination. Minnesota uses a variety of ICs including the following: affidavits/notification, contractual agreements, easements, and restrictive covenants.

PUBLIC PARTICIPATION

Minnesota generally follows public participation requirements under CERCLA for all of its State and voluntary cleanup sites. The State provides for public notice, public comment, hearings/meetings. The State also supports community advisory groups (CAGs) at some sites.

ENFORCEMENT

Liability

The State uses strict, joint and several liability standards, as appropriate, and may impose liability retroactively. The State may impose civil penalties up to $20K per day per violation. No punitive damages may be imposed.

Natural Resource Damages

Minnesota may recover for NRDs under MERLA (Minn. Stat. Ch. 115B.04). The State has a six year statute of limitations. The Department of Natural Resources and the Minnesota Pollution Control Agency began seeking NRDs in 1994. Under State law, one successful claim recovered $91K in NRDs. Under CERCLA, three successful claims recovered $220K. Currently, three State claims are pending. The State uses site-specific assessment to determine the value of claims. Measures of damages include cost of restoration/replacement and potentially nonuse values. Minnesota uses recovered funds for the restoration of natural resources, replacement at other locations, and protection of other natural resources.

Property Transfer

Under Minn. Stat. Ch. 155B.17, the State requires disclosure in the deed when a property is contaminated with hazardous substances.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Established in 1988 by statute, the State's Voluntary Investigation and Cleanup Program (Minn. Stat. Ch. 115B.17, Subd. 14; Ch. 115B.175 - .178), allows any party willing and able to conduct the investigation and required cleanup in a timely manner and to reimburse MPCA for oversight costs to participate in the program. State appropriations and Federal cooperative agreements with EPA fund State participation, as well as reimbursement from private parties. Minnesota provides review and oversight of cleanups at a fee of approximately $92 per hour. Voluntary cleanup oversight costs per site, for the State, range from $2K– $10K. A variety of different liability assurances, technical assistance, and financial assistance provided by other State agencies, such as the Department of Trade and Economic Development, provide incentives for participation in the program. Over 1000 sites have entered the voluntary cleanup program since its inception.

The State Brownfields Program is carried out under the Voluntary Investigation and Cleanup Program.

OHIO

SITES

NPL Sites		State Sites	
Final:	34	Known and Suspected:	1460
Proposed:	5	Identified as Needing Attention:	403
Deleted:	2	On Inventory or Priority List:	1189

STATUTORY AUTHORITIES

The Ohio Revised Code (O.R.C.) §3734 (*Solid and Hazardous Waste Disposal*) authorizes a cleanup fund and voluntary cleanup activities, and provides enforcement authorities. The O.R.C. §3746 (*Voluntary Action Program*) provides for a cleanup fund, and authorizes property transfer provisions and a voluntary cleanup program. In addition, O.R.C. §3745 (*Environmental Protection Agency*) authorizes enforcement activities and citizen suits, while O.R.C. §6111 (*Water Pollution Control*) authorizes enforcement activities.

PROGRAM ORGANIZATION AND FUNDING

The Division of Emergency and Remedial Response (DERR) in the Ohio Environmental Protection Agency (OEPA) administers the State cleanup program. The program employs 150 FTE staff and receives its funding from State general funds and Federal grants. The Attorney General's Office supplies 9.7 FTE staff attorneys to work on non-NPL site cleanups and two FTE attorneys to work on voluntary cleanups.

CLEANUP ACTIVITIES

The State has approximately 365 cleanup activities underway, of which 200 are voluntary cleanup activities. The State completed 3 remedial actions and 20 voluntary cleanup activities in FY97. Since the start of the program, 13 remedial actions, 90 interim actions, and 40 voluntary cleanup activities have been completed. Of the 403 sites identified by the State as needing attention, 260 are municipal landfills.

CLEANUP FUNDING

The Hazardous Waste Cleanup Fund had a balance of $17.3M at the end of FY97. The total amount obligated or encumbered was $1.4M, all of which was obligated to non-NPL sites. Approximately $12.9M were paid out and $12.8M were added to the Fund in FY97. Ohio uses the Fund for site investigation, studies and design, removals, operations and maintenance, grants to local governments, remedial actions, and program administration. Significant sources of the Fund are cost recovery and waste fees. Penalties are a minor source.

The Hazardous Waste Facility Management Fund (a shared fund with the Hazardous Waste and Hazardous Waste Facility Board Program) had a balance of $12.4M at the end of FY97. The total amount obligated or encumbered was $75K, and paid out was $3M. A total of $9.2M was added to the Fund in 1997. Ohio uses this Fund for CERCLA matches, emergency response, and program administration. The only source of the Fund is waste fees.

The Voluntary Action Program Administration Fund had a balance of $1.3M at the end of FY97. The total amount obligated or encumbered was $57K, and paid out was $964K. A total of $391K was added to the Fund during FY97. The State uses the Fund for program administration. Significant sources of the Fund are user fees and loans from other State accounts. Cost recovery is a minor source.

CLEANUP POLICIES AND CRITERIA

Ohio follows CERCLA standards for its State cleanups. The State employs background levels, water quality criteria, MCLs/MCLGs, groundwater standards, and soil standards in conjunction with risk assessments to determine cleanup levels. Carcinogenic risk goals of 10^{-4} to 10^{-6} are used, with 10^{-6} as the point of departure.

The State also determines voluntary cleanup levels using background levels, water quality criteria, MCLs/MCLGs, groundwater standards, soil standards, and sediment standards in conjunction with risk assessment. Ohio employed a two year rule-writing process with involvement from a wide range of stakeholders to determine cleanup criteria and standards for voluntary sites. A cumulative risk goal of 10^{-5} is used for voluntary cleanups.

Land use is considered in determining cleanup levels at both State and voluntary sites. Future land use assumptions for State sites are made based on current and potential site use and nearby land uses and zoning restrictions. In the voluntary program, the volunteer may choose the land use but exposure assumptions must match the intended land use. Deed restrictions, and conditions of operations and maintenance are among the institutional controls used to ensure that specified land uses are maintained.

PUBLIC PARTICIPATION

Ohio law provides for public notice, public comment, and hearings/meetings. Grants to citizen groups are also provided at certain sites. The voluntary program also provides for an information clearing house.

ENFORCEMENT

Liability

Ohio imposes strict, and joint and several liability as appropriate. The State may impose civil penalties but does not impose punitive damages. Ohio may impose retroactive liability.

The voluntary program uses proportional liability standards, as well as retroactive liability standards.

Natural Resource Damages

The State does not have authority independent of Federal law to recover NRDs. Under CERCLA, the State has recovered $3M for three successful claims. Currently, two CERCLA claims are pending. Ohio uses recovered NRD monies for the restoration of natural resources, replacement at other locations, and protection of natural resources. Currently, three natural resource restoration projects are underway.

Property Transfer

The State does not have formal property transfer requirements other than disclosure of all known deficient conditions upon a transfer of residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The Voluntary Action Program was established in 1994 (Ohio Revised Code 3746). Any party is eligible for the program except for those already regulated under Federal or State law. Incentives to participate in the program include tax credits, low interest loans, grants, and liability releases. The State charges a range of fees to cover its program administration, including program audits. The fees range from $1K to $5K depending upon the site. In addition, the State may provide technical assistance at an hourly rate to any party participating in the program.

WISCONSIN

SITES

NPL Sites		State Sites	
Final:	42	Known and Suspected:	5000
Proposed:	1	Identified as Needing Attention:	600
Deleted:	3	On Inventory or Priority List:	600

STATUTORY AUTHORITIES

The *Remedial Action* Chapter 292, Wis. Stat. § 292 (1997), consolidated all of Wisconsin's hazardous waste cleanup laws. The statute creates a State cleanup fund, requires a priority list, provides for contaminated property transfer, establishes a voluntary cleanup program, and authorizes enforcement for State cleanups.

PROGRAM ORGANIZATION AND FUNDING

The Bureau for Remediation and Redevelopment (BRR) is a new bureau within the Department of Natural Resources. It administers hazardous substance cleanup and employs 68 FTE staff. The Attorney General's Office within the Bureau of Legal Services provides legal support to BRR with 3.5 FTE staff attorneys. Funding is provided by Federal grants/cooperative agreements (45%), the State general fund (18%), and the State cleanup fund (37%).

CLEANUP ACTIVITIES

The State has completed cleanup activities at 1600 sites since the start of its program. Cleanup activities are underway at 130 sites. Of sites identified by the State as needing attention, approximately 10% are industrial landfills, 15% are municipal landfills, and 65% are manufacturing sites.

Numbers of voluntary cleanup activities are not available due to substantial restructuring within the voluntary program office, as a result of recent statutory amendments.

Wisconsin maintains a priority list based on a screening process that determines whether sites have a high potential for causing or threatening to cause pollution.

CLEANUP FUNDING

The Environmental Fund (EF) had a balance of $881K at the end of FY97. The total amount obligated or encumbered at the end of FY97 was $2.4M. During FY97, $2.6M were paid out of the EF, all of which was allocated to non-NPL sites. The major source of the EF is waste fees. Appropriations, penalties, cost recovery, and user fees are minor sources of the Fund. The EF may be used for site investigation, CERCLA match, studies and design, operations and maintenance, removals, emergency response, remedial actions, and program administration.

Wisconsin's Bonding Authority Fund had a $20.5M balance at the end of FY97. Approximately $6M were obligated or encumbered with $1.2M allocated to NPL sites and $4.8M allocated to non-NPL sites. A total of $15.5M was added to the Fund in FY97. The Bonding Authority Fund may be used for remedial actions and CERCLA match.

CLEANUP POLICIES AND CRITERIA

Wisconsin employs groundwater standards, soil standards, background levels, water quality criteria, and MCLs/MCLGs in conjunction with risk assessments to determine cleanup levels. Wisconsin uses a two tier system to achieve groundwater standards. The State uses a 10^{-6} risk level for carcinogens and a hazard quotient of 1 for noncarcinogens. Wisconsin uses the same standards to determine voluntary cleanup levels.

Land use is taken into account in setting cleanup levels. The State uses industrial and nonindustrial soil standards and requires institutional controls, including deed restrictions and zoning, to maintain appropriate land uses.

PUBLIC PARTICIPATION

The State requires public notice, public comments, and hearings/meetings for State and voluntary program cleanups. The level of public participation varies from site-to-site within the State depending upon the magnitude of the cleanup and other relevant factors.

ENFORCEMENT

Liability

Wisconsin applies joint and several liability standards. Retroactive liability is imposed in certain circumstances. The State may impose civil penalties up to $5K per day per violation. The State cannot impose punitive damages.

Natural Resource Damages

The State may recover NRDs caused by water pollution, under Section 283.87 of Wisconsin law. No NRD actions under State or Federal law have been filed.

Property Transfer

Wisconsin requires sellers to disclose the presence of hazardous substances on a site before transfer. The State's residential property transfer law contains requirements for disclosure of environmental hazards prior to transfer of certain residential properties. The State maintains a database of known or listed sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State established a voluntary cleanup program in 1994 under the Land Recycling Law. October 1997 amendments substantially expanded the voluntary program, and the program is now in the process of restructuring. Any contaminated site that is not on the NPL is eligible for the program. As a result of the 1997 amendments, any party is also eligible to participate. State participation is funded by a $250 application fee followed by an hourly fee for staff services. Major incentives to participate in the program include financial incentives, such as tax credits, and liability limits.

Region 6

Arkansas
Louisiana
New Mexico
Oklahoma
Texas

ARKANSAS

SITES

NPL Sites		State Sites	
Final:	13	Known and Suspected:	363
Proposed:	0	Identified as Needing Attention:	98
Deleted:	2	On Inventory or Priority List:	9

STATUTORY AUTHORITIES

The Arkansas Code Annotated Title 8 (Environmental Law) provides general enforcement authorities and authorizes two cleanup funds, priority list, and citizen suits. Specifically, the *Remedial Action Trust Fund Act* (RATFA), Ark. Code Ann. §§8-7-501 *et seq.*, establishes the Hazardous Substance Response Trust Fund Act and a State priority list of hazardous waste sites. The *Emergency Response Fund Act* (ERFA), Ark. Code Ann. §§8-7-401 *et seq.*, establishes the Emergency Response Fund. Both RATFA and ERFA provide for apportionment of liability and authorize civil and criminal penalties, treble damages, and cost recovery. In addition to RATFA and ERFA, the State draws upon general authorities of Title 8 to administer its cleanup program.

The *Arkansas Brownfields Law*, Arkansas Code Annotated §8-7-1101 *et seq.* (Act 125 of 1995, as amended by Act 1042 of 1997), provides authority for cleanup of brownfields sites and contains contaminated property transfer provisions.

PROGRAM ORGANIZATION AND FUNDING

The Inactive Sites Branch of the Arkansas Department of Pollution Control and Ecology's (ADPC&E's) Hazardous Waste Division is the lead program office for cleanup of abandoned and inactive properties. The Inactive Sites Branch employs 10 FTEs, although 12 are currently authorized. Legal support is provided by one FTE attorney in the APDC&E's Legal Division. Funding for staff and administration comes from the State cleanup fund (25%) and Federal grants /cooperative agreements (75%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 60 non-NPL sites. During FY97, cleanup activities were completed at two non-NPL sites. It is unknown how many cleanups have been completed since the start of the program. Under the State's voluntary program, 17 cleanups are currently underway and two were completed during the last fiscal year.

Under ADPC&E Regulation 23 §26, a site may be listed on the State's priority list (SPL) if hazardous substances on the property pose a potential substantial endangerment to human health and/or the environment. Endangerment is determined using site-specific risk assessment. To be listed on the SPL, a site must pass administrative procedures as well as a public notice and comment process. Of the sites identified as needing attention, 44 are manufacturing sites, nine are recycling sites, two are municipal landfills, two are industrial landfills, two is a mining site, and 40 are classified as "other" site types.

CLEANUP FUNDING

The Emergency Response Fund (ERF) had a balance of $119.5K at the end of FY97. The fund's balance is capped at $150K. During the fiscal year, $14.1K were added to the fund, and $59.5K were paid out. No funds were obligated or encumbered. The ERF is authorized strictly for emergency response and associated removal actions. No more than $60K may be withdrawn at a time, and the Arkansas Pollution Control and Ecology Commission must authorize any expenditure

from the ERF. The most significant source of funding in FY97 was penalties. Cost recovery was a minor source.

The Remedial Action Trust Fund (RATF) had a balance of $8.7M at the end of FY97. During the fiscal year, $623.6K were added to the fund, and $141.7K were paid out. No funds were obligated or encumbered. Authorized fund uses include site investigation, CERCLA match, studies and design, operations and maintenance, removals, remedial actions, and program administration. Additionally, 10% of fund revenues (up to cap of $250K per year) are deposited in the State's Environmental Education Fund. The Arkansas Pollution Control and Ecology Commission must authorize any expenditure from the RATF. Significant sources of funding include waste fees, interest, and penalties that flow over from the ERF once it reaches its $150K cap. Cost recovery was a minor source.

CLEANUP POLICIES AND CRITERIA

The State's cleanup standards are based on a risk management process. Site specific factors are considered when developing action levels. Cleanup goals may be met by reaching background metals concentrations, consulting Region 6 Human Health Media Specific Screening Levels, performing traditional human health risk assessment, or a combination of all three options when appropriate. Site-specific cleanup standards are established in enforceable Consent Administrative Orders (CAOs). Ecological risk assessment decisions are based on sediment screening levels developed by the National Oceanographic and Atmospheric Administration. Factors in determining appropriate action levels include reasonably anticipated future land use, the use of engineering or institutional controls, human and/or ecological receptors, water quality criteria, and MCLs/MCLGs. Numerical risk goals range from 10^{-4} to 10^{-6}. Depending on the remaining risk, land use restrictions may be specified in a site's CAO and recorded in the property deed. Under the *Brownfields Law*, a CAO must be filed with the clerk of the circuit court in the county in which the site is located. The Order is transferable to all subsequent owners, and the land use designated therein cannot be changed without notifying the ADPC&E so the associated risk management decision can be revisited.

PUBLIC PARTICIPATION

Public notice requirements, provisions for public comment, hearings/meetings, and document availability are all provided by both statute and regulation. As a matter of policy, there is also coordination of regulatory revisions with industry trade groups and environmental groups. A public hearing is held prior to decisions to add or delete sites from the State priority list. Transcripts of public hearings and comments received on sites become part of administrative records. Public meetings and/or fact sheets are provided prior to major milestones on cleanup projects. Identical public participation requirements apply under the State's voluntary cleanup and brownfields programs.

ENFORCEMENT

Liability

The State applies strict, joint and several, and retroactive liability, except in cases where proportional liability is proven by a preponderance of the evidence. Participating responsible parties (RPs) may sue nonparticipants to recover their share of the cleanup costs. The State may impose civil penalties up to $25K per day and criminal penalties for violating the Code, making false statements, or violating an Order. Treble punitive damages are also available.

Natural Resource Damages

Arkansas has authority independent of Federal law to recover for NRDs under Ark. Code Ann. §8-4-103(b)(3) and (c), 8-6-203 (b)(3) and (c), and 8-7-204 (b)(3) & (c). The State's designated

trustee is ADPC&E. Since the State commenced seeking NRDs in 1995, one claim worth $1.65M has been awarded under State law. Currently, one claim with an approximate value of $80K is pending under State law. ADPC&E has not yet settled on a definitive measure of damages or method for determining the value of claims, so decisions thus far have been made on a case-by-case basis. The Department expects to begin relying more heavily on the cost of restoration in the future. Recovered funds are used for restoration, replacement and protection of natural resources. One such project has been completed, and three are currently underway.

Property Transfer

The *Brownfields Law* requires that a property deed disclose the presence of on-site hazardous substances. The State used to have provisions for liens and superliens, but the Arkansas legislature has partially excised the superlien; fragmented authority for liens still exists on the books, but neither liens nor superliens are used or effective at this time. ADPC&E maintains a database of known and listed sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Arkansas has an informal voluntary cleanup program, whereby RPs can come forth to initiate CERCLA-like cleanups. Authority for the program is derived from general provisions of ADPC&E Regulation 23 and the Remedial Action Trust Fund. The program is open to RPs except those under enforcement action by the Department. There are no categorical exclusions as to site-type eligibility. Incentives for voluntary cleanups include a limitation of liability for program participants. The State charges a fee of approximately $63 per hour for document review.

The State also has a brownfields program established by the *Arkansas Brownfields Law*. In general, properties with viable RPs are not qualified to participate in the brownfields program unless the Director of ADPC&E determines it is in the best interest of the State to proceed with a brownfields cleanup while pursuing cost recovery or some other method of settlement with the RP(s) on a separate track. Abandoned industrial, commercial, and agricultural sites not under enforcement action are eligible to enter the program. Incentives for participation include a low interest revolving loan program and total release from State liability if the corrective action order is properly executed. Participants pay a fee of $63 per hour for APDC&E review of submittals and other forms of technical assistance. State participation is funded through these fees and EPA cooperative agreement money. ADPC&E has begun to develop a database of potential brownfields properties using sites that have been archived from the EPA CERCLIS database. To date, 263 potential brownfields sites have been identified. Two Consent Administrative Orders have been executed and property redevelopment is underway. A draft guidance document is expected to be available for external review and comment by the fall of 1998.

LOUISIANA

SITES

NPL Sites		State Sites	
Final:	15	Known and Suspected:	410
Proposed:	3	Identified as Needing Attention:	120
Deleted:	3	On Inventory:	410

STATUTORY AUTHORITIES

Chapter 12 of the *Inactive and Abandoned Hazardous Waste Site Law* (La. Rev. Stat. 30:2271-2280), entitled Liability for Hazardous Substance Remedial Action, provides enforcement authorities and minimum remediation standards. The *Hazardous Waste Control Law*, La. Rev. Stat. 30:2205, establishes the Hazardous Waste Site Cleanup Fund. La. Rev. Stat. 30:2039 requires landowners to disclose the presence of hazardous wastes in property conveyances. The *Voluntary Investigation and Remedial Action Act* (La. Rev. Stat. 30:2285-2290), effective July 1, 1996, authorizes the voluntary cleanup program now in development. While not unique to the State superfund program, La. Rev. Stat. 30:2026 authorizes citizen suits.

PROGRAM ORGANIZATION AND FUNDING

The Inactive and Abandoned Sites Division of the Department of Environmental Quality's (DEQ's) Office of Waste Services employs 34 FTE staff who work on inactive hazardous waste sites. Legal support is provided by one FTE attorney from the Office of Legal Affairs and Enforcement. Staff and administrative costs are funded through Federal grants/cooperative agreements (52%) and the State cleanup fund (48%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at five non-NPL sites. During FY97, cleanups were completed at eight non-NPL sites. Since the start of Louisiana's program, cleanup activities have been completed at 152 non-NPL sites. None of these cleanup activities have been handled through the voluntary cleanup program, as the regulations for that program are still being developed.

Louisiana does not have a formal priority list, but potential sites are placed on the State's inventory list (the Louisiana Site Remediation Information System [LASRIS]) by completing a Site Discovery Form. Typically, sites are discovered by DEQ personnel, identified by citizen complaints, or referred to the Inactive and Abandoned Sites Division by other DEQ divisions or outside agencies. DEQ uses LASRIS to determine which sites actually need attention. Of the 120 sites identified as needing attention, 19 are manufacturing sites, 19 are landfills, 16 are refinery/reclamation facilities, 31 are wood treating facilities, 10 are gas transmission sites, one is a site owned or operated by the Federal or State government, and 24 are classified as "other" site types.

CLEANUP FUNDING

The Hazardous Waste Site Clean-up Fund (HWSCF) had a balance of $1.7M at the end of FY97. No additions were made to the fund during the fiscal year, but $200.8K were paid out to non-NPL sites. A total of $2.3M was encumbered: $381K for non-NPL sites and $1.9M for NPL sites. The HWSCF had a cap of $4M for FY97. Penalties and a portion of the taxes on hazardous waste generation are significant sources of funding for the HWSCF. Interest and monies recovered through judgements and settlements are minor sources. The HWSCF may be used for site investigation, emergency response, removals, remedial actions, studies and design, program administration, CERCLA match, and operations and maintenance.

CLEANUP POLICIES AND CRITERIA

In order to avoid any significant threat to public health or the environment, DEQ is required to select remedies, based on cost effectiveness, that reduce exposure or potential exposure to hazardous substances. There is also a preference for permanent remedies. Choice of cleanup standards depends on site-specific remedial goals, site conditions, and affected media. DEQ currently bases cleanup criteria on background levels, water quality criteria, MCLs/MCLGs, and EPA guidelines. Risk-based soil and groundwater standards are also being developed under the proposed Risk Evaluation/Corrective Action Program (RECAP); these standards will be specific to land use and will require further corrective action if site conditions change such that remedial goals no longer satisfy acceptable risk levels. In determining land use, Louisiana considers current use and projections on the likelihood of that use changing. Numerical risk goals are 10^{-4} to 10^{-6} for carcinogens and a Hazard Index of 1 for non-carcinogens. The same cleanup standards will apply to sites handled through the voluntary cleanup program now in development.

PUBLIC PARTICIPATION

Under Louisiana law, the State must provide public notice, an opportunity for a public meeting and, if requested, a public comment period prior to approval of a remedial investigation plan and selection of a remedy. A public comment period is also required for closure plans when DEQ proposes to treat, store, or dispose of hazardous wastes at an abandoned site. At complex sites, DEQ institutes community relations programs that include regular public meetings and fact sheets. Prior to concluding settlement agreements, DEQ makes them available to the public and may hold public meetings. Public meetings are now also required under the voluntary cleanup program, pursuant to the *Voluntary Investigation and Remedial Action Act* effective July 1, 1996 (La. Rev. Stat. 30:2285).

ENFORCEMENT

Liability

Louisiana has strict, retroactive, joint and several liability standards, but the State allows responsible parties to assign proportional liability amongst themselves where practicable. Civil penalties of up to $25K per day may be recovered for PRP failure to provide requested information. Non-participating PRPs are subject to double damages for participating PRPs' cleanup expenditures and treble damages for the State's. Louisiana will negotiate a settlement with PRPs or issue a remedial demand order wherever possible. DEQ has the authority to seek recovery of State costs from PRPs once the work is done.

Natural Resource Damages

Louisiana uses general provisions in the *Environmental Quality Act* to pursue natural resource damage claims. Since the State began seeking NRDs in 1990, one claim has been recovered under CERCLA; several others have been recovered under the Federal Oil Pollution Act. Louisiana pursues all claims in a cooperative process with the Federal government. As a result, the State uses Federal guidelines to determine the value of claims. Funds recovered are used for restoration, replacement, and protection of natural resources. One restoration project associated with the CERCLA claim is currently underway. It is not possible to determine the amount of money being spent on that action, because DEQ compels responsible parties to take charge of restoring use value and does not inquire as to how much individual projects cost. Louisiana does not mandate public participation in the NRDs assessment or restoration process, but the State typically follows the requirements specified in CERCLA. The Department of Environmental Quality, the Department of Natural Resources, and the Department of Wildlife and Fisheries are designated as natural resource trustees.

Property Transfer

Louisiana may impose a superlien for the recovery of remedial costs incurred by the State and has a statutory requirement that the landowner of an identified hazardous waste site record the location of the site in the mortgage and conveyance records of the parish in which it is located. The State also has a law that requires property sellers to disclose latent defects to the property before transfer; while this provision is not specific to environmental law, it could be used to require disclosure of on-site hazardous substances. The State maintains a database to track assessment and remediation of contaminated sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Louisiana is in the process of developing implementing regulations for a voluntary cleanup program authorized by the *Voluntary Investigation and Remedial Action Act* (effective July 1, 1996). The program will be open to prospective purchasers and responsible parties who remove all discharges and restore the site to residential risk levels. RPs who do not agree to these cleanup criteria will be excluded from the program. Site eligibility will be limited to contaminated commercial or industrial facilities. Incentives for participation will include a certificate of completion issued by DEQ and exemption of liability for disposal or discharge of hazardous substances or waste. A fee system outlining how the State's oversight costs will be covered is currently being developed.

The State does not have a brownfields program, but brownfields sites will be eligible for participation in the voluntary cleanup program; DEQ has developed a list of potential sites, and analysis and marketing efforts are underway.

NEW MEXICO

SITES

NPL Sites		State Sites	
Final:	11	Known and Suspected:	344
Proposed:	2	Identified as Needing Attention:	133
Deleted:	2	On Inventory or Priority List:	60

STATUTORY AUTHORITIES

New Mexico does not have a formal State superfund program, so the State attempts to address non-NPL sites through various regulatory mechanisms including State law and Administrative Orders on Consent (AOCs). When used, AOCs are negotiated with PRPs and call for CERCLA-like investigation and cleanup of all affected media, including those for which the State does not have standards (*i.e.*, direct contact with soils).

The *Hazardous Waste Act*, N.M. Stat. Ann. 74-4-1 to 74-4-13 (1988, as amended 1989 and 1991), establishes the Hazardous Waste Emergency Fund for emergency response and removals, the State CERCLA match, and certain enforcement authorities.

The *Water Quality Act*, N.M. Stat. Ann. 74-6-1 *et seq.* (1993), provides additional enforcement authorities and provisions for citizen suits by appeal. These suit provisions only extend to those who have already been involved in the decision through the public participation process.

The *Environmental Improvement Act*, N.M. Stat. Ann. 74-1-1 *et seq.*, authorizes Administrative Orders on Consent and provides associated enforcement authorities.

The *Voluntary Remediation Act*, N.M. Stat. Ann. 74-4G-1 *et seq.* (1997), authorizes the Voluntary Remediation Program currently being developed by the New Mexico Environment Department (NMED).

PROGRAM ORGANIZATION AND FUNDING

Staff resources are provided by a total of 23.5 FTEs working out of two different offices, the Superfund Oversight Section (SOS) and the Assessment and Abatement Section (AAS), both housed within the Waste and Water Management Division of the New Mexico Environment Department's Groundwater Quality Bureau. Together, the two sections are authorized to employ 27.5 FTEs. The SOS concentrates on CERCLA investigation and oversight, but also has authority to enforce State regulations; typically, the most heavily contaminated sites are handled through the SOS. The SOS employs 5.5 FTEs to work on non-NPL sites and 11 FTEs to work on NPL sites. The non-NPL sites being handled by the SOS are investigated and remediated primarily under AOCs. The future Voluntary Remediation Program will also be handled by the SOS. The AAS operates strictly under State authority and standards, and employs seven FTEs to work on non-NPL sites. Legal support is provided by 0.5 FTE attorneys from NMED's Office of General Counsel. Staff and administrative costs are funded by the State general fund (30%), Federal grants/cooperative agreements (55%), and by responsible private parties (15%).

CLEANUP ACTIVITIES

Cleanup activities are underway at 48 non-NPL sites. During FY97, cleanup activities were completed at three non-NPL sites. Since New Mexico began remediating hazardous waste at abandoned sites, cleanup activities have been completed at 36 non-NPL sites. None of these cleanup activities have been handled through the Voluntary Remediation Program, as the implementing rules and guidelines are still being developed.

The Assessment and Abatement Section maintains an informal priority list that includes sites where contamination is known or suspected to exceed standards. The list is prioritized through a

triage process based on threat to human health and the environment. Of the 133 sites identified as needing attention, 23 are municipal landfills, 8 are industrial landfills, 30 are manufacturing sites, seven are recycling sites, 18 are mining sites, and 47 are classified as other site types.

CLEANUP FUNDING

The Hazardous Waste Emergency Fund (Emergency Fund) had a balance of $1.7M at the end of FY97. During the fiscal year, $93.1K were added to the fund. $1.8K were paid out and $62.9K were encumbered, all for use at non-NPL sites. The Emergency Fund may be used for site investigation, studies and design, removals, emergency response, and CERCLA match. All fund revenues come from penalties.

The Assessment and Abatement State General Fund (AASGF) had a balance of $1.55K at the end of FY97. During the fiscal year, $230.8K were added to the fund, $228.57K were paid out to non-NPL sites, and $675 were encumbered for use at non-NPL sites. The AASGF may be used for site investigation, studies and design, and program administration costs, which include oversight of removals, remedial actions, and emergency response. The AASGF's only significant source of funding is appropriations; penalties and private funds are minor sources.

New Mexico's cooperative agreement with the Department of Defense (DOD) had a balance of $229.3K at the end of FY97. During the fiscal year, $365.5K were added to the fund, $158.3K were paid out to non-NPL sites, and $1.7K were encumbered for use at non-NPL sites. The fund may be used for site investigation, studies and design and program administration costs. This cooperative agreement is funded entirely through Federal appropriations.

New Mexico's cooperative agreement with the U.S. Bureau of Land Management had a balance of $40.6K at the end of FY97. During the fiscal year, $40K were added to the fund, and $28.8K were paid out to non-NPL sites. This fund may be used for site investigation, studies and design, and program administration costs. This cooperative agreement is funded entirely through Federal appropriations.

CLEANUP POLICIES AND CRITERIA

New Mexico's cleanup levels are based on background levels, risk-based groundwater standards, MCLs/MCLGs, water quality criteria, and soil standards. Soil cleanup standards are applied strictly for the purpose of protecting groundwater quality and are determined on a case-by-case basis. Because the State has no formal authority to impose risk-based soil standards, they may only be implemented through Administrative Orders on Consent (AOC) and follow EPA risk guidance. Soils cleaned under AOCs may be cleaned specifically for residential or industrial use based on zoning and the current use of adjacent properties. Cleanup standards for groundwater and surface water are set by regulation and are applied uniformly to all sites without regard for land use considerations. All groundwater with less than 10,000 ppm total dissolved solids is protected for future residential use regardless of present use. MCLs/MCLGS are applied on an ad hoc basis. New Mexico uses risk goals of 10^{-5} for groundwater and surface water, and a range of 10^{-4} to 10^{-6} for CERCLA-like cleanups conducted under AOCs. The same cleanup standards will be applied to sites handled through the Voluntary Remediation Program (VRP), although NMED plans to develop soil cleanup guidelines for VRP sites.

PUBLIC PARTICIPATION

At non-NPL sites, New Mexico follows the regulations of the Water Quality Control Commission, which mandate public notice requirements, public comment provisions, and hearings/meetings. At sites being cleaned up under AOCs, responsible parties often make technical assistance grants available to local communities.

ENFORCEMENT

Liability

Liability in New Mexico is strict, joint and several. Enforcement authorities include orders for site access and information, administrative and consent order authority, injunctive actions, civil penalties and cost recovery authority. Preferred enforcement methods include injunctions or sending a notice of violation with a time period for compliance and a proposed penalty. Civil penalties may be imposed at a rate of $10K per day for water quality violations, up to $15K per day for discharge permit violations, and up to $25K per day for compliance order violations. Punitive damages are not available.

Natural Resource Damages

New Mexico State law does not create liability for NRDs, but the State has been pursuing NRD claims under CERCLA since 1993. Since that date, the State has settled two claims: one for $200K, and the other for specified restoration work for which a monetary value will not be determined. A third NRDs settlement worth $210K is now pending. The State uses several methods depending on site-specific circumstances to determine the value of claims. Recovered funds are used for restoration, replacement, and acquisition of equivalent natural resources. Five such projects are currently underway, and two have been completed; a total of $165K has been spent on these activities. Although there is no State requirement for public participation in the assessment or restoration processes, it is sought in all cases pursuant to CERCLA. The Office of the Natural Resource Trustee is designated by the Governor as the State's natural resource trustee pursuant to CERCLA.

Property Transfer

New Mexico has no law governing the transfer of hazardous waste sites. The State may request deed restrictions, but they are not legally enforceable.

VOLUNTARY AND BROWNFIELDS PROGRAMS

New Mexico is currently drafting regulations and guidelines for a voluntary remediation program authorized by the *Voluntary Remediation Act* of 1997. The program is not yet operational and has not begun accepting sites. In the future, the State will use the voluntary program to encourage efficient and expedient cleanup of hazardous waste sites to applicable standards.

Although NMED has yet to clarify many details, the statute specifies certain key elements of the program such as eligibility and incentives. The program will be open to site owners, operators, prospective owners, and prospective operators. Individuals with a history of violating environmental laws, or those under existing or pending Federal or State enforcement action or permit, will be excluded. Heavily contaminated sites may also be excluded. Incentives for participation will include liability protection during and after implementation of the voluntary remediation agreement, certificate of completion for owners/operators, covenant not to sue for third party purchasers, and lender liability. The State's participation will be funded through an application fee and an hourly oversight rate yet to be determined.

The voluntary cleanup program will also be used to address brownfields sites. Although there are no provisions specific to brownfields, elements such as the covenant not to sue are intended to encourage third party purchase of these properties. NMED plans to educate anyone who might be interested in reusing a contaminated property about the program.

OKLAHOMA

SITES

NPL Sites		State Sites	
Final:	10	Known and Suspected:	793
Proposed:	1	Identified as Needing Attention:	124
Deleted:	0	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

The *Environmental Quality Act*, 27A O.S. Supp.1997 §1-3-1-1(B) & (E6), generally establishes which agencies shall have authority over cleanups of State sites. The Environmental Quality Code, O.S. Supp.1997, includes: §2-1-101 *et seq.*, the *Solid Waste Management Act* (enforcement authority); §2-7-101 *et seq.*, the *Hazardous Waste Management Act* (enforcement authorities); §§2-3-501 *et seq.* General Regulation and Enforcement (enforcement authorities); §2-6-105 *et seq.*, *Nuisance Act*; §2-7-301 *et seq.* the *Hazardous Waste Fund Act* (cleanup fund); and §2-15-101 *et seq.* the *Brownfields Voluntary Redevelopment Act.* 50 O.S. Supp. 1997 §2, which defines public nuisance and liability of property owners, allows the State to hold successive owners accountable for prior releases.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Quality's (DEQ's) Waste Management Division, Site Remediation Section administers the State's hazardous substance cleanups. The office employs 18 FTEs, although 22 are authorized. Legal support is provided by one FTE attorney from DEQ's Office of the Executive Director, Office of General Counsel. Funding for staff and administration comes from Federal grants/cooperative agreements (90%) and solid waste fees (10%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at approximately 52 non-NPL sites. During FY97, cleanups were completed at 19 non-NPL sites. Since Oklahoma began remediating hazardous waste at abandoned sites, cleanups have been completed at over 40 non-NPL sites. All of these cleanups were handled through the State's voluntary cleanup program or through consent orders between the State and the individual party.

The State does not have a priority list. Preliminary Assessment/Site Inspection (PA/SI) determines a site's candidacy for the NPL and/or the need for further attention. Sites are identified through voluntary cleanups, the brownfields program, and the CERCLIS list.

CLEANUP FUNDING

The Environmental Trust Fund (215) had a balance of $0 at the end of FY97. During the fiscal year, $284.4K were expended from the Fund and $282.5K was obligated. Of the amount paid out, $136.5K went toward NPL sites, and $147.9K went toward non-NPL sites. All of the obligated funds went toward NPL sites. No additions to the fund were made. The ETF is funded entirely through taxes. Its only authorized use is CERCLA matches pertaining to oil contamination.

The Hazardous Waste Fund (220) had a balance of $17.2K at the end of FY97. Of the total amount paid out of $593.4, $47.2K went to NPL sites and $546.2K went to non-NPL sites. During the fiscal year, a total of $309.3K was obligated: $139K for NPL sites, and $170.3K for non-NPL sites. A total of $9.5K was added to the fund. Transfers of waste fees were the most significant source of funding. Penalties were a minor source. Authorized uses of the fund include site investigation, CERCLA match, removals, emergency response, grants to local government, and program administration.

CLEANUP POLICIES AND CRITERIA

Cleanup standards are determined by toxicologists who develop site-specific cleanup goals based on current and prospective land use, surrounding population, soil and groundwater considerations. DEQ uses statutory authority and guidelines to establish cleanup standards. State statutes and regulations prescribe background levels, water quality criteria, MCLs/MCLGs, and groundwater standards. Policy or ad hoc decisions call for risk assessment of both carcinogens and noncarcinogens, soil standards, and land use based considerations. Maps, zoning, construction patterns, local authorities, stakeholders, facility owners, and prospective buyers aid in determining land use. Specified land use is generally protected through a consent order signed by DEQ and the property owner. The consent order applies to successors and is enforceable. Deed notification is also used.

The ideal risk goal is zero although this is not practical or achievable in all cases. Thus, DEQ uses three levels of risk evaluation: (1) EPA Soil Screening Level guidance, (2) EPA MCLs for drinking water for the evaluation of ground water, and (3) Oklahoma Water Resources Board Water Quality Standards for surface water. No greater than 10^{-5} risk for carcinogens or a Hazard Index of less than 1 as the sum of all noncarcinogenic risks over any pathway is acceptable.

PUBLIC PARTICIPATION

Oklahoma does not have formal requirements for public participation in cleanup decisions, unless cleanups are conducted under the voluntary cleanup program. Under 27A Okla. Stat. Supp. §2-15, the *Oklahoma Uniform Environmental Permitting Act*, the State must provide public notice, opportunities for public comment, and hearings/meetings for cleanup decisions under the voluntary program. DEQ often facilitates additional public participation mechanisms, such as citizen oversight committees, on an ad hoc basis.

ENFORCEMENT

Liability

The State applies joint and several, and retroactive liability. In cases where public health is in jeopardy, Oklahoma has authority to require cleanup through nuisance laws. Otherwise, the State does not have specific authority to enforce hazardous waste cleanups, so all non-NPL cleanups have been conducted under the *Brownfields Voluntary Remediation Act*. Civil penalties may be assessed up to $25K per day per hazardous waste violation and $10K per violation for any other violation.

Natural Resource Damages

The State has independent authority to recover for NRDs to fish and wildlife under the Oklahoma Constitution Act 26 §4 and 29 Oklahoma Statutes §7-401a. Since the State commenced seeking NRDs in 1992, a total of two claims have been awarded, both under CERCLA. Together, the two claims are valued at approximately $405K. Currently, one claim valued at approximately $71K is pending under CERCLA. The State determines the measure of damages by assessing the cost of restoration and replacement of fish and wildlife. The values of fish are determined as published by the American Fishery Society, Southern Division. The State does not require public participation in the assessment or restoration process, but has held meetings with tribal representatives. The Secretary of the Environment and the Oklahoma Department of Wildlife Conservation are designated as natural resource trustees.

Property Transfer

The State requires disclosure on the deed if a site is contaminated with solid or hazardous waste. Also, under Oklahoma Revised Code, Chapter 16A, sellers of residential property are required

to disclose knowledge of environmental conditions including the presence of hazardous materials. Deed restrictions are available for brownfields sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Oklahoma has a voluntary cleanup program established by statute and enacted in June of 1996. Under the program, sites are addressed through negotiation, consent orders, and technical work plans. Prior to the enactment of the statute (since 1988), consent orders were used to facilitate voluntary cleanups. To date, all cleanups conducted in the State have been voluntary. The formal program is open to any person except individuals under EPA cleanup order, those not in substantial compliance with a State or Federal order relating to regulated substances, or those having a demonstrated pattern of uncorrected noncompliance. NPL sites or those currently under EPA cleanup order are excluded from the program. Incentives for participation include a certificate of completion, certificate of no action (which includes liability protections for cleaned up portions of the site), tax incentives, job act incentives and advice/document review. The State's actual costs are reimbursed by the participant. Actual costs include all direct costs of DEQ oversight and arrangement for the investigation including, but not limited to, time and travel costs of DEQ personnel, contractor costs, personal protective equipment, document review, and the costs of collecting and analyzing split samples.

The State has a brownfields program established by both statute and code. Eligibility criteria are the same as for the voluntary cleanup program. Three cleanup methods are available to participants: (1) EPA soil screening guidance levels and MCLs, (2) application of site specific data to risk-based model, and (3) risk assessment. To date, seven sites have been identified for the program, and one has verbally committed to redevelopment. A deed notice will be in place for that site indicating that it is only suitable for commercial use. Incentives for participation in the brownfields program are the same as those under the voluntary cleanup program.

TEXAS

SITES

NPL Sites		State Sites	
Final:	34	Known and Suspected:	388
Proposed:	2	Identified as Needing Attention:	52
Deleted:	6	On Inventory or Priority List:	49

STATUTORY AUTHORITIES

The Texas Water Code, Chapter 26, establishes the Spill Response Fund and provides enforcement authorities. The Health and Safety Code, Chapter 361, establishes the Hazardous Waste Remediation Fee Account (Fund 550) and a priority list, and provides authority for enforcement, water replacement, and natural resource damage claims. A 1995 amendment established the State's voluntary cleanup program.

PROGRAM ORGANIZATION AND FUNDING

The Office of Waste Management, Pollution Cleanup Division of the Texas Natural Resource Conservation Commission (TNRCC) employs 106 FTEs, although 107 are currently authorized. Of the 106 FTEs employed, 88.5 work on non-NPL sites. Legal support is provided by seven FTE attorneys in the Office of Legal Services, TNRCC Legal Services Division. Funding for program administration comes from the State cleanup fund (64%) and Federal grants (36%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 502 non-NPL sites, 445 of which are being remediated through the voluntary program. During FY97, cleanup activities were completed at 997 non-NPL sites, 55 of which were handled through the voluntary program. Since the start of the program, cleanups have been completed at 18,994 non-NPL sites, 158 of which were handled through the voluntary program.

To be included on the State's priority list, a site must satisfy three criteria: (1) alternative mechanisms for State enforcement have been exhausted or ineffective in achieving remedy; (2) the site does not qualify for the NPL; and (3) the site scored 5 or above using the Federal Revised Hazard Ranking Score. Of the sites identified as needing attention, approximately 20 are manufacturing sites, 17 are recycling sites, 13 are aerial pesticide application sites, one is a municipal landfill, and one is an industrial landfill.

CLEANUP FUNDING

The Hazardous and Solid Waste Remediation Fee Account (Fund 550) had a balance of $69.7M at the end of FY97. During the fiscal year, $35.4M were added to the fund, $41.2M were paid out, and $27M were obligated or encumbered. The fund is available for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, operations and maintenance, and program administration. Its major sources of funding include waste fees, lead acid battery fees, and Federal funds. Minor sources of funding include cost recoveries, user fees from the voluntary program, and interest.

The Spill Response Fund (SRF) had a balance of $191.3K at the end of FY97. There were no additions to, or expenditures from, the fund. Funds obligated or encumbered at the end of the fiscal year totaled $6.7K. The SRF is available for removals and emergency response. Funding is supplied through appropriations.

CLEANUP POLICIES AND CRITERIA

TNRCC uses media specific standards to establish cleanup levels. Risk assessment, background levels, water quality criteria, MCLs/MCLGs, ground water standards, land use based considerations, and soil standards are used to determine cleanup criteria. TNRCC expects to promulgate a new risk-based rule in the latter part of 1998, which will replace its current method for determining protective concentration levels.

In June of 1993, Texas promulgated its Risk Reduction Rules (subchapters A and S of Chapter 335), which establish three closure/remediation performance standards that parties may use to satisfy their cleanup responsibilities. The State permits the individual party to select which risk reduction standard to use. To attain Risk Reduction Standard 1, a person must remove and/or decontaminate all waste and environmental media to background levels unaffected by waste management or industrial activities. Under Risk Reduction Standard 2, preliminary remediation goals for over 150 chemicals of concern in soil and groundwater are used as starting points to determine protective concentration levels. These values may require modification where exposure pathways that were not evaluated in the development of the concentrations are of concern at a particular site. These values were determined through the use of standardized human health risk assessment equations, default exposure factors, and promulgated standards (mainly MCLs for groundwater), where available. Otherwise, risk-based values were developed using 10^{-6} for Class A and B carcinogens and 10^{-5} for Class C carcinogens. Levels for noncarcinogens were based on a target Hazard Index of 1. Risk Reduction Standard 3 uses a site-specific risk assessment process to determine the protective concentration levels. Under Risk Reduction Standard 3, Texas uses 10^{-6} as the goal for establishing protective concentration levels to be consistent with the risk range between 10^{-4} and 10^{-6}. The cumulative risk from carcinogens must not exceed 10^{-4}. For noncarcinogens, protective concentration levels are established such that the Hazard Index does not exceed 1. The same standards apply under the State's voluntary cleanup program.

PUBLIC PARTICIPATION

Under the hazardous substance cleanup program, the State is required by statute to provide public notice, hearings, and the opportunity for public comment on cleanup decisions. TNRCC also conducts hearings and meetings when requested in cases where they are not required by law. Under the voluntary cleanup program the State is required by regulation to provide public notice. Public comment periods and hearings/meetings are provided on an ad hoc basis.

ENFORCEMENT

Liability

The State uses strict, joint and several, and proportional liability standards. The proportional standard is used only when the preponderance of evidence proves divisibility of liability. Comprehensive order and injunctive authority, civil penalties of up to $25K per day, cost recovery, liens, *de minimis* settlement, mixed funding, and treble damages are available.

Natural Resource Damages

Texas has authority independent of Federal law to recover for NRDs resulting from coastal oil spills. The Texas Natural Resource Trustee program is established under 31 TAC 20.1-20.4, 20.10, the *Oil Spill Prevention and Response Act*, and Texas Natural Resources Code 40.107(c)(4). TNRCC, the Texas General Land Office, and the Texas Parks and Wildlife Department are designated as natural resource trustee agencies. Since commencement of the program in 1990, there have been nine restoration projects under CERCLA, three of which have been completed. Four projects comprise a total of $1.73M, and the other five are RP lead projects and no dollar figure is specified. The State determines the measure of damages by assessing the cost to restore, assess, and

mitigate future injury, as well as diminution in future value. Per statute, any reliable and valid incident-specific method may be used to determine the value of claims; in most cases, Habitat Equivalency Analysis is used. Monies recovered are used for restoration, replacement, and protection of natural resources. The State requires public participation in the assessment and restoration processes.

Property Transfer

Under Texas Property Code §5.008, sellers of residential property are required to give buyers a written notice disclosing the presence of hazardous or toxic wastes. However, TNRCC does not use this authority in administration of the State superfund program. Model deed certification language is included in the State's Risk Reduction Rules for persons to include as a notice within a property's deed records to indicate whether the future use of that property is suitable for residential, commercial, or industrial land use.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Texas has a voluntary cleanup program, established in 1995 by statute and regulation (30 TAC 333). All types of commercial and industrial properties, ranging from dry cleaning sites to large petrochemical facilities, are eligible to participate provided that they are not subject to commission permit or order. Any person may apply to enter the program. Under the VCP, all non-responsible parties, including owners and lenders, are released from liability for contamination occurring prior to the date of issuance of the completion certificate. Applicants pay a user fee of $1K and are billed $74 per hour for TNRCC oversight costs.

Brownfield sites may also be remediated on an ad hoc basis through the voluntary cleanup program. No formal criteria are in place for participation; sites owned by local government and local government interests are selected from EPA Brownfields Initiative pilot cities. To date, five sites have been identified, with four sites currently in the cleanup stage. The site not yet being cleaned up has a commitment for redevelopment. In addition to the voluntary cleanup program, brownfields are addressed through local governments and interested party education, technical review, State property tax abatements, and letters for Federal income tax expensing of remediation costs.

Region 7

Iowa
Kansas
Missouri
Nebraska

IOWA

SITES

NPL Sites		State Sites	
Final:	20	Known and Suspected:	400
Proposed:	1	Identified as Needing Attention:	200
Deleted:	4	On Inventory or Priority List:	72

STATUTORY AUTHORITIES

The *Environmental Quality Act* (EQA), Iowa Code Ch. 381-397 and 455B 423-431 (1972, as amended 1979, 1981, 1984, 1987, and 1991), establishes the Hazardous Waste Remedial Fund, provides cleanup and enforcement authorities for abandoned sites, establishes a priority list, allows for citizen suits and water replacement, provides for site registry, and restricts property transfers. Significant amendments concerning cleanup authority for abandoned and uncontrolled sites were enacted in 1979, 1981, and 1987. A 1984 amendment established the Hazardous Waste Remedial Fund.

The *Groundwater Protection Act*, Iowa Code Ch. 455E (1987), establishes procedures and criteria for cleanup of groundwater.

The *Groundwater Hazard Documentation Law*, Iowa Code Ch. 558.69 (1987, as amended 1988), establishes disclosure requirements for real property transfers.

The *Land Recycling and Environmental Remediation Standards Act*, Iowa Code Ch. 455H (1997), establishes a voluntary cleanup program (VCP) for the State.

PROGRAM ORGANIZATION AND FUNDING

The Solid Waste Section of the Iowa Department of Natural Resources is responsible for program administration. There are currently 11.5 full time employees. Legal support is provided by 0.5 FTE attorneys in the DNR's Compliance and Enforcement Bureau. Forty-three percent (43%) of funds for staff and administration are from Federal grants, 5% are from the State cleanup fund, and 26% are from a separate solid waste account, and 26% from RP for oversight cost.

CLEANUP ACTIVITIES

At non-NPL sites, 30 cleanup actions are underway. There were no cleanup actions completed at non-NPL sites in FY97. No voluntary cleanup activities have been started since the legislation was enacted.

CLEANUP FUNDING

The Hazardous Waste Remedial (HWR) Fund had a balance of $1M as of the end of FY97. Approximately $348K were added to the fund in FY97 primarily from fees on the transportation, treatment and disposal of hazardous waste. Approximately $650K were paid out during FY97, although about $300K of this were transferred for use in the State's air quality permitting program.

The HWR Fund may be used for administration, site investigation, emergency response, removals, remedial actions, operations and maintenance, CERCLA match, studies and design, and grants to local governments. Seventy-five percent of the Fund must be used for remediation at non-CERCLA sites and for CERCLA cost share.

CLEANUP POLICIES AND CRITERIA

Cleanup decisions are made on a site-by-site basis. State regulations do provide cleanup goals for groundwater and surface water. State cleanups may use promulgated Groundwater Action Levels based on lifetime health advisories, negligible risk levels, and MCLs (Admin. Code §567.133), but

these are not usually used for hazardous site cleanups. Risk assessment is used to determine applicable cleanup levels if groundwater contamination exceeds Action Levels. There is no established risk range set out in State policy.

Under the voluntary program detailed regulations are being developed to set out cleanup levels. Such cleanups will use risk assessment, background levels, groundwater standards, and soil standards per State law.

PUBLIC PARTICIPATION

The voluntary cleanup law (455H) provides for public notice. But provisions for public comment, hearings, and meetings are handled as a matter of policy under both the enforcement and voluntary programs. Document availability requirements are established by a general statute.

ENFORCEMENT

Liability

Liability is strict and retroactive. The EQA preserves any legal or equitable rights, remedies or defenses. The State maintains that this preserves common law rules of joint and several liability. The State must try to negotiate a settlement with RPs prior to using Fund monies for cleanup. The State can issue orders and seek injunctions against RPs to clean up sites. The State can collect up to $1K per day for failure to notify, up to $10K per day for water or air violations, and treble damages for willful failure to clean up.

Natural Resource Damages

Iowa does have authority independent of Federal law to recover for NRDs. The EQA provides that a person having control over a hazardous substance is strictly liable for reasonable damages to natural resources, including costs of assessment. No NRDs program exists within the agency.

Property Transfer

Under the *Groundwater Hazard Documentation Law*, a property owner must disclose on the deed or with the recorder of deeds that the site was or is being used for the disposal of hazardous substances, and a seller must disclose the presence of hazardous substances on a site before property transfer.

The State does not have an accessible database of sites, but is developing this capability.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Iowa recently enacted VCP legislation, but the rules are not complete. VCPs in the State will be independent of the State's cleanup program. For funding, the State will charge fees for oversight. There is an initial $750 application fee, and reimbursement of actual State oversight costs is capped at $7.5K. Iowa does not have a brownfields program.

KANSAS

SITES

NPL Sites		State Sites	
Final:	15	Known and Suspected:	720
Proposed:	1	Identified as Needing Attention:	484
Deleted:	5	On Inventory or Priority List:	556

STATUTORY AUTHORITIES

The *Environmental Response Act (ERA)*, K.S.A. §65-3453 *et seq.* (1988), amends Kansas' hazardous waste law, enacted in 1981 and amended 1984 and 1985. The Act establishes the Environmental Response Fund (ERF) and provides enforcement authorities for cleaning up hazardous substances as well as hazardous wastes.

The *Kansas Water Plan*, K.S.A. §§82a-927 through 82A-953, established the State Water Plan/Contamination Remediation Account, and provides for cleanup authorities.

The *Water Pollution Control Statutes*, K.S.A. §§65-171 *et seq.*, provides enforcement authority for cleanup of contaminated soils.

The *Kansas Drycleaner Environmental Response Act*, K.S.A. §§65-34-141 through 65-34-155 (1995), establishes the Drycleaning Trust Fund, and provides for cleanup authorities and a priority list.

The *Voluntary Cleanup and Property Redevelopment Act*, K.S.A. §§65-34 -161 through 65-34-174 (1996), established a cleanup and property redevelopment program for low and medium risk contaminated sites.

PROGRAM ORGANIZATION AND FUNDING

The Kansas Department of Health and Environment's (DHE's) Bureau of Environmental Remediation (BER) is responsible for, among other things, Federal and State Superfund cleanups, LUST, emergency response, above ground storage tanks, mine land reclamation, landfill remediation, and the voluntary cleanup program. The Remediation and Restoration Sections, which deal with hazardous substance site cleanups, are staffed by 46 FTEs. Legal support is provided by the Office of Legal Services of the DHE; three FTE attorneys work on the program. Funding for staff and program administration comes from a variety of sources including the State general fund (5%), Federal grants (20%), State Water Plan (60%), and PRP reimbursements (15%).

CLEANUP ACTIVITIES

The State's contaminated sites list, updated biennially, includes all confirmed contamination sites. Currently, cleanup actions are underway at approximately 587 non-NPL sites. In the FY97, nine cleanup actions were completed at non-NPL sites. One hundred and eleven cleanup actions at non-NPL sites have been completed since the start of the State program.

CLEANUP FUNDING

The State Environmental Response Fund has a balance of $0 at the end of each fiscal year. In FY97 it received revenues of $616K. A total of $516K was paid out of the fund to support activities at non-NPL sites. The fund is used to operate the State's program. Cost recoveries are the significant source of monies for the fund. The statute authorizes penalties and transfers as sources of revenue for this fund, however, these sources were not realized.

The State Water Plan-Contamination Remediation Account is the primary cleanup account. The Account had a balance of $0 at the of FY97. A total of $1.7M was added to the Account during the fiscal year. Expenditures during the year, all to non-NPL sites, comprised approximately $1M.

Taxes on water, pesticides, and fertilizer comprise the major source of revenue for the State Water Plan, which may be used for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, operations and maintenance, and program administration.

The Drycleaning Trust Fund was established in 1995. In FY97, Fund revenues and Fund expenditures both equaled $960K. As a result, the Fund's unencumbered balance at the end of FY97 was $0. The Fund may be used for studies and design, site investigation, removals, emergency response, remedial actions, and program administration. Funds derive primarily from taxes and drycleaning solvents and a sales tax surcharge.

CLEANUP POLICIES AND CRITERIA

BER has established interim cleanup target concentrations for the cleanup of contaminated groundwater and soil. The State also uses risk assessment, water quality criteria, MCLs/MCLGs, and background levels. Risk goals ranging from 10^{-4} to 10^{-6} are used. The Voluntary Program specifies the use of risk assessment. Land use-based cleanups are allowed under the cleanup program and specifically provided for in the voluntary program.

PUBLIC PARTICIPATION

The State generally follows the National Contingency Plan public participation procedures, which require public meetings and formal notice. After public participation, meetings for on-site investigations and cleanups are optional. The State has established guidelines on community participation.

ENFORCEMENT

Liability

The ERA authorizes strict and retroactive liability and issuance of orders and injunctions against PRPs. Civil penalties are not available for violation of an ERA order. Penalties are available under hazardous waste, nuisance, or water laws, and the State may use these authorities for enforcement (including cleanup of groundwater and soil). These penalties include $10K to $25K for hazardous waste, $10K for water pollution, and $5K for solid waste violations. The law does not authorize punitive damages.

Natural Resource Damages

Kansas has authority independent of Federal law to recover NRDs under K.S.A. 65-171u. The State commenced seeking NRDs in the mid-1980s. Approximately 15 NRD claims have resulted in recoveries of a total of $150K. Four claims are currently pending for a total amount less than $10K. Approximately 15 restorations have been completed. There are currently no natural resource restorations underway.

Property Transfer

No property transfer provisions have been established; but the State does maintain a database of sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Kansas established the *Voluntary Cleanup and Property Redevelopment Act* in 1996. With the exception of RCRA, NPL, and enforcement sites, all low and medium risk contaminated sites are eligible for the program. Incentives for participation are "No Further Action" letters, and limited oversight is required until cleanup is completed. State participation is funded by reimbursement, and there is a $200 nonrefundable application fee. Reimbursements are drawn by the State against an initial deposit by the applicant. Category one sites (contamination limited to onsite soils) must

deposit $1K; category two sites (contamination is onsite but has affected groundwater and soils) must deposit $2.5K; category three sites (contaminated groundwater has migrated offsite) must deposit $5K. Kansas does not have brownfields authority; however, Kansas does have funding to provide brownfield assessments and technical assistance.

MISSOURI

SITES

NPL Sites		State Sites	
Final:	23	Known and Suspected:	1475
Proposed:	0	Identified as Needing Attention:	225
Deleted:	1	On Inventory or Priority List:	57

STATUTORY AUTHORITIES

The *Missouri Hazardous Waste Management Law*, Mo. Rev. Stat. §§260.350 - 260.575 (1977, as amended in 1980, 1983, 1985, 1987, 1988, and 1993), authorizes the Hazardous Waste Remedial Fund and provides for a priority list, strict liability, site access, administrative order authority, penalties, and punitive damages. The *Voluntary Cleanup Law* (passed in 1993 as S.B. 80), Mo. Rev. Stat. §§260.565-575, provides authority for a Voluntary Cleanup Program.

PROGRAM ORGANIZATION AND FUNDING

The cleanup program in Missouri is administered by the Department of Natural Resources, Division of Environmental Quality, Hazardous Waste Program with 51 FTE staff. Other support agencies include the Division of Geology and Land Survey and the Missouri Department of Health. The Attorney General's office provides legal support with two FTEs. Funding for staff and administration comes 90% from Federal grants and 10% from the State's cleanup fund.

CLEANUP ACTIVITIES

Sites are listed on the State's priority list if they are abandoned or uncontrolled and hazardous waste has been illegally disposed of, or where hazardous waste was disposed of prior to regulations promulgated under the State's Hazardous Waste Law.

There are 103 cleanup actions underway at non-NPL sites. One hundred and forty-one (141) cleanup actions have been completed at non-NPL sites since the start of the program, including 17 during FY97. Of these actions, there are 50 cleanup activities in progress under the voluntary program. Twelve (12) sites were completed during FY97 under the voluntary program, and 30 have been completed since the voluntary program's inception.

CLEANUP FUNDING

The Hazardous Waste Remedial Fund has a balance of $5.2M, all of which is obligated, (encumbrances and obligations are currently $6.5M, spread over the next several years). During FY97, fund revenues were $3.1M and expenditures were $2.7M. Funds are primarily provided by taxes on hazardous waste generators based on tonnage and the method of handling waste. There is a $1.5M per year cap on this tax. Fees on landfilled waste also contribute to the Fund. Cost recovery is a significant source of revenue as well. Penalties, fines, and interest are also contributors to the Fund. The Fund may be used for site investigation, emergency response, removals, studies and design, remedial actions, CERCLA match, operations and maintenance, program administration, health studies, and acquisition of property.

Missouri also maintains a portion of its separate Hazardous Waste Fund to hold and disburse fees and funds deposited under the Voluntary Cleanup Program. The Fund contains up to several hundred thousand dollars of these funds at any one time, but funds are dedicated to oversight at particular sites.

CLEANUP POLICIES AND CRITERIA

The Department sets cleanup levels on a site-by-site basis. State water quality criteria, MCLs/MCLGs, risk assessment, and soil standards may be used to set cleanup levels. Cleanups may take future land use into account. The State Health Department provides site-specific "any-use soil level" recommendations. The State is currently developing Cleanup Action Levels in Missouri (CALM), which has three tiers – residential, commercial, and industrial. Risk goals are usually set at 10^{-5}.

PUBLIC PARTICIPATION

Public notice, comment, and document availability are required by statute (Chapter 610). In addition, the *Missouri Hazardous Waste Management Law* provides for appeals through the Hazardous Waste Management Commission, which may convene a public hearing if a resolution of appeals cannot be negotiated. Public meetings, availability sessions, fact sheets, and news releases are commonly used to provide information to the public, and to solicit input from the public. Public participation under the voluntary program is established by policy, rather than by statute.

ENFORCEMENT

Liability

Strict and retroactive liability applies. Treble damages are available to the State. Violations of property transfer or change of use laws may be subject to a penalty of $1K per day.

Natural Resource Damages

Natural resource damages can be pursued under the water pollution law (Rev. Stat. Mo. 644.056). Missouri's NRDs program began in the mid-1980's and has two NRD claims pending under CERCLA.

Property Transfer

Property transfer provisions exist under Missouri's *Hazardous Waste Management Law* (Section 260.465 RSM). The law requires disclosure on the deed that a site has been used for the disposal of hazardous substances. Sellers must disclose the presence of hazardous substances on the site before transfer, and changes of property use must be approved by the State. The State must maintain a database of sites.

VOLUNTARY AND BROWNFIELDS PROGRAM

The Voluntary Cleanup Program, established by Mo. Rev. Stat. 260.565 in 1993 and effective in 1994, is administered by a separate unit. Participation is open to any site *except* those with imminent and substantial threats to public health or the environment, sites where a PA/SI has been performed and NPL listing is pending, RCRA facilities, or sites where enforcement action is warranted. The State Voluntary Cleanup Program (VCP) uses the same standards as the State law. RCRA enforcement, CERCLA enforcement, and NPL-caliber sites are not eligible for the program. Non-NPL and non-RCRA sites are eligible for the program. Participants pay the State's actual costs and overhead (actual x 2.5). The application fee is $200 and a $5K initial deposit is made toward the costs. The incentive for participation in the program is that the Department issues a "No Further Action" letter upon completion of a voluntary cleanup. The letter addresses only the contaminants identified and cleaned up, providing no additional liability protection for other substances.

The Brownfields Program is also established by statute, Mo. Rev. Stat. §§447l.700 to 447.718; it began in August 1995. It is administered by the economic development agency, which consults with DNR under the voluntary cleanup program. Sites must have been abandoned for three years and be owned by a governmental entity in order to participate.

Cleanup standards for brownfields sites are identical to those for the VCP. Presently, cleanup is underway at six of the eight brownfields sites. All eight sites have commitments for reuse or redevelopment. The State provides grants, loans, loan guarantees, and tax credits as incentives for participation in brownfields.

NEBRASKA

SITES

NPL Sites		State Sites	
Final:	10	Known and Suspected:	400
Proposed:	0	Identified as Needing Attention:	200
Deleted:	0	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

Nebraska does not have a formal enforcement or fund program for cleaning up non-NPL contaminated sites. The *Environmental Protection Act* (Neb. Rev. Stat. §81-1501 through §81-1533), does not cover hazardous substance sites specifically. However, Nebraska uses NCRR Vol. 8 Title 118 of its regulations, promulgated under §81-1505, to prohibit pollution of groundwater and to set standards for cleanups.

The *Remedial Action Plan Monitoring Act* (§§81-15,181 to 81-15,188), established Nebraska's voluntary cleanup program effective January 1, 1995.

PROGRAM ORGANIZATION AND FUNDING

The Superfund Section of the Air and Waste Management Division of the Department of Environmental Quality (DEQ) has 10.5 FTE staff. Legal support is provided by one-half FTE DEQ attorney. The majority of the program's funding comes from Federal grants (95%), the rest being supplied by State general funds (5%).

CLEANUP ACTIVITIES

The State has no priority list of sites. There have been no cleanup activities at non-NPL sites except under the voluntary program. Three voluntary cleanup actions are underway, while one was completed in FY96. Of the sites in Nebraska potentially needing attention, approximately 10 are municipal landfills, 100 are manufacturing sites, 10 are industrial landfills, and 80 are agricultural-related sites.

CLEANUP FUNDING

Nebraska has no State cleanup fund.

CLEANUP POLICIES AND CRITERIA

Cleanup standards are assessed on a site-by-site basis under the voluntary program. Title 118 sets standards for groundwater cleanup, which are applied where appropriate, and water quality criteria, which are also applied where appropriate. The State generally uses risk goals of 10^{-4} - 10^{-6}, depending on future land use.

PUBLIC PARTICIPATION

Title 118, applicable to groundwater cleanups, requires PRPs to submit a Remedial Action proposal based on a "detailed site assessment." Public notice of the proposal is given by newspaper and radio, with copies available in public libraries. A 30-day comment period and any requested hearings run prior to final review. Hearings and meetings are also required by regulation. There are no separate public participation requirements specified in the State's voluntary cleanup statute.

ENFORCEMENT

Liability

Title 118 authorizes Nebraska to issue administrative orders and injunctions against PRPs causing groundwater pollution. The State may also seek judicial civil penalties. Citizen suits may be pursued against solid waste disposal violations in cities of 1st (largest) class. Strict liability applies for groundwater pollution only. There are no civil penalties or punitive damages.

Natural Resource Damages

Nebraska has no program.

Property Transfer

Nebraska has no property transfer provisions, however the State's residential property transfer law also requires disclosure of known environmental hazards prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Anyone is eligible to participate in Nebraska's voluntary cleanup program, established by statute in 1995. Participants will receive a letter from the State indicating that the site has been cleaned up to the State's satisfaction. The State's participation is funded by cost reimbursement by applicants. The State's fees include a $5K application fee and a $5K participation fee.

Nebraska does not have a brownfields program.

Region 8

Colorado
Montana
North Dakota
South Dakota
Utah
Wyoming

COLORADO

SITES

NPL Sites		State Sites	
Final:	17	Known and Suspected:	624
Proposed:	2	Identified as Needing Attention:	178
Deleted:	2	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

Colorado does not have a formal program for cleaning up non-NPL sites. However, the State works with responsible parties to encourage clean up and has a formal voluntary program, the *Voluntary Cleanup and Redevelopment Act*, Colo. Rev. Stat. §§25-16-301 *et seq.* (1995). The *Hazardous Waste Sites Act*, Colo. Rev. Stat. §§25-16-101 *et seq.* (1985, as amended 1988 and 1990), authorizes Colorado's participation in the Federal CERCLA program. It also establishes the Hazardous Substance Response Fund and the Natural Resource Damages Fund, which are used to fund the State's participation in the Federal program. State enforcement authority is derived from other environmental statutes, such as the *Water Quality Control Act*, Colo. Rev. Stat. §§25-8-101 *et seq.*, and the *Hazardous Waste Management Act*, Colo. Rev. Stat. §§25-15-101 *et seq.*

PROGRAM ORGANIZATION AND FUNDING

The Hazardous Materials and Waste Management Division within the Department of Public Health and Environment has 18.5 FTE staff working in the State superfund Program, six FTE staff who are working on non-NPL sites. Approximately 10 attorneys from the Colorado Attorney General's office provide legal support to the program. Funding for program staffing and administration comes from Federal grants (60%), from RP response cost reimbursement (30%), and from the State Hazardous Substance Response Fund (10%).

CLEANUP ACTIVITIES

The State does not typically manage cleanups at non-NPL sites. Although the State does not maintain a formal priorities list, Colorado works with EPA's CERCLIS list. There are 624 known or suspected non-NPL sites in Colorado, 178 of which have been identified as needing attention.

Cleanups are currently underway at 41 non-NPL sites. During FY97, four cleanups were completed, and six have been completed since the start of the program.

Colorado currently has 36 voluntary cleanups underway.

CLEANUP FUNDING

The Hazardous Substances Response Fund, with a balance of $11M as of the end of FY97, is available for CERCLA match, removals, operations and maintenance, and program administration. Significant sources of the Fund include cost recoveries and waste fees; a minor source is interest. During FY97, the State added $3.6M to the Fund. Obligations from the Fund totaled $16M at the end of FY97. All of the monies paid out in FY97, $1.2M, were spent on NPL sites.

The Natural Resource Damages Fund had a balance of $8M at the end of FY97. It is funded by NRDs settlements and interest, and may be used for natural resource restoration under CERCLA. There have been no expenditures from the fund.

CLEANUP POLICIES AND CRITERIA

Health-based cleanup levels are determined using water quality criteria, MCLs, background levels, ground water standards and soil standards, including hazardous waste remedial standards

promulgated as part of the RCRA program. These standards may be used in conjunction with risk assessments. The State uses risk levels of 10^{-4} to 10^{-6}.

An owner's stated land use is considered in determining cleanup levels for voluntary cleanups. Approval of the proposed remedy under the voluntary program is rescinded if the land use changes.

PUBLIC PARTICIPATION

Colorado has no formal public participation requirements.

ENFORCEMENT

Liability

The State cleanup fund statute contains no enforcement authorities. Colorado may use other statutes (*e.g., Water Quality Control Act, Hazardous Waste Management Act*) to collect civil penalties for violation of cleanup orders. The State has used its hazardous waste law at Federal facilities at Rocky Flats and Rocky Mountain Arsenal.

Natural Resource Damages

The State began seeking NRDs as a trustee under the Federal CERCLA program in 1983 and has recovered approximately $5.7M to date. The State Attorney General has filed seven NRD lawsuits, and five have been settled. The amount of the two pending claims has not been determined. The money from settlements is collected in the Natural Resource Damages Fund, and is appropriated annually by the General Assembly for the restoration, replacement, and protection of natural resources under the Federal program.

Property Transfer

Colorado regulations require an owner or operator of a hazardous waste disposal facility to record, within 60 days after closure, a statement notifying potential purchasers that the property was used to manage hazardous waste (6 Code of Colo. Regs. 1007-3 Section 264.119).

VOLUNTARY AND BROWNFIELDS PROGRAMS

The *Voluntary Cleanup and Redevelopment Act* of 1995 established a voluntary cleanup program under which all sites except UST, RCRA, NPL, and CWA sites are eligible for participation. Participants are eligible for no-further-action determinations from the State upon completion and approval of cleanup. The State's administrative costs are funded by a $2K per site fee.

Although Colorado has no official brownfields program or written policy, the State is working on three EPA pilot brownfield sites.

MONTANA

SITES

NPL Sites		State Sites	
Final:	8	Known and Suspected:	N/A
Proposed:	1	Identified as Needing Attention:	187
Deleted:	0	On Inventory or Priority List:	187

STATUTORY AUTHORITIES

The *Comprehensive Environmental Cleanup and Responsibility Act* (CECRA), Mont. Code Ann. §§75-10-701 through 729 (1989, as amended 1991, 1993, 1995 and 1997), establishes the Environmental Quality Protection Fund and contains priority list, enforcement authority, NRDs, citizen suit and property transfer provisions.

State Participation in CERCLA, Mont. Code Ann. §§75-10-601 through 627 (1983, as amended 1987, 1993, and 1995), establishes the Hazardous Waste/CERCLA Special Revenue Account and also contains priority list, enforcement authority, NRDs, citizen suit and property transfer provisions.

The *Voluntary Cleanup and Redevelopment Act* (VCRA), Mont. Code Ann. §§75-10-730 through 738 (1995, as amended 1997) authorizes Montana's voluntary cleanup program and contains property transfer provisions.

In 1997, the State passed the *Controlled Allocation of Liability Act* (CALA), Mont. Code Ann. §§75-10-742 through 752. CALA establishes the orphan share State special revenue account to help pay cleanup costs at non-NPL sites.

Montana also has statutory cleanup authority under the *Water Quality Act*, which provides for citizen suits and enforcement authority.

PROGRAM ORGANIZATION AND FUNDING

The Site Response Section, Hazardous Waste Site Cleanup Bureau of the Environmental Remediation Division of the Department of Environmental Quality (MDEQ) has 22 FTE staff on Federal and State Superfund programs. Legal support is provided by four FTE attorneys from the DEQ Legal Unit. Funding for program administration comes from the State cleanup fund (31%), Federal grants (65%), and the special projects/direct PRP fund (4%).

CLEANUP ACTIVITIES

Cleanup activities are currently underway at 12 non-NPL sites. During FY97, cleanup activities were completed at six sites. Cleanup activities are ongoing or have been completed at 43 sites since the start of the cleanup program. In addition, there are currently 94 interim sites where emergency removals have occurred but no further remedial actions have been completed.

Since VCRA was passed in 1995, 13 voluntary cleanup plans have been approved. Cleanup activities have been completed at 12 of these 13 sites.

Montana maintains an inventory of sites that is based on known or threatened releases that pose an unacceptable risk to human health or the environment. The inventory list consists of 10% landfills and dumps, 3% drum and barrel sites, 11% refineries, 11% mining sites, 12% railroad sites, 13% wood treatment sites, and 40% "other" types of sites.

CLEANUP FUNDING

The Environmental Quality Protection Fund (EQPF) is available for site investigation, CERCLA match, studies and design, removals, emergency response, remedial actions, operations and maintenance, program administration, and natural resource restoration. Significant sources of the

Fund are cost recovery and interest. The Fund balance at the end of FY97 was $742.5K. Additions to the Fund totaled $779.1K. A total of $664.7K was paid out, all at non-NPL sites. In addition, a total of $5.3K was obligated to non-NPL sites.

The Hazardous Waste/CERCLA Special Revenue Account is available for CERCLA match, removals, site investigation, studies and design, remedial actions, emergency response, operations and maintenance, grants to local governments, and program administration. A significant source of funds for the account is the interest earned annually by the Resource Indemnity Trust Fund. Many programs are funded out of this account that do not pertain to cleanups or other State superfund activities, so information on the Fund balance, monies obligated or encumbered, and additions to the Fund was not available. The total amount paid from the Fund during FY97 for cleanup activities was $16.95K, all of which was spent at NPL sites.

The Federal Agreements Account is funded through cooperative agreements and is available for site investigation, studies and design, operations and maintenance, removals, emergency response, grants to local governments, remedial actions, and program administration. The account had a balance of $28.21K at the end of FY97. Additions to the Account during the year totaled $1.19M. Almost the entire amount was spent at NPL sites.

The final fund available for cleanups is the Direct PRP Fund. Money in the account comes from private funds, and may be used for site investigation, emergency response, studies and design, removals, remedial actions, operations and maintenance and program administration. The Fund balance at the end of the fiscal year was approximately $13.8M. Funds obligated or encumbered totaled $37K, with $21.2K obligated to NPL sites and $15.9K obligated to non-NPL sites. Approximately $20.4M were added to the Fund during FY97 and $6.6M were paid out. A total of $6.5M was spent at NPL sites, and a total of $139.8K was spent at non-NPL sites.

CLEANUP POLICIES AND CRITERIA

The State uses site-specific risk assessment in conjunction with water quality standards and soil standards (based on Federal soil screening levels for screening purposes). The State also considers background levels, MCLs/MCLGs, and ground water standards. Numerical total risk goals are 10^{-5} for water quality, 10^{-6} for screening soils, and 10^{-5} for soils that have undergone a thorough, site-specific risk assessment. Cleanups under CECRA must demonstrate acceptable mitigation of risk and be protective of the health, safety, and welfare of the public and the environment. The statute also requires that the remedy be effective, reliable, cost-effective, and technically feasible.

Montana also considers land use in determining cleanup standards. Current zoning, local ordinances, and past and current uses are factors in determining future land use. Deed restrictions and stipulations in "No Further Action" letters are used to maintain specified land uses.

PUBLIC PARTICIPATION

CECRA requires public notice and comment for remedial actions, administrative orders, and consent decrees. CECRA also requires notice to local governing bodies and city commissioners and, at their request, a public meeting must be held. The *Voluntary Cleanup and Redevelopment Act* provides for notice, comment, and public meetings on voluntary cleanup plans. The MDEQ typically allows for more participation than is required by CECRA.

ENFORCEMENT

Liability

Under CECRA, the State may impose strict, joint and several, and retroactive liability. Amendments to CECRA in 1995 provide for a two-year pilot study of the use of proportional liability. Amendments to CERCA in 1997 provide for an optional liability allocation process that allows for reimbursement of orphan shares from the orphan share State revenue special account.

MDEQ is required to make a good-faith effort to have RPs pay for cleanup activities before expending State cleanup funds. The State may issue a unilateral order, negotiate a consent order, institute a civil action, or clean up a site using State funds. The State may impose administrative penalties of $1K per day and civil penalties of up to $10K per day per violation. The State may also collect double punitive damages plus costs from RPs.

Natural Resource Damages

Montana's NRDs program is authorized in §75-10-715 of Mont. Code Annotated. The State began seeking NRDs in 1983 when the State sued the Atlantic Richfield Company (ARCO) for NRDs resulting from ARCO's mining and mineral processing activities at four NPL sites in the Upper Clark Fork River Basin. The $763M claim was brought under both State and Federal law and is still pending.

Determination and measurement of damages in NRD claims may take into account the cost of restoration, interim lost use, and nonuse value. The value of some claims may also be based on contingent valuation or the replacement value of the resources. NRD funds recovered by the State are used for the restoration and replacement of natural resources. Public participation is not required in the NRD assessment process.

Property Transfer

Montana has a publicly available database with the locations and descriptions of hazardous substance sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Since May 1, 1995, Montana has had a voluntary cleanup program established by the *Voluntary Cleanup and Redevelopment Act*, §§75-10-730 through –738, Mont. Code Annotated. Any person or entity is eligible to participate in the voluntary cleanup program, and all non-NPL sites are eligible, although the State is given discretion to reject applications. The State approves a voluntary cleanup plan and supervises a public comment process. The participant has five years to execute the plan and cannot deviate from the agreed course of action. The participant must reimburse the State for all administrative costs. Cost recovery is based on actual cost; there is no standard fee. Incentives for participation in the program include enforcement stays and "No Further Action" letters.

Montana does not have a separate brownfields program.

NORTH DAKOTA

SITES

NPL Sites		State Sites	
Final:	2	Known and Suspected:	N/A
Proposed:	0	Identified as Needing Attention:	N/A
Deleted:	2	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

North Dakota does not have a formal program for cleaning up non-NPL contaminated sites. The *Hazardous Waste Management Act* (HWMA), N.D. Cent. Code §§23-20.3-01 to -10 (1981, as amended 1983, 1987, 1991, 1994), provides enforcement authority that may be used in conjunction with cleanups.

The *Water Pollution Control Law* (WPCL) N.D. Cent. Code §61-28-01 *et seq.* (1967), also provides enforcement authority that may be used in State cleanups.

PROGRAM ORGANIZATION AND FUNDING

The Division of Waste Management in the Environmental Health Section of the Department of Health administers hazardous substance cleanups. Within this Division, five FTE staff work on superfund cleanups, but no single employee works solely on superfund issues, and only .5 FTE work on non-NPL sites. In addition, one FTE attorney in the Attorney General's office provides legal support to the Department for all environmental programs. EPA grants (75%) and State general funds (25%) provide funding for program administration.

CLEANUP ACTIVITIES

Cleanups at 13 non-NPL sites are currently underway in North Dakota. Cleanup activities were completed at 12 sites during FY97.

North Dakota does not maintain a site cleanup priority list.

CLEANUP FUNDING

The Environmental Quality Restoration Fund provides funds for site investigations, studies and design, removals, emergency response, and remedial actions. At the end of FY97, the Fund balance was $160K. Major sources of funds include cost recovery and interest, penalties are a minor source of funds.

CLEANUP POLICIES AND CRITERIA

The State employs water quality criteria, background levels, groundwater standards, MCLs, and soil standards in conjunction with site-specific risk assessments to determine cleanup levels.

Land use is considered in determining cleanup levels. Assumptions about future land use are based on historical use, zoning, and location of sites. North Dakota uses deed restrictions and disclosure of historical information to ensure the maintenance of specific land use.

PUBLIC PARTICIPATION

No statutory requirement for public participation exists, but the Division provides public notice and provides local officials with information about a site on an ad hoc basis.

ENFORCEMENT

Liability

The Attorney General's Office selects liability on a case by case basis. HWMA authorizes retroactive liability and a choice between joint and several and proportional liability. HWMA provides for civil penalties up to $25K per day per violation, and the WPCL provides for civil penalties up to $10K per day per violation.

Natural Resource Damages

The State does not have authority independent of Federal law to recover NRDs.

Property Transfer

The State has no property transfer requirements.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State does not have a voluntary cleanup or brownfields program.

SOUTH DAKOTA

SITES

NPL Sites		State Sites	
Final:	3	Known and Suspected:	1424
Proposed:	0	Identified as Needing Attention:	
Deleted:	1	On Inventory or Priority List:	

STATUTORY AUTHORITIES

The *Regulated Substance Discharge Law*, S.Dak. Codified Laws Ann. Chapter 34A-12 (1988, as amended 1989, and 1995), establishes the Regulated Substance Response Fund, which provides for a cleanup fund, strict liability, administrative order authority, civil injunctive relief, cost recovery and liens.

The *Hazardous Waste Management Act*, S.Dak. Codified Laws Ann. Chapter 34A-11 (1983, as amended in 1988, and 1995), establishes standards for treatment, storage and disposal of hazardous wastes, and provides for site access, civil and criminal penalties, and citizen suits.

The *Water Pollution Control Act*, S.Dak. Codified Laws Ann. Chapter 34A-2 (as amended July 1, 1995), prohibits the degradation of all ground and surface waters of the State, establishes standards for groundwater remediation, and imposes criminal and civil penalties for violations.

The *Environmental Protection Act*, S.Dak. Codified Laws Ann. Chapter 34A-10 (as amended July 1, 1995), allows responsible parties to enter into voluntary compliance and settlement for cleanups.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environment and Natural Resources (DENR) is the lead agency for State cleanups. The Groundwater Quality Program within the Division of Environmental Regulation has 2.5 FTE staff dedicated to cleanup activities and the Attorney General's Office provides legal support for the program with one FTE attorney. Federal grants provide 90% of funding for staff and administration while the State general fund provides 10%.

CLEANUP ACTIVITIES

Cleanups are currently underway at 241 sites, and cleanup activities were completed at 63 sites in FY97. Cleanup activities have been completed at 824 sites. Of sites needing attention in South Dakota, 12% are industrial landfills, 7% are agricultural, 4% are mixed products, and the remaining sites consist of petroleum and/or mixed products contamination.

South Dakota maintains an inventory that consists of all of its sites, including sites with reported releases and sites with removals or response activities underway.

CLEANUP FUNDING

The Regulated Substance Response Fund had a balance of $1.8M at the end of FY97. Additions in the amount of $200K were made to the Fund during the fiscal year. The major source of funds is penalties, and a minor source is accrued interest. The Fund may be used for emergency response, removals, site investigations, studies and design, remedial actions, natural resource restoration, and operations and maintenance activities.

CLEANUP POLICIES AND CRITERIA

The State employs groundwater standards, soils standards, and MCLs/MCLGs in conjunction with site-specific risk assessments to determine cleanup levels. The State uses a risk goal of 10^{-5}.

PUBLIC PARTICIPATION

State policy establishes provisions for public notice, public comment, and hearings/meetings. S. Dak. Codified Laws Ann. §1-40-31 provides for document disclosure for all DENR programs.

ENFORCEMENT

Liability

Strict and joint and several liability standards apply to State cleanups, as appropriate. State law allows for retroactive liability, and provides for civil penalties up to $10K per day per violation. South Dakota does not have any provisions for punitive damages.

Natural Resource Damages

The State has authority to recover NRDs under S. Dak. Codified Laws Ann. Chapters 34A-2-75, 34A-11-14, and 34A-10. No NRD claims have been filed under State law, but one Federal claim is currently pending.

Property Transfer

Under S. Dak. Codified Laws Ann. Chapter 43-4-42 through 43-4-44 inclusive, the State requires a seller to disclose the presence of hazardous substances on a property. South Dakota's residential property transfer law contains requirements for disclosure of environmental hazards prior to transfer of certain residential properties. The State also maintains a database of known or listed cleanup sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State does not have a voluntary or brownfields program, but assists local communities in obtaining Federal brownfields funding and will enter into voluntary cleanup settlements on a case by case basis under S. Dak. Codified Laws Ann. Chapter 34A-10-17.

UTAH

SITES

NPL Sites		State Sites	
Final:	12	Known and Suspected:	325
Proposed:	4	Identified as Needing Attention:	40
Deleted:	0	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

The *Hazardous Substances Mitigation Act*, Utah Code Ann. §19-6-301 *et seq.* (1991, as amended 1995), provides enforcement authority, establishes the Hazardous Substance Mitigation Fund (HSMF), and provides for a priority list and voluntary cleanups.

The *Voluntary Release Cleanup Act*, Utah Code Ann. §19-8-101 *et seq.* (1995), provides for voluntary cleanups and authorizes the State to grant waivers of liability.

PROGRAM ORGANIZATION AND FUNDING

The Superfund Branch of the Department of Environmental Quality (DEQ), Division of Environmental Response and Remediation has 34 staff members. Legal support is provided by three attorneys in the Division of Environmental Response and Remediation and three attorneys in the Utah Attorney General's Office, each of whom works part-time on superfund and other cleanup issues. Funding for program staffing and administration is provided by the State general fund (15%), Federal grants (84%), and voluntary cleanup program fees (1%).

CLEANUP ACTIVITIES

All of the cleanup activities underway in Utah are voluntary cleanups. Cleanup activities are currently underway at nine sites, and voluntary cleanup activities were completed at three sites in FY97. Voluntary cleanup activities have been completed at six sites since the inception of the program.

Of sites needing attention, 10 are municipal landfills, 10 are mining sites, 12 are manufacturing sites, and 8 sites are classified as "other."

Utah's priorities list of 11 sites consists only of sites that are on the NPL or meet the Federal HRS scoring criteria for the NPL.

CLEANUP FUNDING

The HSMF had a balance of $1.5M at the end of FY97. Monies obligated or encumbered totaled $14M. Of this amount, $10M were obligated to non-NPL sites and $4M to NPL sites. The Fund may be used for site investigation, studies and design, removals, emergency response, CERCLA match, natural resource restoration, and operations and maintenance. Significant sources of the Fund include appropriations and NRD settlements, while interest and voluntary private contributions constitute minor sources of funding. During FY97, the State added $400K to the Fund and spent $500K.

CLEANUP POLICIES AND CRITERIA

Cleanup standards are established based on risk. Regulatory standards such as MCLs/MCLGs, groundwater standards, and water quality standards are applied as appropriate. Risk goals are 10^{-4} to 10^{-6} for the proposed land use. Future land use is determined by an owner's intended use and local government zoning. If the land use changes, cleanup standards may become more stringent. A certificate of cleanup completion that specifies any land use restrictions is filed in the appropriate county recorder's office.

PUBLIC PARTICIPATION

Utah's hazardous substance cleanup program has no formal public participation requirements, but as a policy follows NCP guidelines, which provide for public notice and comment, public meetings, and document availability. The *Voluntary Release Cleanup Act* requires public participation in the voluntary cleanup process. Until rules are promulgated, however, the DEQ will continue to apply the NCP public participation requirements on an ad hoc basis in voluntary cleanups.

ENFORCEMENT

Liability

The State uses strict and proportional liability standards. The State may impose civil penalties of up to $10K per day per violation, but cannot collect punitive damages. The State only may impose liability under State law for releases that occurred after March 18, 1985.

Natural Resource Damages

Utah does not have authority independent of Federal law to recover NRDs. The State has obtained one CERCLA settlement for $37M. Of the settlement, $9M has been reserved for restoration of surface or groundwater resources, and the remaining $28M has been set aside for remediation. One CERCLA NRDs action is currently pending. The claim has not been quantified.

Property Transfer

Under the *Voluntary Release Cleanup Act*, Utah requires disclosures in the deeds of properties cleaned up under the voluntary program.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Utah's voluntary cleanup program was established under independent statutory authority in 1997 with the passage of the *Voluntary Release Cleanup Act*. Since 1991, the State had conducted a voluntary cleanup program for contaminated sites as part of the general State cleanup. NPL sites, RCRA corrective action sites, or sites with pending enforcement actions are not eligible to participate in the program. However, any responsible party at eligible sites may participate. Only participants in the program who are not RPs under the *Hazardous Substances Mitigation Act* may be eligible for a State-issued waiver of liability after a successful cleanup. The program is funded through a $2K application fee, which covers State review of the application and oversight of the project. The participant also pays any additional State oversight costs. The State does not have a brownfields program. However, redevelopment of industrial properties through the voluntary cleanup program is strongly encouraged.

WYOMING

SITES

NPL Sites		State Sites	
Final:	3	Known and Suspected:	>140
Proposed:	0	Identified as Needing Attention:	N/A
Deleted:	0	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

Wyoming does not have a formal program for cleaning up non-NPL contaminated sites. The *Environmental Quality Act*, Wyo. Stat. Ann. §§35-11-701 to –1506 (1973, as amended through 1996), provides rulemaking authority, enforcement authority, and contains citizen suit provisions. The Act authorizes the use of funds from the Trust and Agency Account Fund to address immediate public health and environmental emergencies and hazards.

PROGRAM ORGANIZATION AND FUNDING

The Solid and Hazardous Waste Division within the Department of Environmental Quality (DEQ) is primarily responsible for hazardous substance cleanup. Currently, eight FTE staff work on hazardous waste permitting, corrective action, enforcement and compliance issues. The Attorney General's office provides legal support with three FTE attorneys. Federal grants provide 75% of funding for the hazardous waste program while the State general fund provides 25%.

CLEANUP ACTIVITIES

Information on cleanup activities at non-NPL sites is not currently available, but the State is in the process of developing site inventory and corrective action summary databases. Wyoming does not maintain a priority list of its sites.

CLEANUP FUNDING

Although Wyoming does not have a designated cleanup fund, DEQ is authorized to use funds from the Trust and Agency Account Fund to remedy and abate immediate public health and environmental emergencies and hazards. Information about the financial status of this Fund was not available.

CLEANUP POLICIES AND CRITERIA

DEQ's Solid and Hazardous Waste Division establishes cleanup levels on a site-by-site basis. Cleanup levels for groundwater are background, Wyoming water quality standards, MCLs, or State drinking water equivalents (DWELs). For soils, the cleanup objectives are background levels, levels protective of ecological receptors, levels protective of human receptors under an unrestricted land use scenario (10^{-6} for carcinogens; hazard quotient of less than or equal to 1 for noncarcinogens), and levels protective of groundwater at the groundwater cleanup objectives (fate and transport).

The State assumes that property may be used for any purpose and, therefore, does not take land use into consideration.

PUBLIC PARTICIPATION

Wyoming follows Federal CERCLA regulations and policies on public participation. The hazardous waste program developed policy on enhanced public participation during the RCRA corrective action process. In addition, the State uses heightened public participation at significant sites. Citizens may comment on rulemaking, permitting, and corrective action decisions.

ENFORCEMENT

Liability

The State does not have specified liability standards. The State may impose civil penalties of up to $10K per day per violation. For willful and knowing violations, penalties of up to $25K per day per violation are available. The State does not impose punitive damages.

Natural Resource Damages

Wyoming does not have authority independent of Federal law to recover NRDs.

Property Transfer

Hazardous waste sites undergoing corrective actions must restrict use of the property until final cleanup objectives are attained.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Wyoming does not have a voluntary or brownfields cleanup program.

Region 9

Arizona
California
Hawaii
Nevada

ARIZONA

SITES

NPL Sites	
Final:	11
Proposed:	0
Deleted:	1

State Sites	
Known and Suspected:	900
Identified as Needing Attention:	75
On Inventory or Priority List:	30

STATUTORY AUTHORITIES

The *Environmental Quality Act*, Ariz. Rev. Stat. (ARS), Title 49, Ch.2, Section 281 to 298 (1986, as amended 1987, 1990, 1992, 1994, 1995, and substantially amended in 1997), establishes the Water Quality Assurance Revolving Fund (WQARF) and provides for strict and proportional liability, administrative orders, abatement and remedial actions, injunctive actions, water supply replacement, civil penalties, cost recovery, treble damages, and voluntary cleanups, and requires the Department of Environmental Quality to set risk-based remediation standards for residential and nonresidential use. The 1992 Amendments, ARS, Title 49, Ch. 290 §10, Ch. 291 §8 and Ch. 300 §5, identify sources of Fund monies, authorize uses of the Fund, set forth remedial action criteria, and provide additional enforcement authority. ARS, Title 49, Ch. 295 (1992) provides for environmental lien authority. The 1997 amendments provided for a new registry, replacing the former priority list, changed the liability standard to proportional, and provided detailed authority for voluntary cleanups.

The *Greenfields Pilot Program,* Ariz. Rev. Stat. (ARS), Title, 49, Section 153 to 157/1997, provides for voluntary cleanup under a new pilot program.

PROGRAM ORGANIZATION AND FUNDING

The Superfund Programs Section in the Waste Programs Division (WPD), Department of Environmental Quality (DEQ) administers the State's hazardous substance cleanup programs. The Voluntary Cleanup Program is administered by the WPD's Pollution Prevention and Division Support Section, Voluntary Sites Unit. Combined, these sections have 56 FTE staff of which 26 are funded under the WQARF cleanup program. Total authorized FTEs are 68. The Office of the Attorney General provides seven attorneys.

The Fund covers 40% of administrative costs, with Federal grants providing the remaining 60% of the funding.

CLEANUP ACTIVITIES

The registry is the new, reformulated WQARF list. All sites were re-evaluated per the 1997 law. The 30 registry sites are those that the ADEQ will work on directly. Cleanup actions are currently underway at 22 non-NPL sites with 44 sites completed since the start of the program and 11 completed in FY97. Of these, most are under the voluntary cleanup program, where cleanup actions are underway at 21 VCP sites. Sixteen sites have been completed since the start of the VCP in 1992; ten completed in FY97.

Of the sites needing attention, approximately five are municipal landfills, 20 are manufacturing sites, four are mining sites, and one is an industrial landfill.

CLEANUP FUNDING

The WQARF (1500 Account) had a balance of $432.8K at the end of the fiscal year. Additions totaled $1.7M during FY97. Expenditures, all for non-NPL sites, totaled $1.3M. The WQARF (4000 Account) for staff and administration had a balance of $309.5K, with additions of $3.4M and expenditures of $3.1M during FY97. The WQARF Emergency Response account had a balance of $71K, with additions of $210.5K and expenditures of $139.5K.

The 4000 Account is funded by fees, cost recoveries, and settlements; it also receives some civil penalties, interest, and user fees under the voluntary program. The 1500 Account is funded by appropriations, as is the emergency response account.

Expenditures from the 1500 Account are for site investigation, CERCLA match, studies and design, operations and maintenance, removals, remedial actions and loans (but not grants) to local governments. Expenditures from the 4000 Account are for staff and administration. Expenditures from the emergency response account are limited to nonregistry sites.

The entire WQARF is larger than the accounts described above and includes funding for other kinds of activities.

CLEANUP POLICIES AND CRITERIA

Remedial actions must assure the protection of public health and welfare and the environment, allow the maximum beneficial use of State waters, and be cost effective over the period of potential exposure to hazardous substances.

The State applies risk assessment (for soils), MCLs, and State water quality standards and aquifer quality standards where appropriate. Soil remediation standards may be site-specific (10^{-6} to 10^{-4} for carcinogens or Hazard Index of less than 1) or off-the-shelf (based on 10^{-6} for known carcinogens and 10^{-5} for others).

Land use based cleanups include recordation of a consent order in the deed records. For soil cleanups to less than residential standards, a voluntary environmental mitigation use restriction (VEMUR) is recorded after the cleanup (ARS §49-152, and Rule 18-7201).

PUBLIC PARTICIPATION

Both State cleanup and voluntary programs provide for public notice, comment, and hearings per ARS 49-289 and ARS 49- 282.05, respectively.

ENFORCEMENT

Liability

Liability is strict, proportional (since 1997), and retroactive. Civil penalties are $5K per day. Treble damages are authorized.

Natural Resource Damages

Although the State has no written policy, cleanup settlements signed by the Director (since July 1991) contain a clause reserving the right to claim or assess NRDs. No damages have been recovered and no claims are pending.

Property Transfer

Arizona Real Estate Department rules require an agent to disclose any material fact that may affect the value of a property. The Real Estate Department has a policy stating that environmental issues, such as actual or potential contamination, are material facts, and advises owners to disclose their existence. The ADEQ is required to maintain a database of contaminated sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State has a voluntary cleanup program, established in 1992 and expanded in 1997. There are four options for voluntary cleanup. These include the agency-wide program (ARS §49-104 (A) (17)), the new greenfields pilot program (ARS §§ 49-153 to 49-157), which has not yet been used, and two WQARF programs (ARS §49-282.05, §49-285 (B)). The WQARF programs account for most voluntary cleanups of hazardous substance sites. The chief distinction between them is that one of the WQARF programs may be entered into before commencing cleanup or during the cleanup,

while the other allows participation before, during or even after a volunteer has completed cleanup. Sites that are non-NPL and not State-lead WQARF sites are eligible. Expedited review and covenants not to sue are incentives for participation. The State's participation is funded by reimbursement of State expenses by the volunteer. Typical cleanups handled under the program have been $500 to $5K in cost, and as high as $10K.

The State has launched a program targeting up to 100 brownfields sites through the new greenfields pilot program, which was not yet effective in FY97.

CALIFORNIA

SITES

NPL Sites		State Sites	
Final:	94	Known and Suspected:	3247
Proposed:	4	Identified as Needing Attention:	420
Deleted:	4	On Inventory or Priority List:	188

STATUTORY AUTHORITIES

The *Hazardous Substance Account Act*, Cal. Health and Safety Code §§25300 *et seq.* (1981, as amended every year 1982 - 1984 and 1986 - 1995), which includes the *Hazardous Substance Cleanup Bond Act of 1984*, §§25385 - 25386.6, establishes the site mitigation program and provides for cleanup fund, enforcement authority, priority list, water replacement, and voluntary cleanup. Property transfer disclosure requirements and natural resource damage are included at §25359.7, and §25352 of the Cal. Health and Safety Code, respectively.

PROGRAM ORGANIZATION AND FUNDING

The Department of Toxic Substances Control (DTSC) Site Mitigation Program has 298.2 FTE staff, in four regional offices and headquarters who work on NPL and non-NPL sites. The Department's Office of Legal Counsel and Criminal Investigation has five attorneys assigned to the Site Mitigation Program, and the Attorney General's Office provides another seven attorneys. The Department also works with the State Water Resources Control Board and the Regional Water Quality Control Boards. The Regional Water Quality Control Boards also undertake their own cleanups in cases of groundwater contamination. Funding for Site Mitigation Program staff and administration comes 30% from Federal grants, and 70% comes from Hazardous Waste Control Account.

CLEANUP ACTIVITIES

The State maintains a list of the sites that are actively being worked on, according to risk priorities. At non-NPL sites, 188 are being cleaned up, 44 were completed in FY97, and 220 have been completed since the program inception. Of these totals, cleanup activities were completed under the voluntary program at 55 sites, including 13 in the last FY.

On a State database including all types of sites (not just hazardous substance sites), approximately 558 are landfills, 201 are recycling sites, and 6900 are other types of sites.

CLEANUP FUNDING

The Hazardous Waste Control Account (HWCA) had a balance of $11K at the end of FY97. Encumbrances for the fiscal year were $1.6M. Essentially this fund, which is supported primarily by waste fees, is spent down each year. In the future a dedicated tax will support this fund. The fund may be used for site investigation, studies and design, removal and remedial actions (prohibited until RPs are given notice and opportunity to clean up), emergency response, operations and maintenance, State CERCLA match, program administration, and enforcement against RPs.

The Chaptered Bond Fund had a balance of $2.4M at the end of FY97. In FY97, the Chaptered Bond Fund paid out $228K. This account is funded by bond issuance. This fund can be used for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, program administration, and operations and maintenance.

CLEANUP POLICIES AND CRITERIA

Site-specific cleanup levels are based on acceptable risks, future land use, and the NCP. The State sets risk levels at 10^{-4} to 10^{-7}, with 10^{-6} as a point of departure. Remedial action plans must be based upon, among other things, the effect of contamination on beneficial uses of resources, the effect of alternative remedial action measures on groundwater, site-specific characteristics, and cost effectiveness. The State has promulgated MCLs for many water contaminants and a number of other standards, including air toxics. The State also uses background levels. The DTSC Voluntary Cleanup Program (VCP) was established administratively. DTSC does not treat Voluntary Cleanup Program sites differently than other sites. There is a Voluntary Cleanup Program Policy in place.

PUBLIC PARTICIPATION

The Department must hold at least one public meeting before adopting a remedial action plan, and must review and consider public comments. Anyone affected by a removal or remedial action must be provided with the opportunity to participate in the Department's decision making process. The Department must develop, and make available to the public, a schedule of activities for each site. These policies apply to both State hazardous substances, and VCP sites.

ENFORCEMENT

Liability

The State has strict and proportional liability standards. DTSC generally proceeds under CERCLA to recover its costs. The State has civil or administrative penalty authority for up to $25K per day for violating an order/agreement, and criminal penalties up to $25K per day and/or imprisonment for up to one year. Treble punitive damages are available. There is a citizen suit provision under Proposition 65. An RP may seek judicial review of a final remedial action plan. An RP must be given notice and opportunity to assume cleanup responsibility, and fail to comply, in order for the State to undertake a cleanup or enforcement activity. Legislation allows cooperating RPs to sue noncooperating RPs for three times their share of cleanup costs. The cooperative RPs get 50% of the award and the Department gets 50% of the award.

Natural Resource Damages

California Health and Safety Code §25352 provides authority to recover NRDs. DTSC and the Department of Fish and Game have been designated as the State's Trustees for natural resources. DTSC frequently files claims under CERCLA and OPA as well as State law. The Department of Fish and Game restores damaged natural resources using reimbursable funding from RPs and the Department of Fish and Game's Pollution and Abatement Account. Natural resource damage activities include identifying and quantifying NRDs; identifying feasible restoration alternatives and their costs; calculating compensation; and coordinating with Federal and State co-trustees.

Property Transfer

California requires disclosures of contamination before the transfer of nonresidential property, and deed recordation. The State's residential property transfer law also requires disclosure of known environmental hazards prior to transfer of certain residential properties. The State also maintains a database of sites (CalSites).

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State has a Voluntary Cleanup Program that was administratively established in 1993. The VCP is operated under the same regulations as the State cleanup program. It is open to known or suspected soil/groundwater contaminated sites, but not Federal or State superfund sites and facilities

outside of DTSC jurisdiction. The program gives responsible parties more control over cleanup. The State's oversight costs are funded 100% by responsible parties.

Although there is no official Brownfields Program, the State reports that it targets brownfields through a variety of programs: VCP, Annual Workplan Sites, abatement of regional groundwater plumes, and contaminated aquifers (innocent landowners relieved of liability).

HAWAII

SITES

NPL Sites		State Sites	
Final:	4	Known and Suspected:	524
Proposed:	0	Identified as Needing Attention:	103
Deleted:	0	On Inventory or Priority List:	4

STATUTORY AUTHORITIES

The *Environmental Response Law*, Haw. Rev. Stats. §§128D-1 *et seq.* (1988, as amended 1991), establishes a fund for removals and remedial response actions and provides for strict, joint and several, and retroactive liability; administrative order and site access authority; civil and criminal penalties; reporting requirements; cost recovery; provision of alternative water supplies; NRDs; and property transfer. In 1997, the law was amended to establish a voluntary cleanup program (VCP), Haw. Rev. Stats. §128D-2 *et seq.*

PROGRAM ORGANIZATION AND FUNDING

The Hazard Evaluation and Emergency Response Office (HEER) in the Environmental Management Division of the Department of Health has 18 FTEs, who handle all aspects of response actions on NPL and non-NPL sites, and who administer the Voluntary Cleanup Program. One attorney from the Attorney General's Office works 50% on these HEER programs. HEER gets approximately 50% of its program and administrative funding from Federal grants, 12.5% from the State General Fund, and 37.5% from the State Fund.

CLEANUP ACTIVITIES

The State's priority list is limited to sites where a formal cleanup agreement has been signed. Other than emergency response, currently the State has no cleanup activities conducted by the HEER Office at non-NPL sites. In prior years some removals and voluntary actions have occurred at non-NPL sites, but the State does not have this historical information tracked in an accessible way. No cleanup at VCP sites has occurred to date, but one cleanup is underway at a brownfield site.

CLEANUP FUNDING

The State Environmental Response Revolving Fund had a balance of $0 for FY97. It was entirely expended in connection with the November 1996 hurricane. The Fund is being replenished to its prior $500K level funded by oil tax. This fund is used for site investigations, studies and design, removals, emergency response, revenues, CERCLA match, operations and maintenance, natural resource restoration, and program administration.

The VCP fund was established in 1997 with an EPA grant and has not expended any of the $150K starting balance. This fund supports administration of the program. The brownfields program was also established in 1997 with EPA funding and has not expended any of the $75K starting balance.

CLEANUP POLICIES AND CRITERIA

In 1995, the HEER Office adopted regulations establishing risk assessment and management criteria and cleanup policies. Water quality criteria, MCLs/MCLGs, and background levels are also used where appropriate. Standards for subsurface contamination are established by a policy statement. The State also has a modeling process and has established standards for petroleum constituents. The State uses risk goals ranging between 10^{-4} and 10^{-6}. The same cleanup standards are used for the voluntary cleanup program

PUBLIC PARTICIPATION

Public participation requirements are established in regulation (Chapter 11-451, the State Contingency Plan). The same requirements apply to the Voluntary Cleanup Program. The State determines what public participation activities are appropriate, then conducts or requires PRPs and/or VCPs to conduct the following activities: issuing press releases and fact sheets; making personal contacts with local officials, community residents, public interest groups, or other interested or affected parties, as appropriate; and preparation and implementation of a community relations plan. Where the State determines that public participation is in the public interest or significant concern has been expressed, the State publishes a notice of availability of the administrative record in a newspaper that is printed and issued at least twice weekly in the county affected by the response actions, and if appropriate, in a newspaper of general circulation in the State within 60 days of initiation of onsite removal activity. Public comments and hearings may be held.

ENFORCEMENT

Liability

Liability is strict, joint and several, retroactive, and includes liability for NRDs. Civil penalties are available for $10K per day for failure to report a release and at least $50K-100K per day per violation for failure to comply with an enforcement order. Punitive damages for failure to perform removal or remedial actions are treble. Cost recovery actions must be commenced within six years of completion of response actions.

Natural Resource Damages

Hawaii's *Environmental Response Law*, Chapter 128D-5(d), allows the State to recover NRDs and use the State funds for restoration, rehabilitation, replacement or acquisition of natural resources that were damaged or destroyed due to a release. There is a three year statute of limitations. The HEER Office under the Deputy Director of Environmental Health acts as trustee for NRDs. No money has been recovered since the start of the program in 1990.

Property Transfer

The types of property transfer provisions existing under State law are under the new voluntary cleanup program. They include: a requirement of disclosure on the deed or with the recorder of deeds that the site was or is contaminated with hazardous substances; requirement that the seller disclose the presence of hazardous substances on the site before transfer; requirement that the seller investigate the property to determine if hazardous substances exist on the site; and requirement of cleanup agreement before transfer. The State's residential property transfer law also requires disclosure of known environmental defects prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The State has a program for voluntary cleanups of contaminated sites. In 1997, the VCP was established by Statute and is currently in the development stages. The State's participation will be funded through an account that is established within the environmental revolving fund. This fund will require a $1K nonrefundable application fee and a deposit of up to $5K to initiate a site-specific account and reimburse the State for oversight costs. All sites are eligible except: NPL listed and proposed sites; enforcement sites under CERCLA; RCRA corrective action sites; and (as determined by the director) sites that are enforcement sites under State law or where a State response is underway, sites that pose an imminent and substantial threat, and sites affected by a significant public interest. Incentives to participate include a letter of completion and exemptions from liability for prospective purchaser upon completion (if cleanup attains risk goal of 10^{-6}). The letter of completion

is recorded on the property deed and its conditions run with the land; it is also sent to the county agency that issues building permits.

A brownfields policy has been developed as part of the VCP. Only one site has been identified as a brownfields pilot site, Kakaako Park. No cleanup is currently underway. Cleanup standards for brownfields are determined the same as all sites in the State.

NEVADA

SITES

NPL Sites		State Sites	
Final:	1	Known and Suspected:	129
Proposed:	0	Identified as Needing Attention:	129
Deleted:	0	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

Nev. Rev. Stat. §§459.400-459.600 (1981, as amended 1983, 1985, 1987, 1989, 1991), primarily covers operating facilities and spills. It gives authority for spill cleanup by the State or responsible parties. It also establishes the Hazardous Waste Management Fund (HWMF).

The *Water Pollution Control Law*, Nev. Rev. Stat., Chapter 445, provides for additional enforcement authorities.

PROGRAM ORGANIZATION AND FUNDING

The Bureau of Corrective Action, part of the Department of Conservation and Natural Resources' Division of Environmental Protection, oversees the State's superfund, RCRA corrective action, and UST programs. 4.5 FTEs in the Remediation Branch and three FTEs in the Superfund Branch are involved in remediations and superfund activities. The Attorney General's Office supplies two attorneys to the Division. Funding comes from the HWMF (85%) and Federal grants (15%).

CLEANUP ACTIVITIES

The State does not maintain a priority list, but has 129 nonpetroleum related open cases. The authorized RCRA regulatory program, and statutory authority under the *Water Pollution Control Law* are the primary mechanisms used to require and oversee cleanup activities. There are currently cleanup activities underway at 129 non-NPL sites. Since the start of the State's cleanup program, 520 cleanup actions have been completed at non-NPL sites. Ninety cleanup actions were completed at non-NPL sites during FY97.

CLEANUP FUNDING

The Hazardous Waste Management Fund had a balance of $1M at the end of the fiscal year. During FY97, approximately $300K were added to the Fund, and then paid out for non-NPL sites. Approximately $500K were obligated at the end of the fiscal year for use at non-NPL sites. Most of the revenue comes from waste volume fees. Cost recoveries and penalties are also minor sources of funding. The fund monies may be used for site investigation, studies and design, removals, emergency response, remedial actions, CERCLA match, operations and maintenance, natural resource restoration, and program administration.

CLEANUP POLICIES AND CRITERIA

Action levels for contaminated sites are set by regulation with respect to both soils (N.A.C. 445A. 2272) and groundwater (N.A.C. 445A. 22735). Water quality criteria, MCLs/MCLGs, and risk assessments are also used. The State uses risk goals of 10^{-4} to 10^{-6}. Cleanups are to residential standards unless otherwise specified; land use restrictions are typically reflected in notices recorded on the deed.

PUBLIC PARTICIPATION

State law and policy do not require public participation. However, the Corrective Action Bureau follows general NDEP public participation requirements, which address public notification,

public hearings, public records, advisory groups, appeal procedures, and input to regulatory and statutory development. In addition, the Bureau of Corrective Actions will conduct public outreach to educate the regulated community and the general public about its programs.

ENFORCEMENT

Liability

Liability is strict for those in possession of hazardous material involved in a spill. Liability is retroactive. Administrative order authority, including orders for information and site access, subpoena authority, injunctive action, criminal penalties, and cost recovery are available. Cost recovery is generally secured in consent agreements. Civil penalties of $25K per day per violation are available. Punitive damages are not authorized.

Natural Resource Damages

Nevada does not have a NRDs program.

Property Transfer

Nevada does not have property transfer provisions.

VOLUNTARY AND BROWNFIELDS PROGRAMS

The voluntary program is part of the standard cleanup program, and any party is eligible to participate. Civil penalties will not be assessed against PRPs who participate. State participation is funded by the HWMF.

The State is currently developing a brownfields program. It targets areas currently zoned for industrial use for cleanup.

Region 10

Alaska
Idaho
Oregon
Washington

ALASKA

SITES

NPL Sites		State Sites	
Final:	8	Known and Suspected:	1625
Proposed:	0	Identified as Needing Attention:	1206
Deleted:	1	On Inventory or Priority List:	1625

STATUTORY AUTHORITIES

The *Oil and Hazardous Substance Releases Law*, Alaska Stats. §§46.08.005 to .900 (1986, as amended 1989, 1990, 1991, 1994, 1995), authorizes a fund and provides for administrative and consent order authority, injunctive relief, civil and criminal penalties, cost recovery, and serves as the basis for the voluntary cleanup program.

The *Hazardous Substance Release Control Law,* Alaska Stats. §§46.09.010 to .900 (1986, as amended 1990, 1991, 1993, 1994), covers enforcement and other provisions.

The *Liability and Cost for Oil and Hazardous Substances Discharge Law,* Alaska Stats. §§46.03.822 *et seq.* (1972, as amended 1976, 1989, 1991, 1992), was used in response to the Exxon Valdez oil spill and provides for strict, joint and several liability.

The *Oil and Hazardous Substance Pollution Control Law*, Alaska Stats. §46.04 (1980, as amended 1982, 1986, 1989, 1990, 1991, 1992, 1993, 1994) provides for additional fund authorities.

PROGRAM ORGANIZATION AND FUNDING

The Department of Environmental Conservation, Spill Prevention and Response Division, Contaminated Sites Remediation Program is responsible for cleanup activities at historically contaminated sites. This section has 40 FTEs devoted to State and Federal Superfund activities. The Office of the Attorney General provides legal support with 2.5 FTE attorneys. Funding for staff and administration is provided by the Response Fund (58.5%) and Federal grants (41.5%).

Spill emergency response is handled by the Division's Preparedness and Emergency Response Program.

CLEANUP ACTIVITIES

The State's inventory includes all sites, including petroleum sites (about 80% of the total), and closed sites. Hazardous substance sites cannot be separately broken out. Currently, the State reports cleanup activities underway at 1206 non-NPL sites. Sixty-three remedial actions were completed at non-NPL sites in FY97. At non-NPL sites, 419 remedial actions have been completed since the start of the State's program. Most sites are handled voluntarily. However in 1996, the State established a more formal Minimal Oversight Program (MOP), which initially handles only petroleum sites but will be expanded to include hazardous substances. No hazardous substance sites have been cleaned up to date under the MOP.

CLEANUP FUNDING

Alaska's State cleanup fund is the Oil and Hazardous Waste Release Response Fund. This fund is composed of monies appropriated from a Surcharge Account that is funded by a $.05 per barrel tariff on crude oil. Monies appropriated to a Mitigation Account are further appropriated by the legislature to the Response Fund. Two accounts comprise the Response Fund: the Response Account, which had a balance of approximately $52M at the end of FY97, and the Prevention Account which had a balance of about $24M at the end of FY97.

The Response Account, which is to be maintained at a level of $50M receives funds from the oil surcharge only if it drops below that total. In FY97, it received additions of $79K in cost

recoveries, and disbursed $1M. $329K were obligated as of the end of the fiscal year. The Account is for emergency responses.

The Prevention Account receives funds from the oil surcharge, interest, and cost recoveries. In FY97 this Account received additions of $5M in interest, $4M in cost recoveries, and $12.9M in oil surcharge funds. It expended $19.8M, of which $5.3M was transferred to the UST fund and the State's general fund. Funds obligated as of the end of the fiscal year were $1.4M. Prevention Account money may be used for site investigation, studies and design, CERCLA match, operations and maintenance, removals, emergency response, remedial actions, program administration, and grants to local governments.

CLEANUP POLICIES AND CRITERIA

The State uses risk assessments, MCLs/MCLGs, water quality criteria, background levels, groundwater, and soil (petroleum) standards. State guidelines provide for risk levels of 10^{-5} for individual carcinogens, and cumulative risk of 10^{-4}. Proposed cleanup regulations are pending. These include deed restrictions and notices. The voluntary program will also follow this approach.

PUBLIC PARTICIPATION

The Department attempts to involve the public depending on the seriousness of the site and on public interest. Public notice, public comment, hearings and meetings, and document availability are provided on an ad hoc basis.

Citizen advisory panels are formed for major cleanups. National Contingency Plan public participation guidelines are followed. The legislature has established a Citizens' Oversight Council on Oil and Hazardous Substances.

ENFORCEMENT

Liability

Liability is strict, joint and several, and retroactive. Civil penalties are $500 to $100K for first violations, and no more than $10K per day that a violation continues. No punitive damages are available.

Natural Resource Damages

The State has authority independent of Federal law to recover for NRDs under AS §46.04.040 (5). Alaska's authority, however, is very broad, and recovered $1,000M for the Exxon Valdez Oil Spill accident under State law.

Property Transfer

Alaska has no property transfer program or provisions, but does allow public access to its sites database. However, the State has a residential property transfer law that requires disclosure of known environmental hazards prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Alaska established a formal VCP in 1996. The VCP is open to all petroleum sites and is being expanded to hazardous substance sites. The State's participation is funded by cost recovery after total expenses exceed $1K. The State does not have a brownfields program.

IDAHO

SITES

NPL Sites		State Sites	
Final:	9	Known and Suspected:	N/A
Proposed:	2	Identified as Needing Attention:	N/A
Deleted:	2	On Inventory or Priority List:	N/A

STATUTORY AUTHORITIES

Idaho does not have a State equivalent to the Federal program for cleaning up non-NPL contaminated sites, but works with responsible parties to encourage clean up of contaminated sites. The *Idaho Voluntary Land Remediation Act*, Idaho Code Chapter 72, Title 39 (1996), establishes a voluntary cleanup program and requirements for contaminated property transfer.

The *Environmental Protection and Health Act* (EPHA), Idaho Code §§39-101 to –130 (1972, as amended 1993) provides enforcement authority for the Division of Environmental Quality (DEQ) to administer air quality standards, water quality standards, and enforcement measures.

In addition, the *Idaho Hazardous Waste Management Act* (HWMA), Idaho Code §§39-4401 to -4432 (1983, as amended 1984, 1987, and 1988), provides for RCRA enforcement authority, emergency response measures, and citizen suits authority.

PROGRAM ORGANIZATION AND FUNDING

The Division of Environmental Quality's (DEQ's) Division of Water Quality and Remediation, Remediation Bureau administers hazardous substance cleanup. The Bureau currently has .2 FTE assigned to cleanup of non-NPL sites. At DEQ's six regional offices approximately 4.5 FTE total are funded to conduct non-NPL site assessment and cleanup funded through the State Hazardous Waste Management Account. In addition, approximately three FTE are funded by responsible parties undertaking non-NPL cleanup work. The DEQ's Remediation Bureau is responsible for all cleanup activities at NPL sites and Federal facility cleanups. The Remediation Bureau has 21 FTE dedicated to these efforts. Legal support for non-NPL site work is provided by the Idaho Attorney General's Office on an as need basis by one of three attorneys that deal with non-NPL cleanup matters. Federal grants contribute 80% of funding for program staff and administration, while 20% of funding comes from the State cleanup fund.

CLEANUP ACTIVITIES

Information on numbers of cleanup activities is not available. Idaho does not maintain a site priority list.

CLEANUP FUNDING

Idaho does not have a fund for non-NPL site cleanups. Idaho does have several funds that provide monies for NPL cleanups. The Superfund Multi-Site Cooperative Agreement provided approximately $100K in Federal grants for site investigation and remedial actions during FY97. During FY97, the Superfund Multi-Site Cooperative Agreement for the Bunker Hill site paid out $500K for site investigation and remedial actions at the NPL site.

A Department of Energy grant provided approximately $1.3M in funds from DOE for NPL cleanups during FY97. The monies were used for site investigation and remedial actions.

In addition, appropriations from the State Legislature during FY97 provided $520K for site investigation and remedial actions at NPL sites in the State. The Governor's Trust Account provided $520K for site investigation and remedial actions at NPL sites during FY97.

Funding for non-NPL site cleanup from various State and responsible party funding sources is approximately $375K during FY97.

CLEANUP POLICIES AND CRITERIA

The State employs water quality criteria, MCLs/MCLGs, and groundwater standards in conjunction with risk assessments to determine cleanup levels. Idaho uses risk goals of 10^{-4} to 10^{-6} for its cleanups. Pursuant to the *Voluntary Land Remediation Act*, voluntary cleanups standards must be consistent with Federal Superfund requirements.

Land use is considered in determining cleanup levels. Calculations for both residential and industrial uses are completed in the risk assessment, followed by site-specific land use determinations. For sites that are cleaned up to standards based on a specific land use, several types of institutional controls are used to ensure that the land use is maintained, including restrictive covenants.

PUBLIC PARTICIPATION

The State follows Federal Superfund guidelines for public participation by providing opportunities for public comments, hearings/meetings, and document availability. The *Voluntary Land Remediation Act* requires the State to provide public notice, public comment periods, and hearings and meetings for all voluntary cleanups.

ENFORCEMENT

Liability

Idaho does not have formal liability standards. The State can impose civil penalties of up to $10K per day per violation and up to $1K per day for continuing violations. The State does not impose retroactive liability or punitive damages.

Natural Resource Damages

The State does not have authority independent of Federal law to recover for NRDs. Under CERCLA, three NRD claims have recovered $65M. Idaho uses recovered monies for the restoration of natural resources. Currently, $65M is being spent on two restoration projects.

Property Transfer

Idaho does not have any property transfer requirements other than requirements for disclosure of all environmental hazards prior to transfer of certain residential properties.

VOLUNTARY AND BROWNFIELDS PROGRAMS

In 1996, Idaho created a State voluntary cleanup program (*Voluntary Land Remediation Act*). Any party is eligible for the program except those engaged in cleanups regulated under other authorities (*e.g.*, RCRA). Incentives to participate in the program include tax incentives and a covenant not to sue once remediation has been fully completed. Participants are responsible for payment of State oversight costs.

OREGON

SITES

NPL Sites		State Sites	
Final:	12	Known and Suspected:	1933
Proposed:	1	Identified as Needing Attention:	306
Deleted:	2	On Inventory or Priority List:	160

STATUTORY AUTHORITIES

The *Environmental Cleanup Law*, Or. Rev. Stats. §§465.200-420, 465.995 (1987, as amended 1989, 1991, 1995), establishes the Hazardous Substance Remedial Action Fund (HSRAF), an Orphan Site Account, a priority list, authorizes the Department of Environmental Quality to clean up sites contaminated by hazardous substances, and provides for enforcement, liability, cost recovery, cleanup standards, public participation, NRDs, environmental disclosure property transfer, and voluntary cleanups.

PROGRAM ORGANIZATION AND FUNDING

The Waste Management and Cleanup Division (WMCD) in the Department of Environmental Quality (DEQ) has a staff of 78 FTEs. One attorney from the Oregon Department of Justice handles litigation and advises the WMCD as requested.

Funding for staff and administrative costs is provided by the State's cleanup fund (80%, including the Orphan fund (27%) and HSRAF (53%)), Federal grants (14%), and the Dry Cleaner Fund (6%).

CLEANUP ACTIVITIES

The confirmed release site list includes those sites where a release has been verified. The inventory of sites list includes only those sites where a preliminary assessment or the equivalent has been completed and a determination made that further investigation or remedial action is necessary.

At non-NPL sites, 315 are being cleaned up, 35 were completed during FY97, and 119 have been completed since the program started. Of this number at voluntary cleanup sites, 212 are being cleaned up, 23 were completed during FY97, and 87 have been completed since the program started.

Of the sites needing attention, approximately 6 are municipal landfills, 103 are manufacturing sites, two are mining sites, four are industrial landfills, 23 are recycling sites, and 168 are other types of sites.

CLEANUP FUNDING

The Hazardous Substance Remedial Action Fund (HSRAF) had a balance of $5.6M at the end of FY97. Additions for the fiscal year were $6.8M and $5.9M were paid out for non-NPL activities. Cost recoveries and hazardous substance and solid waste tipping fees make up the significant source of the HSRAF, with additional revenue from user fees supporting the voluntary program, and interest and penalties. The fund may be used for emergency response, site investigations, removals, studies and design, remedial actions, operations and maintenance, program administration, grants to local government, and State CERCLA match.

The Orphan Site Account had a balance of $5.8M at the end of 1997. A total of $465K were added to the account during FY97. $5M were paid out of the account, all for non-NPL purposes. The significant sources of funds for the Orphan Site Account are bond authority and interest. Bonds are usually sold every other year, and none were sold in FY97. Authorized uses for the fund include studies and design, removals, remedial actions, and operations and maintenance.

The Dry Cleaner Fund had a balance of $690K at the end of FY97. It took in $630K during FY97, and paid out $169K, all to non-NPL sites. These funds are generated by a solvent fee.

CLEANUP POLICIES AND CRITERIA

The State uses risk assessment, background levels, and soil standards to set cleanup levels. Water quality criteria or MCL/MCLGs may be used if foreseeable uses of water are affected. Risk levels of 10^{-6} are used for individual carcinogens, and 10^{-5} for cumulative cancer risk. The State uses a Hazard index of 1 or less for noncarcinogens.

Oregon has adopted numeric standards for soil cleanup of 76 compounds at "simple" sites. These soil cleanup standards allow greater residual contamination in industrial zones. Land use based cleanups are recognized. The PRP must identify and submit all current and reasonably likely land uses to the department for evaluation. Institutional controls are deed restrictions and other equitable servitudes. The same cleanup standards apply to the voluntary program.

PUBLIC PARTICIPATION

The law mandates public notice of DEQ's program for identifying releases, proposed settlement agreements, and all proposed remedial actions, with a 30-day comment period. Public meetings are required for proposed remedial actions if requested by a minimum of 10 people. Public notice is provided for final remedial action. The laws also provide for document availability.

Regulations for the statute were promulgated, as mandated, with significant input from a 22-member committee composed of citizens, local governments, environmental groups, and industry.

ENFORCEMENT

Liability

The statute establishes strict, retroactive liability for owners, operators, and any person who caused or contributed to a release of a hazardous substance. Liability is joint and several. However, transporters and off-site generators are generally not liable. Proportional liability applies in contribution actions using the "Gore" factors. Civil penalties of up to $10K per day are available.

The statute authorizes administrative orders, injunctive relief, cost recovery, penalties, liens, and treble damages. WMCD favors an approach that seeks voluntary cleanup from PRPs prior to issuance of orders; use of the Fund is the agency's last choice.

Natural Resource Damages

Oregon has authority independent of Federal law to recover for NRDs under ORS 465.255, ORS 466.890, and ORS 468B.395. The State, however, has not sought NRD recoveries under State law for hazardous substance sites. The Oregon Fish and Wildlife Service has been involved in some NRDs resulting from oil spills. Responsible parties are liable under State law for NRDs.

Property Transfer

Oregon does require the seller of a site to disclose the presence of hazardous substances (ORS 465.255(1)(c)); however, there is no active State government role. The State's residential property transfer law contains requirements for disclaimer and disclosure of known environmental hazards prior to transfer of certain residential properties. The State also has a database of sites.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Oregon has a voluntary cleanup program, established by policy in 1991 and legislatively ratified by a budget bill in 1993, that complements the orphan and enforcement program using the same standards and criteria. Anyone wanting to move a cleanup forward is eligible to participate. The State will provide technical assistance and a "No Further Action" letter for participants. State

participation in the program is funded by cost reimbursement. An hourly rate including indirect costs and overhead for staff oversight is charged, and there is an initial $5K deposit.

Oregon does not have an official brownfields program, but does seek redevelopment of some orphan projects, and administers a prospective purchaser program.

WASHINGTON

SITES

NPL Sites		State Sites	
Final:	60	Known and Suspected:	1493
Proposed:	0	Identified as Needing Attention:	1006
Deleted:	13	On Inventory or Priority List:	595

STATUTORY AUTHORITIES

The *Model Toxics Control Act*, Wash. Rev. Code Ch. 70.105D (1988, as amended 1993, 1994, 1997), authorizes funding for two cleanup accounts, provides enforcement authorities, establishes a priority list, and provides for citizen suits, replacement water supplies, and public participation procedures.

PROGRAM ORGANIZATION AND FUNDING

The Department of Ecology (WDOE), includes the Toxics Cleanup Program, which has 144 FTE staff members, 49 of which are Federally funded. The remaining 95 FTEs are supported by the State Toxic Control Account. The Attorney General's office has approximately 2.5 FTEs working on cleanups. Staff and administrative costs are funded by Federal grants (30%), and a State cleanup fund (70%).

CLEANUP ACTIVITIES

The Hazardous Sites List includes all sites that have been assessed and ranked using the Washington Ranking Method (WARM). It includes NPL sites, but these are excluded from the 595 reported above.

At non-NPL sites, 278 cleanup actions are currently underway. Cleanup activities were completed at 65 non-NPL sites in FY97, bringing the total completed to 348 since the program inception.

Under the voluntary cleanup program, 34 cleanup actions are underway. Cleanup activities were completed at 49 sites in FY97, bringing the total to 176 since the start of the program.

Of the sites needing attention, approximately 20 are municipal landfills, 312 are manufacturing sites, two are mining sites, 140 are industrial landfills and recycling sites, and 530 are other types of sites.

CLEANUP FUNDING

The Department administers two accounts: (1) the State Toxics Control Account and (2) the Local Toxics Control Account.

The balance in the State Toxics Control Account was $7.4M at the end of the fiscal year. $5.5M were encumbered at the end of the fiscal year, all for non-NPL sites. The State account received $23.9M in FY97. A total of $27M was paid out during FY97: $26.8M for non-NPL sites, $200K for NPL sites. The State account is funded primarily from taxes and waste fees. Cost recoveries, fees, interest and penalties also contribute to the fund. The State account may be used for site investigation, emergency response, removals, studies and design, remedial actions, natural resource restoration, operations and maintenance, State CERCLA match, and program administration. Penalties and fines are earmarked for best management practices and recycling, not cleanup.

The Local Toxics Control Account balance at the end of FY97 was $37.46M. $2.33M were obligated or encumbered at the end of the fiscal year. Funded by taxes, $18.79M were added to the account and $15.64M were paid out during FY97: $3.53M to NPL sites, $12.11M to non-NPL sites.

CLEANUP POLICIES AND CRITERIA

Three cleanup options are used by the State: (1) Default ("look up") levels (Tables, Practical Quantitative Limit levels, ARARs, or background); (2) Required risk algorithms with default values; and (3) "full" risk assessment, but only as a last resort or as necessary. The State has established health-based cleanup standards for soils, groundwater, air, and surface water. WDOE uses water quality criteria, MCL/MCLGs, background levels, soil and groundwater levels, PQLs, and standard State formulas for risk assessment. Risk levels of 10^{-6} for individual carcinogens for unrestricted use, and 10^{-5} for restricted use sites. Total risk must meet a Hazard Index of 1 and cancer risk of 10^{-5} Land use based cleanups are allowed and uses are enforced by deed restrictions. The same standards are used for the voluntary cleanup program.

PUBLIC PARTICIPATION

Early planning and development of a site-specific public participation plan is required. The WDOE must establish regional citizens' advisory committees, notify the public of the development of investigation or remedial plans and of the availability of an RI/FS and Cleanup Action Plan, give concurrent public notice of all compliance orders, enforcement orders, and notices of violation. Provisions include public notice and hearings on consent decrees. The *Model Toxics Control Act* authorizes public participation grants to affected persons or not-for-profit public interest organizations.

ENFORCEMENT

Liability

The *Model Toxics Control Act* (MTCA) provides for strict, joint and several, and retroactive liability. The law includes subpoena authority, site access authority, enforcement order authority, injunctive action, civil penalties (up to $25K per day), cost recovery, and treble damages. Citizen suits and contractor indemnification are also authorized.

Natural Resource Damages

Since 1990, RCW 70.105D.040(2) has authorized the State to collect NRDs. The Department of Ecology is the designated natural resources trustee. The State has collected approximately $50M as a joint trustee with the Federal trustees and tribes in seven CERCLA settlements. No State law claims have yet resulted in recovery of NRDs. However, one claim is pending. Currently, there are ten natural resource restorations underway and four have been completed thus far. A total of $40M has been spent on restorations.

Property Transfer

The State has the following property transfer provisions: requirement of disclosure on the deed that the site was, or is, contaminated with hazardous substances (restrictive covenant); a requirement that seller disclose the presence of hazardous substances on the site before transfer; and a State-maintained database.

VOLUNTARY AND BROWNFIELDS PROGRAMS

Washington has a voluntary cleanup program, established in 1993 by regulation (WAC 173-340-550 (7)) and modified in 1997. It is authorized under the *Model Toxics Control Act.* Any PRP who submits a cleanup report with a fee is eligible provided the site is not under order or subject to a current proposal for an order. Participants receive a timely review of the cleanup report and written determination, plus site-specific technical assistance if requested. State participation in the program is funded by fees paid by the participants. The State charges actual weighted rates for staff time,

which range from $60 to $80 per hour. Costs of voluntary cleanups are $100K on average, with $54K the median.

Washington does not have a brownfields program; however, the State is targeting brownfields through independent cleanups, prospective purchaser agreements, and prepayment agreements.

Appendix A: List of State Web Pages

Region	State	Agency/Bureau Web Address
1	Connecticut	http://dep.state.ct.us/water/prgactiv.htm
	Maine	http://www.state.me.us/dep/rwm/home.htm
	Massachusetts	http://www.state.ma.us./dep/bwsc/bwschome.htm
	New Hampshire	http://www.state.nh.us/des/hwrb/
	Rhode Island	http://www.state.ri.us/dem/
	Vermont	http://www.anr.state.vt.us
2	New Jersey	http://www.state.nj.us/dep/srp/index.htm
	New York	http://www.dec.state.ny.us
	Puerto Rico	
3	Delaware	http://sirb.awm.dnrec.state.de.us
	District of Columbia	
	Maryland	http://www.mde.state.md.us/
	Pennsylvania	http://www.dep.state.pa.us/dep/deputate/airwaste/wm/default.htm
	Virginia	http://www.deq.state.va.us/envprog/wstman.html
	West Virginia	http://192.243.139.248/
4	Alabama	http://www.adem.state.al.us
	Florida	http://www2.dep.state.fl.us/waste/programs/cleanup/
	Georgia	http://www.dnr.state.ga.us/dnr/environ/
	Kentucky	http://www.state.ky.us/agencies/nrepc/waste/dwmhome.htm
	Mississippi	http://www.deq.state.ms.us
	North Carolina	http://wastenot.ehnr.state.nc.us
	South Carolina	http://www.state.sc.us/dhec/
	Tennessee	http://www.state.tn.us/environment/dsf/home.htm
5	Illinois	http://www.epa.state.il.us/
	Indiana	http://www.ai.org/idem/oer/index.html
	Michigan	http://www.deq.state.mi.us
	Minnesota	http://www.pca.state.mn.us/cleanup/index.html
	Ohio	http://www.epa.ohio.gov/derr
	Wisconsin	http://www.dnr.state.wi.us/org/aw/rr/
6	Arkansas	http://adeq.state.ar.us/hazwaste/main.htm
	Louisiana	http://www.deq.state.la.us/oshw/oshw.htm
	New Mexico	http://www.nmenv.state.nm.us

Region	State	Agency Web Address
6	Oklahoma	http://www.deq.state.ok.us/waste.html
	Texas	http://www.tnrcc.state.tx.us/waste/index.html
7	Iowa	http://www.state.ia.us./epd
	Kansas	http://www.ink.org/public/kdhe/ber/
	Missouri	http://www.dnr.state.mo.us/deq/homedeq.htm
	Nebraska	http://www.deq.state.ne.us/
8	Colorado	http://www.state.co.us/gov_dir/cdphe_dir/hm/
	Montana	http://www.deq.mt.gov/rem/index.htm
	North Dakota	http://www.ehs.health.state.nd.us/ndhd/environ/wm/index.htm
	South Dakota	http://www.state.sd.us/state/executive/denr/denr.html
	Utah	http://www.eq.state.ut.us/EQERR/errhmpg.htm
	Wyoming	http://deq.state.wy.us/
9	Arizona	http://www.adeq.state.az.us/waste/index.htm
	California	http://www.calepa.ca.gov/dtsc/dtsc.htm
	Hawaii	http://www.hawaii.gov/health/
	Nevada	http://www.state.nv.us
10	Alaska	http://www.state.ak.us/local/akpages/ENV.CONSERV/home.htm
	Idaho	http://www2.state.id.us/deq/
	Oregon	http://www.deq.state.or.us/wmc/cleanup/clean.htm
	Washington	http://www.wa.gov/ecology/

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