

STATE PARTICIPATION IN THE SUPERFUND PROGRAM

CERCLA SECTION 301(a)(1)(E) STUDY

Final Report

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## PREFACE

This report, required by Section 301(a)(1)(E) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, or Superfund), provides both descriptive and quantitative information on state participation in the Superfund program, in light of state resources and EPA policies over time.

Information included in this analysis was obtained from several sources. Interviews were conducted with EPA headquarters and regional staff. Relevant quantitative information was extracted from such EPA data bases as the Emergency and Remedial Response Information System and the National Response Center. The most comprehensive, and currently the only available, source of data on state hazardous substance cleanup programs is a report based on a survey conducted by the Association of State and Territorial Solid Waste Management Officials. State Cleanup Programs for Hazardous Substance Sites and Spills, a report to the Environmental Protection Agency, submitted by the Association of State and Territorial Solid Waste Management Officials, December 21, 1983. The survey is referred to as the ASTSWMO study throughout this 301(a)(1)(E) report. Data from this report are relied upon to provide staff, budgetary, and activity (e.g., state enforcement activities) data as reported by state officials.

Although the preceding sources provide the best available information, they are limited by the following factors:

- The ASTSWMO survey was conducted during July-October 1983; therefore, the report does not contain up-to-date program data. However, for many areas the survey did ask for projections for fiscal years 1984 and 1985. Although responses do not represent actual resource/activity levels of expenditures on hazardous substance cleanup, they are useful for assessing the states' participation in the Superfund program.
- Almost every state's fiscal year begins July 1 and ends June 30. Therefore, fiscal year comparisons between state and EPA data do not cover concurrent time periods. EPA's fiscal year runs from October 1 through September 30.
- Because CERCLA does not govern state enforcement authorities, the states are not required to report their enforcement activities to EPA and few data are available to compare EPA and state action in this area. Some enforcement data were included in the ASTSWMO report, but do not distinguish state enforcement actions taken at NPL sites from those taken at non-NPL sites.

The analysis in this report takes into account these data limitations.

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## EXECUTIVE SUMMARY

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) establishes a clearly defined role for states in the Superfund program. The Act requires that states participate in any remedial cleanup actions within their boundaries, either cooperating with EPA on Federal lead projects or taking the lead on the projects themselves. States must provide at least ten percent of the costs of remedial action (if the site is publicly owned, the state must pay 50 percent), plus all operation and maintenance costs after the first year.

In addition, states must follow certain notification requirements in CERCLA, and states are authorized to submit site names for the National Priorities List (NPL). In fact, among the 100 highest priority sites on the NPL, there must generally be one for each state designated by the state as its highest priority.

EPA initially was responsible for almost all actions during the site discovery and investigation phase of the program. However, during the last two years, the role of states has expanded significantly in this area. States first received grants for site discovery and investigation work under the RCRA section 3012 program. EPA has continued to follow up with assistance through cooperative agreements.

Although new sites continue to be identified, it appears that the more serious and the more obvious hazardous waste sites have been identified. Therefore, the primary emphasis currently is on site investigation, and most preliminary assessment activity to identify potential problems at individual sites is conducted by the states.

A comparison of EPA's figures for total sites identified in each state with estimates provided by states in the ASTSWMO survey indicates that both EPA and the state estimates are similar. EPA currently has approximately 19,000 potential sites listed in the Emergency and Remedial Response Information System, and the states have identified approximately 18,000 potential sites. However, on a state-by-state basis, the EPA and state estimates vary widely.

EPA has started 290 remedial investigation/feasibility studies at NPL sites, and at least 66 of these are state lead sites. As these projects move into the construction phase over the next several years, states will be required to provide their cost share for construction and will be required to take over operation and maintenance after the first year. This is likely to place a significant burden on states.

States have also undertaken some long term cleanups (i.e., cleanup actions that cost more than \$1 million) on their own. Since 1981, 25 percent of

the 133 long term cleanups initiated by states have been completed. Both state funds and staff resources allocated to remedial or long term cleanup activities have expanded over the past several years. Total state projections for 1984 remedial funding levels show an increase of more than 100 percent from the 1983 funding total of \$126 million. For both years, states indicated that CERCLA funds constitute the most important source for their remedial response activities. Staff devoted to remedial activities were expected to increase by 65 percent -- from 259 person years in 1983 to 428 person years in 1984. The major source of funding for state remedial staff was expected to come from state revenues.

State remedial resources and activities have remained concentrated in a small number of states. EPA's remedial activities have been more widely distributed across states.

State enforcement action is classified as the lead activity at 136 of the 538 NPL sites, and 34 of the 248 proposed sites. There are, however, no state enforcement authorities under CERCLA. States derive their enforcement authority from a variety of state laws, which differ from state to state and are not likely to contain the comprehensive authorities in CERCLA. Because EPA does not monitor state enforcement activities, there is little data available on the status of these actions.

States have reported over 2,000 sites subject to state enforcement actions from 1981 through mid-1983. Many of these actions resulted in private party cleanup. State resources devoted to enforcement totaled \$4 million in 1983 and \$6 million in 1984. Enforcement funding and staff, however, are highly concentrated in a handful of states.

Data indicate that state sources account for the vast majority of sudden release and removal funds available to the states. The number of removals or short term cleanups conducted by both EPA and the states increased each year between fiscal years 1981-1983. The states have conducted more short term cleanups than the federal government, but the scope of state cleanup actions is unknown. States participate informally in Superfund removal actions.

An evaluation of the sources and amounts of state funds for hazardous substance cleanup in fiscal years 1983-1985 indicates that in 33 jurisdictions, \$293 million was budgeted over this three year period. Amounts may vary widely from jurisdiction to jurisdiction; however, those that reported the greatest expenditures and projected expenditures tend to contain numerous National Priorities List sites. Data also show that approximately 66 percent of the states' funds are available for cost sharing.

With respect to legal and institutional constraints that have affected states' capabilities to respond to hazardous substance releases, the data support the need for states to obtain additional funding for personnel and equipment. To achieve optimal staff levels, states' FY 1983 staff would need to increase by 84 percent. In addition to the need for more funds, administrative and institutional changes could benefit state programs. Hiring freezes and salary limitations for technical personnel in conjunction with procurement restrictions have impeded the progress of many state cleanup programs.

## 1. CERCLA REQUIREMENTS AND EPA POLICIES AFFECTING STATE PARTICIPATION

This chapter reviews both the various statutory and regulatory provisions that govern state participation in the Superfund program and EPA policies that provide guidance for state participation. Sources of authority and guidance include:

- CERCLA;
- The National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300);
- EPA policy documents; and
- Superfund policy changes as of May 1983.

### 1.1 STATUTORY AUTHORITY AND REQUIREMENTS

This section describes the Congressional intent for state participation and the specific provisions of CERCLA authorizing their participation.

#### 1.1.1 Congressional Intent for State Participation in CERCLA

In its approach to the problem of hazardous substances, Congress has clearly evidenced its intention that states participate in the cleanup of hazardous substances. Because of the magnitude and immediacy of the hazardous substance problem, however, Congress included in CERCLA provisions that authorize the federal government to direct and coordinate response activities, as necessary.

In establishing Superfund, Congress recognized that many states lacked the capability to undertake remedial activities themselves or were unwilling to address what they considered to be a national problem. Superfund was intended to provide the financial resources and program leadership necessary to achieve the national goals. At the same time, state participation was made an integral part of the Superfund program.

States have specific responsibilities in the national program established by CERCLA for responding to releases of hazardous substances. It is extremely important to consider state responsibilities in assessing state capabilities, because a state's inability to provide necessary assurances or to perform necessary activities may limit initiation of Superfund responses.

The CERCLA requirements for state participation and cost-sharing were intended to serve four purposes. First, Congress determined that equity would be best served if the costs of remedial actions were financed by contributions from industry, the federal government, and state or local governments. The

requirements for government contributions recognized that while most hazardous substance releases result from industrial activities and practices, some occur as a direct result of public sector actions.

Second, the requirement that states contribute funds to each remedial action undertaken within their borders ensured that the states that benefit most from expenditures from the federal trust fund will make the largest contributions from their own funds. Congress believed that this apportionment of the financing burdens would promote greater equity.

Third, Congress intended that the requirement for state cost-sharing help the states and the federal government to establish priorities for funding. Because of the limits on funds available for cleanup, Congress believed that cleanup efforts at sites that pose the greatest risk should receive the highest priority. By giving the states funding responsibilities, Congress sought to give them a stake in setting priorities.

Finally, the requirement for state cost-sharing provides the states with a check on the federal selection of Fund-financed remedial measures by enabling states to postpone a response action (by withholding funding assurances) until state and federal authorities resolve any serious disagreements over the proposed remedial action. This check assures the public that adequate arrangements have been made to accomplish the remedy and to maintain its effectiveness over time.

Congress recognized that several states had already begun to address the problems of uncontrolled hazardous waste sites and hazardous substance releases. To encourage these states to maintain their programs, CERCLA authorizes the federal government to arrange for states to assume the lead in remedial programs and provides a cost-share credit for some expenditures.

Congress also recognized, however, that federal resources are limited. Federal assistance, therefore, is focused on the hazardous substance releases that present the greatest threat to public health and welfare and the environment. Many problem sites and release incidents that pose less serious dangers are considered state responsibilities. Consequently, an assessment of state capabilities and efforts to upgrade those capabilities must take account of the ability of states to respond to releases that will be left either wholly or partially untouched by the federal government. In many instances, sites may initially be addressed exclusively under state authorities. Subsequently, both federal and state resources and authorities may be required. In other instances, federal resources may not be committed at all. For all these reasons, it is important that states retain authority to establish funds, raise revenues to support such funds, set limits on liability, and help finance remedial activities or pay third party damages.

#### 1.1.2 Statutory Authority and Requirements for State Participation In CERCLA

CERCLA's requirements concerning state assurances and state administration of remedial response actions provide evidence of Congress' intent that state



governments assume a role in the implementation of the Act. CERCLA Section 104(d)(1) provides:

Where the President determines that a State or political subdivision thereof has the capability to carry out any or all of the actions authorized in this section, the President may, in his discretion, enter into a contract or cooperative agreement with such State or political subdivision to take such actions in accordance with criteria and priorities established pursuant to section 105(8) of this title and to be reimbursed for the reasonable response costs thereof from the Fund....

Before remedial action can proceed at a given site, the state must assure through a letter that at a minimum it will pay 10 percent of remedial action costs. If the site was owned by the state or a political subdivision at the time of disposal, the state must assure coverage of at least 50 percent or more of response costs. Section 104(c) also provides that state expenditures on priority sites from 1978 to 1980 may be credited against the state's share of the costs. States must also assume responsibility for all operation and maintenance of the response measures and provide for off-site disposal facilities where necessary (CERCLA section 104(c)(3)).

Other sections in CERCLA that pertain to state involvement are:

- Section 103(a) -- States generally must notify the National Response Center if a hazardous substance is released from a facility or vessel it owns or operates in a quantity equal to or greater than a reportable quantity.
- Section 103(c) -- Within one hundred and eighty days after the enactment of CERCLA, states were required to notify EPA of all state-owned or operated hazardous substance facilities, specifying the types of substances they contained and describing any known, likely, or suspected releases.
- Section 104(c)(2) -- The President is required to consult with the affected state or states before determining any appropriate remedial action to be taken pursuant to the response authority granted under Section 104(a).
- Section 105:
  - Requires EPA to specify the states' roles and responsibilities as part of the national contingency plan (Section 105(4)); and

Authorizes states to submit lists of sites for inclusion on a National Priorities List and requires that states' priorities be considered in the formulation of the List (Section 105(9)(B)).

- Sections 107(f), 111(b), 111(h)(1) -- States may act as trustees for natural resources within their borders for the purposes of recovering damages.

## 1.2 EPA POLICIES ON STATE ROLE AND REQUIREMENTS

In addition to the requirements intended by Congress and mandated by CERCLA, EPA has issued a number of important policy documents that address and clarify the states' role in the area of hazardous substance site response and management.

### 1.2.1 National Oil and Hazardous Substances Pollution Contingency Plan

The primary policy document for CERCLA is the National Contingency Plan. The Plan was originally authorized by Section 311 of the Federal Water Pollution Control Act. Section 105 of CERCLA required that the Plan be revised to establish guidelines for EPA's authority under the Act and to establish standards for the Superfund program. The revised Plan, published July 6, 1982 (47 FR 31180), provides direction for federal responses to releases of hazardous substances consistent with the authority granted under CERCLA.

Two sections of the Plan directly address the states' role and responsibilities under CERCLA: 40 CFR 300.24, which concerns "State and local participation;" and 40 CFR 300.62, which delineates the "State role." These sections advance the goals set forth in the provisions of CERCLA by encouraging state-led response actions and providing procedures for developing contracts and cooperative agreements for response actions.

The role of the states is further defined by the requirement that states be represented on each Regional Response Team (40 CFR 300.32(b)), as well as assist in developing the Team's regional plans (40 CFR 300.42(a)). The Plan also encourages states to designate individuals to serve as contacts for coordinating response actions with local governments and to assist in the development of regional, federal, and local contingency plans (40 CFR 300.32(b)(2) and (b)(5)).

Other National Contingency Plan sections that outline state involvement include: EPA and state joint efforts for response and enforcement actions (40 CFR 300.33(b)(3) and 300.66(c)(1)); requirements related to notification of releases (40 CFR 300.36(c) and 300.63(b)); procedures for state submittal of sites for the National Priorities List (40 CFR 300.66(d)); and authorization for states to act as trustees for natural resources within their boundaries (40 CFR 300.73).

### 1.2.2 Remedial Program Policies Over Time

#### Site Discovery and Investigation

Although the goal of site discovery -- to identify all hazardous substance releases and ensure that they are brought to the attention of the appropriate authorities -- has remained the same throughout the first three years of the Superfund program, the emphasis on different phases in the process has changed significantly. These changes reflect EPA's belief that many of the sites posing more serious problems have been identified and that EPA resources should increasingly focus on further assessment and inspection of these sites.

The first site discovery efforts involved merging federal and state inventories and creating a national data base to identify hazardous substance sites. This initial identification process mainly involved federal resources. In late 1982, EPA received a one-time appropriation to allocate \$10 million under RCRA Section 3012 to states to conduct site identification activities. Whereas EPA had been responsible for conducting most of the preliminary assessments prior to mid-1983, the states are now responsible for these activities with RCRA Section 3012 awards and funding provided in cooperative agreements. EPA will conduct approximately 75 percent of the site inspections, with states conducting the remainder.

EPA's targets, set in May 1983, are to (1) complete preliminary assessments for all sites in the Emergency and Remedial Response Information System by the end of fiscal year 1986; and (2) complete site inspections for sites that warrant inspection after the preliminary assessment by the end of fiscal year 1987. In 1983, EPA requested from the states annual targets for the number of preliminary assessments each state expects to complete. Although states initially fell short of their targets (largely because of planning inexperience in this area), EPA is providing assistance in helping states establish new objectives.

There have been no major policy changes related to the Hazard Ranking System. The primary criterion in the National Contingency Plan for listing sites on the National Priorities List is a sufficiently high hazard ranking score. In the proposed first update to the National Priorities List, EPA proposed the addition of the Quail Run Mobile Manor site, Gray Summit, Missouri, to the List, although the site's total score was below the 28.5 cutoff. In adding the Quail Run site to the List, EPA stated its intent to "amend the National Contingency Plan to authorize consideration of limited criteria other than the total hazard ranking score for purposes of including sites on the National Priorities List." In amending the National Contingency Plan, EPA will consider using health assessments or advisories issued by other federal agencies.

Expansion of the National Priorities List has occurred in several significant steps. On September 8, 1983, EPA promulgated a list of 406 sites for the final National Priorities List and proposed 133 additional sites, plus seven sites that were listed as pending. On May 8, 1984, 4 of the sites proposed in September were also placed on the final List. In September 1984,

128 of the previously proposed sites were added to the list, bringing the total National Priorities List sites to 538. In October 1984, EPA proposed an additional 244 sites for inclusion on the list. The expanded National Priorities List will facilitate an increase in the number of sites that could be candidates for remedial action.

### Remedial Activities

The category of "remedial activities" encompasses a broad range of response efforts serving various ends and guided by various policies. It is therefore useful to structure the discussion of policies governing remedial activities around three subcategories of actions:

- Remedial Investigation/Feasibility Study;
- Remedial Design and Construction; and
- Initial Remedial Measures.

The remedial investigation/feasibility study and design and construction classifications form a two-step sequence for the selection and implementation of long term remedies. Initial remedial measures, which involve short-term, temporary measures intended to reduce risks to health and the environment while work on permanent corrective measures progresses, generally include abbreviated versions of both the remedial investigation/feasibility study and design and construction phases.

Remedial investigations/feasibility studies follow a seven-stage process. These stages may be summarized as follows:

- Development of a Superfund Comprehensive Management Plan, which sets forth a rough timetable for cleanup activities at a particular site, and of quarterly and annual Superfund Comprehensive Accomplishment Plans for each EPA region, which set forth schedules for all Superfund activities in each region.
- Development of a community relations plan. Prior to the initiation of the remedial investigation, either EPA or the state must develop a community relations plan to keep the public informed and incorporate community concerns into response decisions.
- Initiation of intergovernmental review procedures, including notifying affected state and local governments and providing a 60-day comment period. (The procedures are also conducted after the Superfund Comprehensive Accomplishments Plan is prepared.)
- Negotiation of remedial planning agreements. Before CERCLA funds can be used for on-site remedial investigation/feasibility study activities, EPA and the relevant state must execute an agreement (cooperative

agreements or state letter of request) delineating the responsibilities and obligations of EPA and the state agency.

- Performance of site-related activities. On-site work includes the sampling and analysis that are needed to develop and assess remedial alternatives. Off-site work involves evaluating various alternatives on the basis of factors such as cost, environmental effects, and feasibility of the cleanup action.
- A three-week public comment period must be provided. (This also ensures "functional equivalency" with the public participation requirements of the National Environmental Policy Act.)
- Preparation and review of a decision document. The decision document serves primarily to document that the recommended remedial measures are consistent with CERCLA and the National Contingency Plan.

The design and construction phase of a remedial action involves the formulation and implementation of detailed engineering plans (including timetables for completion) and safety procedures. The relationship between EPA and the state in the design and construction phases depends upon whether the state government assumes the lead role or leaves this role to EPA. Activities at sites where EPA assumes primary responsibility are governed by Superfund state contracts. Each Superfund state contract sets out EPA's responsibility for project management and records the state's assurance that it will meet the cost share, operation and maintenance, and off-site disposal requirements specified in CERCLA Section 104(c)(3). EPA relies on the Army Corps of Engineers for the technical expertise needed to select contractors for design and construction and to oversee contractors' performance. In addition to supervising the work of the Corps of Engineers, EPA's responsibilities at federal-lead projects include working with the state to obtain site access, maintaining community relations activities begun during the remedial investigation/feasibility study phase, and pursuing any available opportunities for cost recovery.

Remedial design and construction at sites where states have assumed lead responsibility are governed by cooperative agreements. Agreements negotiated by EPA and the states for state-lead remedial investigation/feasibility study activities are amended to include the assurances required by CERCLA Section 104(c)(3) and descriptions of steps involved in the design and construction phase. The states' role in state-lead remedial actions includes the selection and oversight of competent contractors. However, EPA reviews all major design decisions and retains authority over enforcement matters.

Initial remedial measures include certain functions that are similar to those covered by both the remedial investigation/feasibility study and design and construction phases. The decision concerning whether to implement an

initial remedial measure is made by EPA at each National Priorities List site during the initial appraisal, or "scoping." Under the National Contingency Plan, initial remedial measures are considered appropriate if they are found to be feasible, cost effective, and necessary to limit exposure or the threat of exposure to a significant health or environmental hazard. Once the decision to implement an initial remedial measure has been made, the intended measures must be included in the quarterly and annual Superfund Comprehensive Accomplishment Plans for the relevant EPA regions.

After an initial remedial measure is listed on the Accomplishment Plan, a number of additional preliminary steps must still precede implementation. The level of detail required in the planning and approval process is determined by the complexity of the initial remedial measure.

### Significant Changes in EPA Policies and Procedures

The goals of response actions have changed little since the inception of the Superfund program. However, as the program has developed and EPA has refined its understanding of the demands of cleanup activities, policies and priorities have been revised to increase the speed and effectiveness of remedial activities. The discussion that follows describes the policy and procedural changes that have significantly affected the role of the states in each area of remedial activity.

Since the beginning of the Superfund program, the remedial investigation/feasibility study stage of remedial action has been intended (i) to identify the most efficient remedial alternative as quickly as possible, (ii) to promote state involvement in the selection of remedial alternatives, and (iii) to ensure public participation in remedial planning. Changes in EPA policy and procedures concerning the remedial investigation/feasibility study process include:

### Policy Changes

- State Cost-Share for Planning and Timing of Assurances. In May 1983, EPA waived the regulatory requirement for cost-sharing for remedial planning activities (including remedial investigation, feasibility study, and remedial design activities) at privately-owned sites (40 CFR 30.720(a)).
- Duration of Federal Contribution to Operation and Maintenance Costs. Before a remedial action can be initiated, CERCLA requires the state in which the hazardous substance release occurs to enter into an agreement with EPA to provide that the state will assure all future maintenance of whatever removal and remedial actions are agreed upon. Under current EPA policy, disbursements from the Fund may cover state operation and maintenance costs for up to one year at the same rate of cost-share as for the remedial action, after the

contractor has certified that the remedy is operational. After that period, states are required to pay all operation and maintenance costs. Initially, coverage for state operation and maintenance costs extended to only six months.

#### Procedural Changes

- Means of Obtaining Assurances. CERCLA requires that states provide assurances for all remedial actions (e.g., cost-sharing, operation and maintenance, off-site disposal). Since early 1984, EPA has strongly encouraged states to develop multi-site agreements. These multi-site agreements must be supplemented by site-specific provisions as necessary. Incorporating all assurances in multi-site agreements enables EPA to eliminate delays. A multi-site agreement has already been approved for Pennsylvania. Other states with numerous National Priorities List sites (e.g., New Jersey, Michigan, New York, Florida, Ohio) are likely to find multi-site agreements an efficient means of making necessary assurances. An EPA work group established in February 1984 is analyzing ways of expanding the concept of the multi-site agreement.
- Coordination of Remedial Activities. To improve coordination between EPA headquarters and the regions and facilitate long-term planning and management of the Superfund program, EPA requires that a comprehensive management plan be developed for every Superfund site. This plan, known as the Superfund Comprehensive Management Plan, provides: (1) a process for the states and regions to reach agreement on the approximate timetable for initiating action on each site; (2) an approximate multi-year timetable for the accomplishment of major steps in the site cleanup; and (3) an approximate picture of current and planned activities for the Superfund program as a whole. To ensure that resources are available and allocated effectively, the EPA regions and the states coordinate in scheduling and planning remedial activities. When remedial investigation and feasibility study activities are completed, results are summarized in a decision document. This presents supporting material to EPA headquarters to demonstrate that the remedial activities are consistent with CERCLA and the National Contingency Plan. Remedial actions do not proceed until EPA headquarters reviews and approves the decision document.
- Delegation of Authority to the Regions. In the Spring of 1983, EPA delegated authority to the regions

for negotiating and signing cooperative agreements and state Superfund contracts. In addition, in the Spring of 1984, authority for initiating and conducting remedial investigation, feasibility study, and remedial design and construction activities was delegated to the regions. Previously, such documents and activities required approval by the Assistant Administrator for the Office of Solid Waste and Emergency Response. Delegation of these and other authorities is intended to decentralize decision making to ensure more timely and effective responses.

The purposes of remedial design and construction activities, like the purpose of remedial investigations/feasibility studies, have remained constant since the Superfund program began. Remedial design and construction efforts have been guided by the goals of achieving effective, efficient, timely remedies and promoting state and community involvement.

Because remedial design and construction cannot proceed until a site has been investigated and a remedial alternative selected, EPA has less experience with design and construction than with remedial investigation/feasibility study activities. As of August 1, 1984, design and construction efforts had been initiated at fifty-three sites and completed at six. Still, EPA has been able to identify policies that tend to impede the progress of remedial design and construction and to adjust its policies accordingly.

Several policy and procedural changes affect design and construction activities conducted under cooperative agreements, i.e., activities at state lead sites. The changes are summarized below:

- Amendment of contracting restrictions. In November 1983, EPA eliminated its prohibition on states noncompetitively selecting the same contractor for the remedial investigation/feasibility study and design and construction. The change was intended to expedite design and construction by streamlining the contracting process.
- May 1983 Policy Changes. Policy changes that were adopted to remove obstacles to remedial investigation/feasibility study activities (described above) also speed the progress of design and construction. Waiving the regulatory requirement that states pay a share of the costs of remedial investigation/feasibility study activities at privately owned sites, for example, reduces delays in design and construction by expediting the completion of remedial investigation/feasibility study activities and by lessening demands on scarce state funds.



- Regional Authority. In the Spring of 1984, regional administrators were delegated authority to initiate and conduct not only the remedial investigation/feasibility study, but also the design and construction phases.

The purpose of initial remedial measures, since the beginning of the Superfund program, has been to stabilize imminent hazards at National Priorities List sites pending initiation of full-scale remedial actions. The policy and guidance documents that govern the implementation of initial remedial measures, however, have undergone revision and continue to change as EPA identifies and removes impediments to timely, effective action. The principal areas of past and projected change are identified below:

- Community Relations Guidance. EPA's initial guidance concerning community relations, issued in November 1981, did not specifically refer to community relations for initial remedial measures. Current policy set forth in the Agency's May 1983 community relations guidance and in a November 1983 memorandum to regional personnel requires that the community be given advance notice of the actions to be taken and an opportunity to submit comments.
- National Contingency Plan procedures. The National Contingency Plan first identified the category of initial remedial measures and established criteria for implementing these measures. EPA is currently considering elimination of initial remedial measures as a separate category under the National Contingency Plan and including those activities in a broader range of removal actions.

### 1.2.3 Removal Policies Over Time

EPA removal policies have evolved since the beginning of the Superfund program. The most significant policy change is the delegation of removal response authority to regional offices. This section briefly discusses delegation and other major changes in EPA's removal policies, including notification and site monitoring policy changes. Because states do not cost-share, but participate informally in Superfund immediate removal actions, it is difficult to draw any cause and effect relationship between changes in EPA policy and the incidence of state responses to sudden releases and short-term cleanups.

#### Notification Policies

Notification of sudden releases of hazardous substances alerts the federal government that a rapid response to protect public health and welfare and the environment may be necessary. EPA, however, has placed relatively greater emphasis on performing removal actions than on enforcing notification requirements. EPA staff in the Emergency Response Division of the Office of

Emergency and Remedial Response believe that noncompliance with CERCLA notification requirements has not seriously impeded the Superfund removal action program. All serious hazardous substance releases seem to have been reported to some government authority that provided an appropriate response or that contacted the appropriate response agency.

#### Monitoring Policies

Monitoring activities can result in the meeting of health and environmental goals almost entirely without the use of Superfund monies, thereby conserving fund monies for sites where federal response is more critical. Monitoring activities also help ensure that removals performed by private parties or states are adequate to protect the public and the environment from the dangers of hazardous substance releases. Monitoring activities are either off-site (by telephone) or on-site.

#### Removal Policies

EPA removal policies have undergone significant change since the beginning of the Superfund program. Major changes have occurred in the following policy areas:

- The criteria for taking an immediate removal action;
- The creation of the category of planned removals;
- The restriction on performing removals at sites on the National Priorities List;
- The delegation of authority outside the Office of the Assistant Administrator; and
- The requirement to conduct a community relations program for immediate removal sites.

The most significant of these changes is the delegation of removal response authority to regional offices. Executive Order 12316 delegated to the EPA Administrator the authority to fund and respond to the release of hazardous substances. This authority has been delegated to the Assistant Administrator of the Office of Solid Waste and Emergency Response (who can authorize removal actions exceeding the statutory limit of \$1 million) and gradually to the regional administrators (who can authorize removal actions up to \$1 million and exceeding the six month statutory limitation).

#### 1.2.4 Enforcement Policies Over Time

After CERCLA's passage, EPA initially sought to negotiate settlements with potentially responsible parties before resorting to formal enforcement authorities or to Fund-financed cleanups. As a consequence of this policy, cleanup actions at sites were delayed while EPA attempted to negotiate each individual segment of the response. In an attempt to speed up action at a

site, EPA briefly instituted a "dual-track" system, which allowed Fund-financed remedial investigations and feasibility studies to be conducted at the same time enforcement staff negotiated with potentially responsible parties for the remedy. The dual-track system had two drawbacks, however. First, the potentially responsible parties were reluctant to agree to conduct a cleanup before the scope of the required remedy had been determined. Second, concurrent site actions by program and enforcement personnel often resulted in duplicated efforts and inefficient management of site responses.

As public and Congressional pressure for increased cleanup activity mounted, EPA developed a Site Classification System in 1983 to allocate responsibility for sites more efficiently. Under the Site Classification System, sites on the National Priorities List are assigned to one of four categories:

- Category I sites generally involve only Fund-financed response.
- Category II sites are enforcement-lead sites.
- Category III sites are sites where there is only limited time available for negotiations. In some situations, a responsible party may be compelled to clean up the site; or EPA may proceed with a Fund-financed remedial action and seek to recover costs and damages, if appropriate.
- Category IV sites are state-lead enforcement sites.

As of September 1984, 136 sites are categorized as state-lead enforcement sites, although EPA has not developed explicit criteria for determining when a site should be classified as state-lead enforcement. EPA may influence state enforcement at National Priorities List sites through the Agency's delisting procedures and criteria. States wishing to have state-lead enforcement sites in the state remedied and removed from the National Priorities List must use their enforcement authorities to secure a remedy that meets EPA standards for delisting.

#### 1.2.5 EPA Policy Documents

Because of the complexity of the Superfund program, several guidance documents have been developed to clarify EPA policy and procedures. Among the most relevant of these are:

- (1) State Participation in the Superfund Remedial Program, February 1984. This document was developed for state officials, EPA regional site officers, and EPA headquarters zone managers. It provides a detailed statement of EPA policies and procedures governing federal-state cooperative agreements at remedial sites under CERCLA. The guidance describes the initial steps in selecting and planning

remedial actions at sites on the National Priorities List. It also outlines the procedures for negotiating cooperative agreements and state Superfund contracts, the two types of documents used to delineate state and federal responsibilities at individual sites.

- (2) Community Relations in Superfund: A Handbook, Interim Version, September 1983. This interim handbook, an updated version of materials first developed in 1981, establishes a plan of action to assist EPA regional offices and states in implementing cost-effective cleanups by keeping the public well-informed and involved in the decision-making process during all phases of response actions. The Handbook concentrates on the distinctive community relations problems that pertain to removal and remedial hazardous substance responses and on describing techniques to handle issues that develop from these actions. The Handbook also discusses the advantages and disadvantages of suggested activities and explains the administrative requirements for the program.
- (3) Interim Standard Operating Safety Guide, January 1983. This guide was initially published as the Interim Standard Operating Procedures on May 1, 1981. It was revised in 1982 and again in January 1983. The safety standards for incident responses set out in this guide supplement existing regional safety criteria.
- (4) Superfund Removal Guidance, Revision #1, December 1982. This document provides EPA response officials with uniform, agency-wide guidance on immediate and planned removal actions. Areas covered include: notification, initiation, and investigation procedures; eligible costs; reporting and documentation requirements (draft and sample forms are included); technical assistance and training projects; and community relations planning.
- (5) Interim Emergency Procurement Procedures. This manual establishes procedures for the procurement of services to respond to emergencies where a release or potential release of a hazardous substance presents an imminent, substantial threat to public health or welfare.
- (6) National Enforcement Investigations Center Policies and Procedures, May 1978, revised December 1981. The Center provides the Office of Enforcement and Compliance Monitoring with technical information and evidence in support of EPA legal actions. The Center's standard operating procedures ensure that information and evidence it develops will be legally admissible in enforcement actions. Topics covered by the procedures include: employee responsibility and authority; conflict of interest and public relations

relating to Center duties; sampling and document control;  
evidence audits; and data quality assurance.

Exhibit 1-1 lists other Superfund policy documents that bear directly or indirectly on the role and responsibilities of states in the Superfund program.

EXHIBIT 1-1

SUPERFUND POLICY DOCUMENTS THAT PROVIDE  
GUIDANCE ON STATE PARTICIPATION IN CERCLA

- Cost Control Manual for Superfund Removals, July 1982.
- Requirement to Use Formal Advertising Procurement Method for Subagreements Under Superfund Remedial Action Cooperative Agreements.
- Guide for Establishing the National Priorities List, (Superfund Program Guidance 82-12), June 28, 1983.
- Remedial Investigation/Feasibility Study Model Statement of Work.
- Requirements for Selecting an Off-Site Option on a Superfund Response Action (Memorandum from William N. Hedeman, Jr. to regional administrators), January 28, 1983.
- Remedial Action Master Plans Memorandum, from William N. Hedeman, Jr. to Regional Superfund Coordinators, (Superfund Program Guidance 82-9), June 22, 1982).
- Guideline for Using Imminent Hazard, Enforcement, and Emergency Response Authorities of Superfund and Other Statutes, (47 FR 20664, May 13, 1982).
- Procedures for Identifying Responsible Parties at Uncontrolled Hazardous Waste Sites, National Enforcement Investigations Center, April 1980.
- Enforcement Considerations for Evaluations of Uncontrolled Hazardous Waste Disposal Sites by Contractors, National Enforcement Investigations Center, April 1980.
- On-Scene Coordinator User Guide - Interim Procedures for the Financial Management System, July 1981.
- Guidance on Exemption to March 11, 1982 Policy on Operation and Maintenance Costs, (Superfund Program Guidance 82-8), June 15, 1982.
- Guidance on Exemption to March 11, 1982 Policy on Operations and Maintenance Costs, (Superfund Program Guidance, June 15, 1982.
- Hazardous Waste Compliance and Enforcement Program Guidance, February 23, 1982.
- Coordination of Superfund Enforcement and Fund-Financed Cleanup Activities.

## 2. STATE HAZARDOUS RELEASE RESPONSE ACTIVITIES

The states have responsibilities in the national hazardous substances cleanup program established by CERCLA and the National Contingency Plan. States have become more aware of the extent of the hazardous waste problems under their respective jurisdictions, but have been limited in responding adequately because of staff and funding limitations. In addition to this lack of resources, a number of federal and state regulatory constraints have impeded the states' ability to proceed with spill and site cleanups. (State-imposed constraints are discussed in Chapter 3.) As noted in the preface, most data in this chapter are derived from a 1983 survey conducted by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

### 2.1 REMEDIAL PROGRAM<sup>1</sup>

#### 2.1.1 Discovery and Investigation

This section describes site identification activities including site discovery, preliminary assessment, site inspection, and hazard ranking of sites for the National Priorities List.

##### Site Discovery

Site discovery actions, which can be taken by federal, state, or local governments, are required by CERCLA Section 105(1) and the National Contingency Plan. Section 300.63 of the Plan lists methods that may be used to discover sites. Site discoveries are reported to EPA and entered into the Emergency and Remedial Response Information System data base.

##### Preliminary Assessments

After site discovery, a preliminary assessment is conducted by EPA or the state to determine what future actions are necessary at a site -- e.g., no further action, emergency action, or a site inspection. Regional EPA personnel establish the order in which sites receive preliminary assessments based upon the sites' apparent hazard potential. As discussed in Section 300.64 of the National Contingency Plan, preliminary assessments are designed to determine what hazardous substances are at the site, how exposure to the substances could occur, who might be exposed, how the hazardous substances have been handled at the site, and who may be responsible for the site. The majority of preliminary assessments are now conducted by the states.

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<sup>1</sup>A detailed discussion of the remedial program is contained in Chapter 2, of the CERCLA Section 301(a)(1)(A) Study.

### Site Inspections

The purpose of a site inspection is to further define the problem posed by a waste site, or to reduce the uncertainty associated with a site. The site inspection supplements information collected during the preliminary assessment. Site inspections are more extensive than preliminary assessments and require on-site and off-site samplings to identify particular hazardous substances and determine whether they have migrated. A site inspection usually provides data that are sufficiently detailed to be used in the EPA Hazard Ranking System, the next step in determining whether a major environmental hazard exists.

### Hazard Ranking System and the National Priorities List

In addition to covering site inspections, Section 300.66 of the National Contingency Plan requires candidate sites for the National Priorities List to be ranked by the Hazard Ranking System. States and EPA use the Hazard Ranking System to rank releases or threatened releases on the basis of potential hazard.

The Hazard Ranking System attempts to establish the relative severity of a site and the probability and magnitude of human and sensitive environmental exposure to hazardous substances.

CERCLA Section 105(b) requires the National Priorities List to include "at least four hundred of the highest priority facilities." Section 105(b) of CERCLA also requires "to the greatest extent practicable" that the List include within the 100 highest priorities at least one facility designated by each state.

### Training Resources for Discovery and Investigation

Approximately one-half of the states indicated in the ASTSWMO survey that between 1981-1983 their staff attended training that was related to site identification. Most of the training took place in 1982 and 1983 and was sponsored by EPA. In some instances states, contractors, or a combination of the three sponsored the session.

As displayed in Exhibit 2-1, the states' responses have been categorized into (1) training related to sampling and/or monitoring and (2) training related to environmental assessment and evaluation. The figures show that slightly more people attended the assessment/evaluation training, but an equal amount of time (approximately 70 hours) was spent on each kind of training. The average state trained 6.6 people in sampling/monitoring and 9.4 people in assessment/evaluation.

### Analysis of Discovery and Investigation Data

This analysis examines the overall discovery and investigation progress that has been made by EPA and the states throughout the Superfund program. In addition, site identification activities broken out by state are discussed.



## EXHIBIT 2-1

STATE STAFF DISCOVERY AND INVESTIGATION TRAINING a/  
Fiscal Years 1981-1983

State	<u>Sampling and/or Monitoring</u>		<u>Environmental Assessment &amp; Evaluation</u>	
	<u>Number of</u> <u>Staff Trained</u>	<u>Days of</u> <u>Training</u>	<u>Number of</u> <u>Staff Trained</u>	<u>Days of</u> <u>Training</u>
Alabama	15	2		
Arizona	1	5	1	5
Colorado	2	3	3	2
Delaware	2	4		
District of Columbia	2	5		
Florida	22	5		
Georgia	20	2		
Illinois			6	5
Indiana			30	15
Kansas			1	3
Kentucky	5	4		
Maryland			2	3
Massachusetts	2	5	1	5
Mississippi	9	3	3	3
Nevada	4	.25		
New Hampshire	2	1	6	2
New York	11	5		
Ohio			12	2
Oklahoma			5	7
Pennsylvania	8	5	160	9
South Carolina	43	7		
South Dakota	3	5	1	5
Texas	6	6		
Vermont			4	2
Washington	8	3		
TOTALS	165	70.25	235	68
NUMBER OF RESPONDENTS	25			

a/ More than one training session may be included in a particular state's figures. For example, 80 Pennsylvania staff attended one 5-day assessment-related session and 80 attended another 4 day assessment-related session.

Source: ASTSWMO survey.

Finally, EPA and state estimates of the number of hazardous substance sites are compared for their perspectives of the extent of the problem.

Exhibit 2-2 charts site discovery, preliminary assessment, and site inspection activities for each quarter of the Superfund program (fiscal years 1981 through 1984). These data were submitted by the states and EPA regional offices and entered into headquarters' Emergency and Remedial Response Information System. The large peak in site discoveries in the third quarter of 1981 reflects the start-up of the Information System; most sites included in the third quarter data were previously identified and recorded in other data systems.

Exhibit 2-2 shows that the greatest level of activity has been in the area of site discovery and that most sites were identified early in the Superfund program. Over the past 2-1/2 years, preliminary assessments have fluctuated quarterly, but have generally exceeded the levels of other discovery and investigation activities. The number of site inspections conducted each quarter has remained fairly constant.

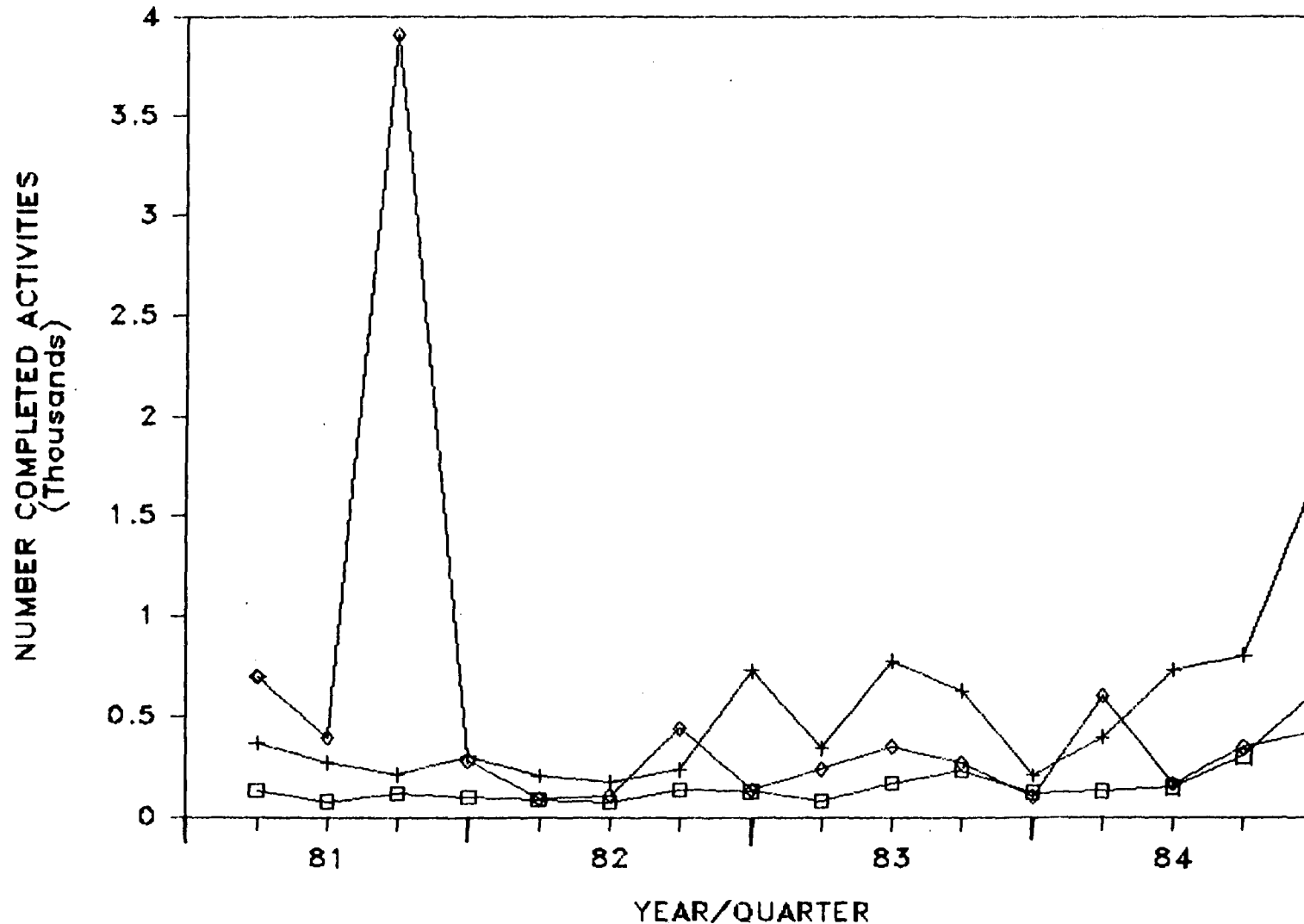
#### Discovery and Investigation Activities by State

Each discovery and investigation activity serves as a screen to categorize a site as requiring immediate attention, additional evaluation, or no action. Exhibit 2-3 contains information on the progress that has been made by both EPA and the states in this screening process. Major findings drawn from the exhibit are as follows:

- Over 18,800 sites have been identified nationwide, but their distribution among the states varies considerably. The number of sites per state averages 331, although the range is from 1 to 1,132.
- Seven states rank among the top ten states with respect both to the number of sites identified and the number of National Priorities List sites.
- Site assessment activities conducted by EPA and the states also vary from state to state. One state in particular, Texas, is noteworthy for being ranked second highest in total sites identified and completing preliminary assessments at 90 percent of these sites. Over one-half of all identified sites (57 percent) nationwide received preliminary assessments; site inspections were completed at 19 percent of all identified sites.
- Nine percent of all identified sites received a hazard ranking score and approximately 3 percent have been listed on the National Priorities List. Each state on average has 30 scored sites and 10 sites listed on the National Priorities List.

# EXHIBIT 2-2

QUARTERLY BREAKDOWN OF SITE DISCOVERIES, PRELIMINARY ASSESSMENTS  
AND SITE INSPECTIONS FOR FISCAL YEARS 1981-1984



Legend: ♦ Sites Discovered Note: Sites discovered are only those sites for which a date of discovery was available.  
+ Preliminary Assessments  
■ Site Inspections

Source: U.S. EPA, Emergency and Remedial Response Information System.

EXHIBIT 2-3SITE DISCOVERY AND INVESTIGATION ACTIVITIES  
THROUGH FISCAL YEAR 1984

<u>State</u>	<u>Total Sites a/ Identified</u>	<u>Completed Preliminary Assessments</u>	<u>Completed Site Inspections</u>	<u>Sites with Hazard Ranking Score b/</u>	<u>NPL Sites c/</u>
Alabama	417	187	25	16	7
Alaska	96	46	21	1	0
American Samoa	2	2	1	1	1
Arizona	225	161	63	12	6
Arkansas	248	222	125	16	6
California	976	525	141	109	19
Colorado	242	119	10	32	9
Commonwealth of the Marianas	4	4	1	1	1
Connecticut	234	140	14	13	6
Delaware	69	65	32	15	9
District of Columbia	5	3	2	1	0
Florida	375	199	58	65	29
Georgia	593	283	36	13	5
Guam	13	2	1	1	1
Hawaii	77	56	22	13	0
Idaho	120	67	39	7	4
Illinois	900	364	100	87	11
Indiana	695	273	62	53	17
Iowa	280	143	75	22	3
Kansas	260	172	39	15	4
Kentucky	314	215	37	22	7
Louisiana	318	263	115	8	5
Maine	78	72	21	26	5
Maryland	168	105	26	19	3
Massachusetts	489	331	60	31	16
Michigan	965	308	130	174	48
Minnesota	222	139	29	40	23
Mississippi	273	237	36	15	1
Missouri	606	514	190	82	7
Montana	81	60	8	13	5
Nebraska	174	137	31	9	0
Nevada	118	34	8	4	0
New Hampshire	75	50	21	21	10
New Jersey	1,042	403	171	144	85
New Mexico	166	153	62	6	4
New York	1,132	460	232	146	29
North Carolina	647	211	57	19	3
North Dakota	31	15	2	3	1

## EXHIBIT 2-3 (continued)

SITE DISCOVERY AND INVESTIGATION ACTIVITIES  
THROUGH FISCAL YEAR 1984

<u>State</u>	<u>Total Sites <u>a/</u> Identified</u>	<u>Completed Preliminary Assessments</u>	<u>Completed Site Inspections</u>	<u>Sites with Hazard Ranking Score <u>b/</u></u>	<u>NPL Sites <u>c/</u></u>
Ohio	860	348	75	77	22
Oklahoma	449	390	206	14	4
Oregon	167	113	54	11	3
Pennsylvania	1,031	675	223	95	39
Puerto Rico	139	14	6	10	8
Rhode Island	78	50	23	15	6
South Carolina	206	112	20	18	10
South Dakota	38	27	1	1	1
Tennessee	622	453	321	26	6
Texas	1,112	1,001	344	36	10
Trust Territories of Pacific	2	2	1	1	1
Utah	110	50	1	15	1
Vermont	22	6	2	2	2
Virginia	284	203	34	13	4
Virgin Islands	1	0	0	0	0
Washington	501	212	80	51	14
West Virginia	214	136	63	18	4
Wisconsin	242	177	42	51	20
Wyoming	74	58	2	3	1
TOTALS	18,884	10,767	3,601	1,732	538
NUMBER OF JURISDICTIONS	57				

a/ The number of total sites exceeds the number of sites discovered (Exhibit 2-2) because the latter represents only those sites for which the date of discovery was available. Two sites located on Wake Island and Midway Island are not included in this exhibit, but are included in the total.

b/ Obtained from MITRE Data Base, September 30, 1984.

c/ 48 FR 40658, September 8, 1983, 49 FR 19480, May 8, 1984, and 49 FR 37070, September 21, 1984.

Source: U.S. EPA Emergency and Remedial Response Information System.

### The Extent of the Problem

Because EPA believes that the majority of the sites posing the more serious problems have been discovered,<sup>2</sup> it is important to examine state perceptions on the number of sites in existence. The ASTSWMO survey asked the states to estimate total sites for their state and to estimate how many of these sites will require response. The results are presented in Exhibit 2-4 along with EPA's state figures for total sites as identified in the Emergency and Remedial Response Information System.<sup>3</sup>

The data reveal that nationwide, the EPA data base reported 1,261 more sites than did the states in the ASTSWMO survey. On a state-by-state basis, however, discrepancies between EPA and state estimates are greater. For example, California state officials reported that they have 4,750 sites, 2,000 of which need response. The Emergency and Remedial Response Information System lists 976 sites for California. On the other hand, EPA estimates 860 sites for Ohio, while state officials responded that 40 sites exist in their state. In most states (70 percent), however, EPA figures are larger, whereas only 27 percent of states reported more sites than did EPA.

The most important observation from the exhibit is that states' estimate that over 7,000 sites require response, although the scope of response for these sites is likely to be less than for sites listed on the National Priorities List. States perceive the extent of the problem to be considerably broader than what can be addressed by the Superfund program, which is expected to place 1,800 sites on the National Priorities List. There may also be certain sites that the states are aware of, yet have not submitted to the Information System for political and institutional reasons, or because they planned to initiate enforcement actions at the site(s).

### Effect of EPA Policies on State Participation in Discovery and Investigation

Two EPA activities seem especially relevant to the extent of state involvement in identifying and evaluating sites:

- (1) EPA's attempt to increase the pace of the Superfund program by increasing the number of sites listed on the National Priorities List; and
- (2) EPA's disbursement of funds to the states under the Resource Conservation and Recovery Act Section 3012 program and under Superfund cooperative agreements.

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<sup>2</sup>EPA believes that the number of sites submitted to the Emergency and Remedial Response Information System will grow to approximately 22,000. Thus, according to this estimate, over 85 percent of potential hazardous sites have been discovered.

<sup>3</sup>State estimates are from July-October 1983, and EPA data are as of September 30, 1984.

## EXHIBIT 2-4

ESTIMATES OF THE NUMBER OF HAZARDOUS SUBSTANCE SITES  
BY EPA AND THE STATES

<u>State</u>	<u>a/</u> Number of Sites in State by States' <u>Estimates</u>	<u>a/</u> Sites Needing Response by States' <u>Estimates</u> Percent of Total <u>Estimated</u>		<u>b/</u> Number of ERRIS Sites as of 9/30/84	Difference Between States' <u>Estimate</u> and ERRIS
		<u>Number</u>			
Alabama	400	100	25	417	-17
Alaska	10	2	20	96	-86
American Samoa	.	.	.	2	.
Arizona	200	50	25	225	-25
Arkansas	300	20	7	248	52
California	4,750	2,000	42	976	3,774
Colorado	20	8	40	242	-222
Commonwealth of the Marianas	.	.	.	4	.
Connecticut	200	200	100	234	-34
Delaware	80	8	10	69	11
District of Columbia	3	0	0	5	-2
Florida	237	90	38	375	-138
Georgia	300	150	50	593	-293
Guam	.	.	.	13	.
Hawaii	50	5	10	77	-27
Idaho	.	8	.	120	.
Illinois	550	100	18	900	-350
Indiana	200	200	100	695	-495
Iowa	.	.	.	280	.
Kansas	150	100	66	260	-110
Kentucky	150	75	50	314	-164
Louisiana	.	.	.	318	.
Maine	.	.	.	78	.
Maryland	100	11	11	168	-68
Massachusetts	350	53	15	489	-139
Michigan	1,200	700	58	965	235
Minnesota	125	90	72	222	-97
Mississippi	250	25	10	273	-23
Missouri	100	65	65	606	-506
Montana	79	20	25	81	-2
Nebraska	150	15	10	174	-24
Nevada	4	2	50	118	-114
New Hampshire	95	50	53	75	20
New Jersey	1,500	800	53	1,042	458
New Mexico	200	100	50	166	34

## EXHIBIT 2-4 (continued)

ESTIMATES OF THE NUMBER OF HAZARDOUS SUBSTANCE SITES  
BY EPA AND THE STATES

<u>State</u>	<u>a/</u> Number of Sites in State by States' Estimates	<u>Sites Needing</u> <u>Response by</u> <u>States' Estimates</u> <u>Percent</u> <u>of Total</u> <u>Estimated</u> <u>Number</u>	<u>a/</u> <u>Estimates</u>	<u>b/</u> Number of ERRIS Sites as of 9/30/84	<u>Difference</u> <u>Between</u> <u>States'</u> <u>Estimate</u> <u>and ERRIS</u>
New York	750	200	27	1,132	-382
North Carolina	.	.	.	647	.
North Dakota	15	0	0	31	-16
Ohio	40	40	100	860	-820
Oklahoma	50	15	30	449	-399
Oregon	45	8	18	167	-122
Pennsylvania	1,200	600	50	1,031	169
Puerto Rico	.	.	.	139	.
Rhode Island	.	.	.	78	.
South Carolina	30	30	100	206	-176
South Dakota	50	2	4	38	12
Tennessee	650	500	77	622	28
Texas	1,300	150	12	1,112	188
Trust Territories of the Pacific	.	.	.	2	.
Utah	.	.	.	110	.
Vermont	12	6	50	22	-10
Virginia	275	15	5	284	-9
Virgin Islands	1	0	0	1	0
Washington	500	.	.	501	-1
West Virginia	200	.	.	214	-14
Wisconsin	750	500	67	242	508
Wyoming	.	.	.	74	.
TOTALS	17,621	7,113	40	18,884 <u>b/</u>	1,261 <u>c/</u>
NUMBER OF RESPONDENTS	44	43		57	44

a/ ASTSWMO survey.

b/ U.S. EPA, Emergency and Remedial Response Information System. Two sites located on Wake Island and Midway Island are not included in this exhibit, but are included in the total.

c/ Cumulative differences between states' estimate and ERRIS equaled 5,489 where the state estimate was the larger, and 4,885 where the ERRIS number was the larger, or a total discrepancy of 10,374.



As a result of these efforts, EPA and the states expect to increase significantly the number of assessment activities and to complete all preliminary assessments by the end of fiscal year 1986 and site inspections by the end of fiscal year 1987.

The effects of EPA's policy changes on the performance of hazard assessment activities are not yet fully known, but EPA expects that the incidence of preliminary assessments and site inspections will increase because of the greater emphasis on these activities and the states' additional resources under the Resource Conservation and Recovery Act Section 3012 program and under Superfund cooperative agreements. Experience thus far suggests that states may need assistance in establishing site identification targets or require assistance in planning for resource needs to reach their targets. Such assistance could include, for example, continued training for state staff.

In summary, states are now taking major responsibility for the conduct of most preliminary site identification tasks. EPA is providing funding support and technical assistance to the states under the RCRA Section 3012 program and Superfund cooperative agreements.

#### 2.1.2 Remedial Activities<sup>4</sup>

This section focuses on state remedial planning and response activities. A remedial action is a long-term response, consistent with permanent remedy, to prevent or mitigate the migration of hazardous substances into the environment. Remedial actions generally cost over \$1 million and take from six months to several years to complete.

The pace of cleanup efforts depends as much on factors over which EPA has no influence, as on the procedures EPA establishes and the division of costs and responsibilities between states and EPA. Such factors may include state budgetary constraints and the political pressures exerted on state governments to expedite cleanups. However, a review of changes in the level of remedial activity over time provides an indication that recent EPA policy changes (particularly the decision to limit the time allotted to negotiation in favor of quick action) may have contributed to increases in the level of activity. Exhibit 2-9 charts the actual number of remedial investigation/feasibility studies initiated by EPA in each quarter from the first quarter of FY81 through the fourth quarter of FY84. (No investigations/studies were initiated prior to the third quarter of FY81.) The exhibit reveals a sharp increase in the number of remedial investigation/feasibility studies initiated in the third quarter of FY83. Prior to that time, fewer than 24 remedial investigations/feasibility studies were initiated per quarter. Since the third quarter of FY83, the average has been close to 40 start-ups per quarter. Although these improvements cannot be definitively attributed to EPA policies, the increase did occur when EPA began to implement these policies in May 1983.

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<sup>4</sup>A detailed discussion of remedial activities is contained in Chapter 2 of the CERCLA Section 301(a)(1)(A) report.

### State Resources for Long-Term Cleanups

The ASTSWMO survey asked a series of questions concerning staffing levels for states' remedial action programs. States were asked to estimate the total number of person-years devoted to remedial response -- including both Superfund cleanups and any independent state efforts -- for fiscal years 1983, 1984, and 1985. ASTSWMO further requested that states disaggregate these figures by funding source, identifying positions or fractions of positions funded from state revenues, from federal Superfund allotments, and from other federal sources.

Exhibit 2-5 presents the survey results concerning state staffing. The exhibit indicates the total number of full time positions in each state's remedial response program for fiscal years 1983 and 1984. (Because many respondents in the ASTSWMO survey did not provide estimates for FY85, the data for that year have been omitted from the exhibit.) The exhibit also presents a breakdown of these totals by funding source. Three categories of sources for the funds to pay remedial response staff are listed: state funds, CERCLA funds, and other federal government funds. Several important points may be drawn from the exhibit:

- States predicted a sharp increase between 1983 and 1984 in the amount of staff time devoted to remedial responses. For FY83, 41 states listed a total of 258.8 person-years. For FY84, 40 states projected a total of 427.9 person-years -- a 65 percent increase in absolute terms and a 70 percent increase in the average for responding states.
- Funding for the majority of positions, in both 1983 and 1984, was expected to come from state revenues. In FY83, states reported that 189.9 of 258.8 remedial response positions (or 73 percent) were financed from state resources. In projections for FY84, states anticipated funding 317.6 of 427.9 projected positions (or 74 percent) from state revenues. Superfund financing represents the next most important funding source, supporting 45.3 (or 18 percent) of remedial response positions in 1983 and 64.6 (or 15 percent) of projected 1984 positions. Monies from federal sources outside of Superfund funded the remaining remedial staff.
- Personnel are concentrated in a few states. The five states that reported the largest staffs in 1983 (New Jersey, New York, California, Massachusetts, and Tennessee) accounted for 145.5 or 56 percent, of all reported positions. Projections for 1984 suggested the possibility of even greater concentration. The five leading states for that year (New Jersey, New York, Michigan, Massachusetts, and California) accounted for 277 of the person-years projected for that year, or 65

## EXHIBIT 2-5

STATE	1983 Staff				REMEDIAL RESPONSE STAFF				1984 Staff			
	Res. Response Total	Res. Response EPA - Fed fund	Res. Response Other - Fed	Res. Response Other - State	Res. Response Total	Res. Response EPA - Fed fund	Res. Response Other - Fed	Res. Response Other - State	Res. Response Total	Res. Response EPA - Fed fund	Res. Response Other - Fed	Res. Response Other - State
Alabama	1.0	0.0	0.8	0.3	6.4	0.0	6.4	0.0				
Alaska	0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.2				
Arizona	4.0	0.0	0.3	3.5	4.3	2.0	0.0	2.3				
Arkansas	4.0	0.0	0.0	4.0	4.0	0.0	0.0	4.0				
California	17.0	0.0	0.0	17.0	21.0	0.0	0.0	21.0				
Colorado	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Connecticut	2.5	0.0	2.0	0.5	2.5	0.0	2.0	0.5				
Delaware	1.3	0.0	0.0	1.3	1.3	0.0	0.0	1.3				
District of Columbia	0.5	0.0	0.5	0.0	0.5	0.0	0.5	0.0				
Florida	6.0	0.0	0.0	6.0	10.8	0.0	0.0	10.8				
Georgia	6.0	0.0	2.0	4.0	10.0	0.0	6.0	4.0				
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Idaho	.	.	.	.	.	.	.	.				
Illinois	2.5	1.0	0.0	1.5	3.0	2.0	0.0	1.0				
Indiana	0.6	6.0	1.6	1.0	7.0	0.0	0.0	7.0				
Kansas	0.5	0.0	0.4	0.1	0.5	0.0	0.4	0.1				
Kentucky	2.8	0.0	0.0	2.8	0.4	1.5	3.5	3.4				
Maryland	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0				
Massachusetts	16.5	0.0	1.0	15.5	24.0	0.0	5.0	19.0				
Michigan	12.0	4.0	0.0	8.0	26.0	8.0	4.0	14.0				
Minnesota	14.0	5.0	0.0	9.0	14.0	5.0	0.0	9.0				
Mississippi	0.3	0.0	0.2	0.1	0.3	0.0	0.2	0.1				
Missouri	5.5	0.0	1.5	4.0	5.0	0.0	1.0	4.0				
Montana	0.5	0.0	0.5	0.0	1.3	1.3	0.0	0.0				
Nebraska	0.4	0.0	0.3	0.1	0.4	0.0	0.3	0.1				
Nevada	0.5	0.0	0.3	0.2	0.2	0.0	0.1	0.1				
New Hampshire	2.0	0.0	0.0	2.0	3.0	0.0	0.0	3.0				
New Jersey	50.0	0.0	0.0	50.0	110.0	0.0	0.0	110.0				
New Mexico	1.0	0.0	0.0	0.3	1.0	0.0	0.0	0.3				
New York	46.0	7.0	0.0	39.0	96.0	14.0	0.0	82.0				
North Dakota	.	.	.	.	.	.	.	.				
Ohio	4.7	0.0	2.9	1.8	10.7	0.0	10.1	0.6				
Oklahoma	1.8	0.0	0.0	0.3	2.5	1.0	1.1	0.4				
Oregon	0.3	0.0	0.3	0.0	2.4	1.9	0.0	0.5				
Pennsylvania	13.0	0.0	5.2	7.8	.	.	.	.				
South Carolina	4.0	3.0	0.0	1.0	6.0	0.0	3.0	3.0				
South Dakota	0.2	0.0	0.1	0.1	0.2	0.0	0.1	0.1				
Tennessee	16.0	10.0	0.0	6.0	16.0	10.0	0.0	6.0				
Texas	9.0	0.5	0.0	0.5	11.0	10.5	0.0	0.5				
Vermont	1.0	0.0	0.8	0.3	3.0	2.7	0.0	0.4				
Virgin Islands	.	.	.	.	.	.	.	.				
Virginia	0.0	0.0	0.0	0.0	3.8	3.8	0.0	0.0				
Washington	2.5	0.0	1.5	1.0	8.0	1.0	0.0	7.0				
West Virginia	.	.	.	.	.	.	.	.				
Wisconsin	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0				
Total	258.8	45.3	23.6	189.9	427.9	64.6	45.8	317.6				
Average	6.3	1.1	0.6	4.6	10.7	1.6	1.1	7.9				
Number of Respondents	41	41	41	41	40	40	40	40				

Source: ASTSWMO Survey.

percent. Three of these states -- New Jersey, New York, and Michigan -- rank among the top five states with the most National Priorities List sites. California and Massachusetts also have a large number of National Priorities List sites.

The survey results concerning remedial response funds exhibit some of the same patterns that are evident in the staffing data. These results are set forth in Exhibit 2-6. This exhibit characterizes states' remedial response funding for fiscal years 1983 and 1984 in four categories: total funding, and funding obtained from CERCLA, from state sources, and from federal sources other than CERCLA. Some of the important generalizations supported by these data may be summarized as follows:

- Respondents projected that remedial response funding during FY84 would be substantially higher than in FY83. For 1983, 37 respondents reported total response funds of \$126.0 million. The 35 jurisdictions that provided responses for 1984 projected a total funding level of \$263.2 million -- an increase of more than 100 percent. Because the 1984 figure represents a smaller number of responses, the average funding level per respondent increased even more sharply from \$3.4 million in 1983 to \$7.5 million in 1984.
- For both years, respondents indicated that the Superfund would be the most important source of remedial response funds. In 1983, \$103.7 million of \$126.0 million in total funds (or 82 percent) were reported to have come from Superfund. Projections for FY84 indicated that \$201.0 million out of \$263.2 million in total funds (or 76 percent) would come from Superfund. The survey identified state funds as the next most important source of remedial resources. State revenues accounted for \$20.5 million, or 16 percent, of total resources in 1983 and \$39.3 million, or 15 percent, of projected resources in 1984. Thus, although state resources pay the salaries of most remedial response personnel, they are vastly outweighed by CERCLA funds as sources of overall response funds.
- Response funds, like response program staff, are heavily concentrated in a handful of states. For 1983, the four states that reported the greatest response funds (Michigan, Pennsylvania, New York, and New Jersey) reported controlling \$102.5 million, or 81 percent of all reported response funds. Projections for 1984 placed \$173.1 million, or 66 percent, of remedial response funds in the hands of the four leading jurisdictions (Florida, California, New Jersey, and New York).

## EXHIBIT 2-6

REMEDIAL RESPONSE FUNDS  
(in thousands of \$)

STATE	1983 Funds				1984 Funds			
	Remedial Response Total	Remedial Response EPA - Fed fund	Remedial Response Other - Fed	Remedial Response Other - State	Remedial Response Total	Remedial Response EPA - Fed fund	Remedial Response Other - Fed	Remedial Response Other - State
Alabama	.	.	.	.	.	.	.	.
Alaska	0.0	0.0	0.0	0.0	62.0	0.0	60.0	2.0
Arizona	200.0	0.0	19.5	180.5	6,426.0	5,866.5	0.0	559.5
Arkansas	.	.	.	.	.	.	.	.
California	1,821.0	0.0	0.0	1,821.0	43,100.0	16,900.0	21,200.0	5,000.0
Colorado	45.0	.	.	45.0	45.0	.	0.0	45.0
Connecticut	.	.	.	.	.	.	.	.
Delaware	23.5	0.0	0.0	23.5	1,553.5	1,500.0	0.0	53.5
District of Columbia	2.0	0.0	0.9	1.9	2.0	0.0	1.2	1.6
Florida	1,907.0	1,875.0	0.0	32.0	52,500.0	45,000.0	0.0	7,500.0
Georgia	150.0	0.0	0.0	150.0	377.0	327.0	0.0	50.0
Hawaii	0.0	0.0	0.0	0.0	47.0	0.0	47.0	.
Idaho	0.0	0.0	.	.	.	.	.	.
Illinois	2,500.0	500.0	0.0	2,000.0	1,980.0	1,800.0	0.0	180.0
Indiana	762.0	282.0	75.0	405.0	600.0	0.0	75.0	525.0
Kansas	.	.	.	.	.	.	.	.
Kentucky	821.7	693.0	0.0	128.7	1,954.6	1,618.8	126.4	209.4
Maryland	.	.	.	.	.	.	.	.
Massachusetts	1,480.5	0.0	35.0	1,445.5	2,665.0	.	0.0	2,665.0
Michigan	36,000.0	36,000.0	.	.	15,300.0	15,300.0	.	.
Minnesota	785.0	445.0	0.0	340.0	4,768.6	2,908.0	0.0	1,860.6
Mississippi	8.0	0.0	4.8	3.2	8.0	0.0	4.8	3.2
Missouri	.	.	.	.	.	.	.	.
Montana	18.0	0.0	18.0	0.0	22.5	22.5	0.0	0.0
Nebraska	12.2	0.0	8.7	3.5	12.2	0.0	8.7	3.5
Nevada	23.0	0.0	13.8	9.2	9.2	0.0	4.6	4.6
New Hampshire	1,710.0	1,500.0	0.0	210.0	7,007.5	4,000.0	0.0	1,007.5
New Jersey	17,244.9	15,516.9	0.0	1,728.0	42,311.2	38,077.2	0.0	4,234.0
New Mexico	32.0	0.0	24.0	8.0	32.0	0.0	24.0	8.0
New York	19,167.0	12,500.0	667.0	6,000.0	35,140.0	25,000.0	500.0	9,640.0
North Dakota	.	.	.	.	.	.	.	.
Ohio	4,826.5	3,850.0	800.0	176.5	2,596.0	2,596.0	0.0	0.0
Oklahoma	249.8	228.0	0.0	21.8	254.4	231.3	0.0	23.1
Oregon	11.2	0.0	11.2	0.0	125.3	0.0	103.0	22.3
Pennsylvania	30,130.0	27,000.0	0.0	3,130.0	30,616.0	27,000.0	486.0	3,130.0
South Carolina	1,120.8	651.8	0.0	469.0	1,740.8	900.0	80.2	752.6
South Dakota	2.0	0.0	1.0	1.0	2.0	0.0	1.0	1.0
Tennessee	2,122.0	372.0	.	1,750.0	372.0	372.0	.	.
Texas	2,330.0	2,330.0	0.0	.	7,398.0	7,398.0	0.0	.
Vermont	200.0	.	0.0	200.0	.	.	.	.
Virgin Islands	.	.	.	.	.	.	.	.
Virginia	0.0	0.0	0	0.0	150.0	0.0	150.0	0.0
Washington	260.0	0.0	60.0	200.0	2,920.0	2,200.0	0.0	720.0
West Virginia	0.0	0.0	0.0	0.0	1,000.0	.	.	1,000.0
Wisconsin	0.0	0.0	0.0	0.0	66.0	0.0	0.0	66.0
Total	125,973.9	103,724.3	1,738.0	20,510.5	263,164.6	201,017.3	22,879.9	39,267.5
Average	3,404.7	2,963.6	51.1	603.3	7,519.0	6,281.8	715.0	1,266.7
Number of Respondents	37	35	34	34	35	32	32	31

Source: ASTSWMO Survey.

### State Resources for Community Relations

States have begun to increase their involvement in the community relations component of the Superfund program. State staffing and budget resources devoted to community relations are discussed below.

#### Community Relations Staff

As Exhibit 2-7 shows, nine states have full-time staff specifically responsible for community relations. Often, the states rely on EPA regional staff or EPA Remedial Planning/Field Investigation Team contractors for assistance in developing and implementing community relations plans.

Exhibit 2-7 also shows the expected community relations training needs of various states. The states anticipated the need to train thirty-four (34) staff persons in FY84 and thirty-two (32) staff persons in FY85. The number of staff reported to need community relations training varies substantially among the states. For example, Michigan reported that 25 staff (74 percent of the total need reported by the states) are expected to receive community relations training in FY84, while most states anticipated the need to train one or two staff for community relations. This large variation is probably a result of the states' different approaches to implementing community relations at Superfund sites, or differing emphases placed on these activities. In some states, the technical staff are responsible for conducting community relations in addition to performing other activities at specific sites. Because community relations is only part of their responsibilities, the entire technical staff may receive general community relations training. Other states may have one or two staff persons responsible for community relations at all sites in the state. In this case, community relations training would be more specialized and extensive.

Some of the states' training needs will be met by the community relations training program being conducted by EPA. The training program is designed to give region and state technical, enforcement, and community relations staff additional guidance on how to implement an effective community relations program. A staff person from each state is invited to attend the program and encouraged to share the information from the training program with other state staff. In addition, videotapes of the workshops will be used by the regions to train state staff in community relations.

#### Community Relations Budget

Little information is available on state budgets for community relations at Superfund sites. Recent conversations with two state Superfund staff suggest a significant difference between states in the amount of money budgeted for community relations. For example, New Hampshire allocates approximately \$10,000 to \$16,000 per site for community relations.<sup>5</sup> In

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<sup>5</sup>Telephone conversation with Kathleen Barlow, Hazardous Waste Coordinator, New Hampshire Water Supply and Pollution Control Commission (June 1, 1984).

## EXHIBIT 2-7

COMMUNITY RELATIONS TRAINING

State	Full-time Community Relations staff	Number of Staff Expected to Receive Training	
		<u>FY 84</u>	<u>FY 85</u>
California			10
Colorado			1
Connecticut			2
Delaware		2	2
Georgia			1
Maryland			1
Massachusetts	1		7
Michigan		25	
Minnesota	1		
Missouri	1		2
New Hampshire	1		
New Jersey	4 <u>a/</u>	1	1
New York	3-5 <u>b/</u>		
Ohio	3	3	
Oklahoma		2	2
South Dakota			1
Texas	1	1	
Vermont			1
Washington	1		
West Virginia			1
TOTALS	16-18	34	32
NUMBER OF JURISDICTIONS	20		

a/ In the report by ICF Incorporated, Fostering the State Role in Superfund, (August 1983), New Jersey indicated that the state had two (2) employees handling Superfund community relations. However, a telephone conversation with Grace Singer, Program Manager for Community Relations, New Jersey Department of Environmental Protection, indicates that New Jersey now has four (4) staff persons responsible for community relations at Superfund sites.

b/ According to the ICF Incorporated report (August 1983), no single New York state employee works exclusively on Superfund community relations. However, two full-time professionals handle "public participation" and nine (9) people in the state spend approximately thirty percent (30%) of their time on Superfund community relations. The three to five staff reported above represent full-time staff equivalencies.

Source: ASTSWMO survey (unless otherwise noted).

contrast, New Jersey, which has initiated work at 49 sites in FY84, has a total community relations budget of \$226,000 (an average of less than \$5,000 per site).<sup>6</sup> In addition, part of New Jersey's community relations budget is used for non-site specific tasks such as funding development of its management plan.

#### Analysis of State Long-Term Cleanup Data

State involvement in efforts to address the problems caused by hazardous substance releases can also be assessed through a review of the numbers of remedial responses initiated and completed in each state. Exhibit 2-8 sets out the numbers of long term remedial responses initiated and completed by state. "State long-term cleanups" are remedial responses that do not involve Superfund monies and that require more than six months and \$1 million to complete. (Figures in this category may include actions at National Priorities List sites that are financed by private responsible parties.) "CERCLA-funded cleanups" are CERCLA remedial actions financed through Superfund disbursements and the state cost shares required by CERCLA Section 104(c)(3). This category includes Superfund remedial actions that are governed by cooperative agreements (i.e., state-lead actions) as well as by Superfund state contracts (i.e., EPA-lead activities).

Because there can be no assurance that states who responded to the survey construed the term "long-term cleanup" to be synonymous with remedial activities at Superfund sites, the figures presented in the exhibit may not be strictly comparable. With this qualification in mind, it is useful to examine the following observations concerning the progress of remedial activities:

- State cleanups are less evenly distributed than EPA cleanups. For example, the three states that have initiated the most cleanups among survey respondents since 1981 (Wisconsin, Michigan, and Tennessee) account for 98 of the 133 state cleanups, or 74 percent. In contrast, the three states in which the most EPA cleanups have been initiated (New Jersey, Pennsylvania, and Michigan) contain 84 of 290 cleanup sites, or 29 percent.
- The proportion of projects that have been completed is substantially higher for state long-term cleanups initiated since 1981 than for EPA cleanups begun during the same period. States reported having completed 33 of 133 or 25 percent of their cleanup actions, while Superfund program data shows 6 completions out of 290 projects or 2.1 percent. Available information fails to identify the source of this disparity. State cleanups

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<sup>6</sup>Telephone conversation with Grace Singer, Program Manager for Community Relations, New Jersey Department of Environmental Protection (June 15, 1984).



## EXHIBIT 2-8

LONG-TERM CLEANUPS OF HAZARDOUS WASTE SITES SINCE 1981

<u>State</u>	<u>State Long-Term Cleanups a/</u>		<u>CERCLA-Funded Cleanups b/</u>	
	<u>Initiated Since 1/1/81</u>	<u>Completed Since 1/1/81</u>	<u>Initiated Since 1/1/81</u>	<u>Completed Since 1/1/81</u>
Alabama	1	1	1	0
Alaska	0	0	0	0
American Samoa	-	-	1	0
Arizona	0	0	4	0
Arkansas	0	0	5	0
California	0	0	13	0
Colorado	1	0	7	0
Commonwealth of the Marianas	-	-	1	0
Connecticut	0	0	3	0
Delaware	0	0	4	0
District of Columbia	1	1	0	0
Florida	1	0	16	0
Georgia	0	0	0	1
Guam	-	-	1	0
Hawaii	0	0	0	0
Idaho	0	0	0	0
Illinois	0	0	11	0
Indiana	0	0	9	0
Iowa	-	-	3	0
Kansas	0	0	2	0
Kentucky	0	0	7	0
Louisiana	-	-	6	0
Maine	-	-	3	0
Maryland	0	0	3	1
Massachusetts	9	8	10	0
Michigan	38	8	18	1
Minnesota	0	0	9	0
Mississippi	0	0	0	1
Missouri	-	-	5	0
Montana	0	0	4	0
Nebraska	0	0	0	0
Nevada	1	0	0	0
New Hampshire	0	0	6	0
New Jersey	4	2	43	0
New Mexico	0	0	2	0
New York	8	0	14	0

## EXHIBIT 2-8 (continued)

LONG-TERM CLEANUPS OF HAZARDOUS WASTE SITES SINCE 1981

<u>State</u>	<u>State Long-Term Cleanups a/</u>		<u>CERCLA-Funded Cleanups b/</u>	
	<u>Initiated</u> <u>Since</u> <u>1/1/81</u>	<u>Completed</u> <u>Since</u> <u>1/1/81</u>	<u>Initiated</u> <u>Since</u> <u>1/1/81</u>	<u>Completed</u> <u>Since</u> <u>1/1/81</u>
North Carolina	-	-	0	0
North Dakota	-	-	1	0
Ohio	0	0	13	1
Oklahoma	0	0	4	0
Oregon	0	0	1	0
Pennsylvania	2	1	23	1
Puerto Rico	-	-	2	0
Rhode Island	-	-	2	0
South Carolina	0	0	4	0
South Dakota	0	0	0	0
Tennessee	20	1	3	0
Texas	0	0	12	0
Trust Territories of the Pacific	-	-	1	0
Utah	-	-	0	0
Vermont	0	0	1	0
Virgin Islands	-	-	0	0
Virginia	0	0	3	0
Washington	0	0	6	0
West Virginia	7	6	2	0
Wisconsin	40	5	1	0
Wyoming	-	-	0	0
TOTALS	133	33	290	6
NUMBER OF JURISDIC- TIONS	42	42	57	57

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(footnotes on next page).

## FOOTNOTES TO EXHIBIT 2-8

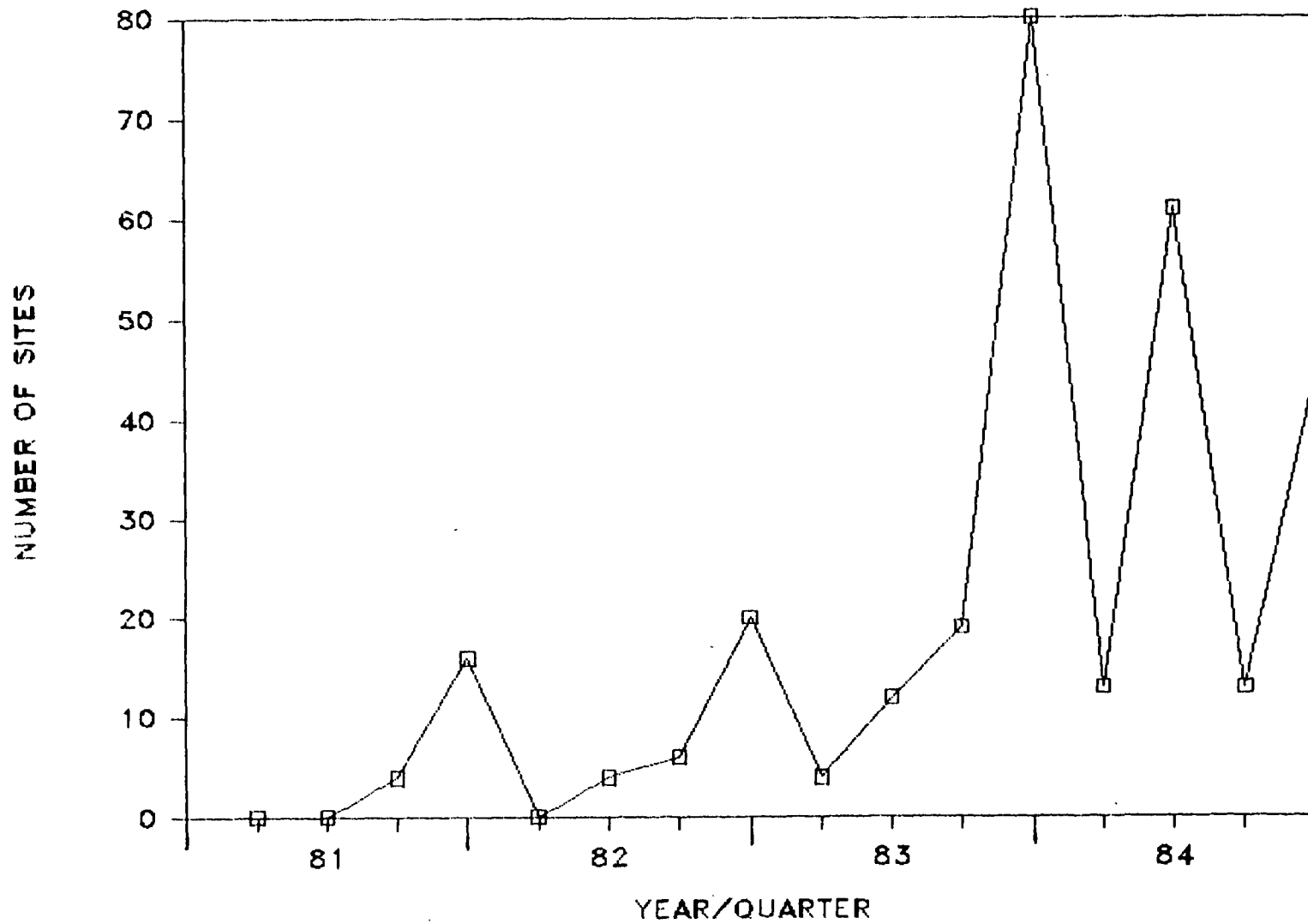
a/ State long-term cleanups include remedial responses that do not draw upon Superfund monies and that require more than six months and \$1 million to complete. Although no breakdown is available, activities in this category may include both long-term cleanups undertaken at sites that are not listed on the National Priorities List and cleanups at listed sites that are financed by responsible parties. Apart from these privately financed cleanups at sites ranked by the Superfund program, it is uncertain whether states' interpretation of the phrase "long-term cleanup" is consistent with the definition EPA attaches to the term. Also, some states may have included state-lead, CERCLA-financed cleanups in their responses to this question. Thus, the figures presented in this exhibit cannot be interpreted to provide the definitive comparison of CERCLA and state cleanup actions.

b/ Data on CERCLA-funded cleanups initiated since January 1, 1981, include RI/FS's initiated through September 30, 1984. Data on completions include sites at which all currently scheduled remedial construction was completed by September 12, 1984. These data do not include 25 cleanups by private responsible parties.

Source: ASTSWMO survey (state cleanup data) and U.S. EPA, Office of Solid Waste and Emergency Response (CERCLA cleanup data).

EXHIBIT 2-9

QUARTERLY BREAKDOWN OF REMEDIAL INVESTIGATIONS/  
FEASIBILITY STUDIES FOR FISCAL YEARS 1981-1984



Source: U.S. EPA, Office of Emergency and Remedial Response.

may have been initiated earlier, on average, than EPA cleanups. State cleanups may generally be less complex or narrower in scope. Alternatively, the difference could reflect differences in the activities states and EPA use to mark the beginning or end of a long-term cleanup. Data concerning EPA cleanups includes all sites at which remedial investigation/ feasibility studies have commenced. It is not known whether survey responses from states uniformly included state cleanups that are only at the planning stage.

- Certain states, such as New York and Michigan, rank among the leaders in both state cleanups and EPA cleanups. These two states are also among the five states having the greatest number of National Priorities List sites. Some states, such as Wisconsin and Tennessee, rank far higher in their number of state (as opposed to EPA) cleanups, while others, such as Pennsylvania, have a high number of EPA cleanups relative to state cleanups.

## 2.2 RESPONSES TO SUDDEN RELEASES AND SHORT-TERM CLEANUPS<sup>7</sup>

This section analyzes state responses to sudden releases or spills and short-term cleanup activities. In the ASTSWMO survey a spill response meant that the state sent a staff person to investigate a spill; the state may or may not have cleaned up the spill. States responded to over 8,000 spills annually in fiscal years 1981 and 1982. The survey also asked states to report their short-term cleanups, exclusive of Superfund cleanups. These cleanups were defined as costing less than \$1 million and taking less than six months to complete. The definition of a short-term cleanup in the survey is comparable to EPA's definition of a removal action under CERCLA.

### State Resources for Sudden Releases and Short-Term Cleanups

To conduct sudden release and short-term cleanup activities, three types of resources are essential to the development and operation of a response program: (1) staff resources; (2) adequate funds; and (3) access to necessary technical expertise and resources. There is a close relationship among these three resources in that technical staff resources are dependent on funding availability. Similarly, cleanup funds are significant only to the extent that a state has the technical expertise and staff resources to carry out cleanup activities effectively. Adequacy in one resource area may be of limited utility without access to either of the other resource areas. State data are presented below for each of these three resources.

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<sup>7</sup>A detailed discussion of EPA's removal program is presented in Chapter 3 of the CERCLA Section 301(a)(1)(A) Study.

The staffing and funding section of the ASTSWMO survey asked states to provide data on their "spill response" resources. Staffing and funding figures, therefore, may represent responses to sudden releases and short-term cleanups. The following discussion utilizes the term "spill response" in referring to state staff and funds for these activities.

Staff Resources.<sup>8</sup> One measure of a state's ability to respond to hazardous substance spills is the number of staff that it commits solely to hazardous spill response activities. Having greater staff committed to spill response activities at the state level implies an enhanced state capability to respond expeditiously to spills and a decreased likelihood of having to rely upon EPA or federal assistance for implementation of its spill response activities. The commitment of state staff resources for spill response activities for fiscal years 1983 and 1984 is presented in Exhibit 2-10. The 40 states responding for both fiscal years 1983 and 1984 reported a total of 155 person-years, or approximately 4 person-years per state committed to spill response activity in fiscal year 1983.<sup>9</sup> In fiscal year 1984, staff available for spill response for these same 40 states increased by approximately 12 percent to 174 total staff persons, or an average of 4.4 person-years per state. Four states -- Georgia, Massachusetts, New Jersey, and Tennessee -- have each committed 17 or more person-years in both fiscal years 1983 and 1984 for work on spill response activities. Ten states have either less than one or no full time staff committed to spill response in fiscal year 1984.

Spill Response Funding. A second measure of a state's capacity to respond to spills of hazardous substances within the state's boundaries is the level of program funding that is committed to spill response activities. As shown in Exhibit 2-11, for the 29 states that responded with data for both fiscal years 1983 and 1984, total state spill response funds remains roughly the same for fiscal years 1983 and 1984 -- approximately \$6.7 million.<sup>10</sup> Sources of these funds are as follows:

- Except for Florida, which reported receiving \$2 million of CERCLA funds in fiscal year 1983, no CERCLA funds have been provided for state spill response. (Florida may have included CERCLA monies used for a planned removal.)
- For both fiscal years, approximately 8 percent of the funds available for spill response in the 29 states reporting data for those years came from other federal sources.

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<sup>8</sup>Staff represent person-years reported by the states.

<sup>9</sup>Pennsylvania did not report a number of spill response staff for fiscal year 1984 and is therefore excluded in this comparison of total staff (i.e., this leaves a total of 155 staff for fiscal year 1983).

<sup>10</sup>Ohio, which reported spill funding data only for fiscal year 1984, is excluded from this analysis. Total funds available for all respondents in fiscal year 1984 was \$7,638,300; Ohio reported \$865,000 of that amount.

## EXHIBIT 2-10

STATE SPILL RESPONSE STAFF FOR  
FISCAL YEARS 1983 AND 1984

STATE	1983 Staff				1984 Staff			
	Spill Response Total	Faid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds	Spill Response Total	Paid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds
Alabama	1.1	0.0	0.8	0.3	0.4	0.0	0.3	0.1
Alaska	1.0	0.0	0.1	0.9	1.0	0.0	0.1	0.9
Arizona	0.5	0.0	0.5	0.0	0.3	0.0	0.3	0.0
Arkansas	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0
California	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0
Colorado	1.5	0.0	0.0	1.5	1.5	0.0	0.0	1.5
Connecticut	7.0	0.0	5.0	2.0	8.0	0.0	5.0	3.0
Delaware	0.3	0.0	0.0	0.3	4.0	0.0	3.0	1.0
District of Columbia	1.9	0.0	1.9	0.0	2.0	0.0	2.0	0.0
Florida	1.5	0.0	0.5	1.0	3.0	0.0	0.0	3.0
Georgia	20.0	0.0	0.0	20.0	20.0	0.0	0.0	20.0
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Illinois	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0
Indiana	6.0	0.0	2.0	4.0	6.0	0.0	2.0	4.0
Iowa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kansas	0.0	0.0	0.0	0.0	2.8	0.0	0.0	2.8
Kentucky	2.6	0.0	0.0	2.6	3.0	0.0	2.0	1.0
Maryland	3.0	0.0	2.0	1.0	19.0	0.0	1.0	18.0
Massachusetts	17.5	0.0	1.0	16.5	7.0	0.0	2.0	5.0
Michigan	7.0	0.0	2.0	5.0	4.0	0.0	1.0	3.0
Minnesota	4.0	0.0	1.0	3.0				
Mississippi	1.4	0.0	0.8	0.6	1.4	0.0	0.8	0.6
Missouri	2.0	0.0	0.0	2.0	5.0	0.0	0.0	5.0
Montana	0.5	0.0	0.0	0.5	0.5	0.0	0.0	0.5
Nebraska	1.4	0.0	1.0	0.4	1.4	0.0	1.0	0.4
Nevada	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1
New Hampshire	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Jersey	18.0	0.0	0.0	18.0	24.0	0.0	0.0	24.0
New Mexico	1.1	0.0	0.8	0.3	1.1	0.0	0.8	0.3
New York	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0
Ohio	9.0	0.0	0.0	9.0	9.0	0.0	0.0	9.0
Oklahoma	0.3	0.0	0.2	0.1	0.3	0.0	0.2	0.1
Oregon	1.1	0.0	0.1	1.0	1.5	0.0	1.0	0.5
Pennsylvania	6.0	0.0	2.4	3.6				
South Carolina	6.5	0.0	0.0	6.5	7.0	0.0	0.5	6.5
South Dakota	0.7	0.0	0.5	0.2	0.7	0.0	0.5	0.2
Tennessee	17.0	0.0	0.0	17.0	17.0	0.0	0.0	17.0
Texas	12.0	0.0	7.1	4.9	12.0	0.0	7.1	4.9
Vermont	2.0	0.0	1.5	0.5	2.0	0.0	1.5	0.5
Virginia	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0
Washington	1.1	0.0	1.1	0.0	1.3	0.0	1.3	0.0
Wisconsin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	161.1	0.0	32.3	128.8	174.3	0.0	33.4	140.9
Average	3.9	0.0	0.8	3.1	4.4	0.0	0.9	3.5
Number of Respondents	41	40	41	41	40	38	39	40

Source: ASTSWMO survey

## EXHIBIT 2-11

**STATE SPILL RESPONSE FUNDS FOR  
FISCAL YEARS 1983 and 1984**  
(thousands of \$)

STATE	1983 Funds				1984 Funds			
	Spill Response Total	Paid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds	Spill Response Total	Paid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds
Alaska	15.0	0.0	5.0	10.0	15.0	0.0	5.0	10.0
Arizona	16.5	0.0	16.5	0.0	8.3	0.0	8.3	0.0
California	1,000.0	.	0.0	1,000.0	1,000.0	.	0.0	1,000.0
Colorado	45.0	.	0.0	45.0	45.0	.	0.0	45.0
Delaware	6.3	0.0	0.0	6.3	53.0	0.0	31.0	22.0
District of Columbia	5.2	0.0	1.7	3.6	4.0	0.0	2.4	1.6
Florida	2,066.0	2,000.0	16.0	50.0	1,000.0	.	.	1,000.0
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Illinois	311.0	0.0	0.0	311.0	311.0	0.0	0.0	311.0
Indiana	214.0	0.0	74.7	139.3	214.0	0.0	74.7	139.3
Kentucky	116.5	0.0	70.1	46.4	122.1	0.0	73.2	48.9
Massachusetts	1,068.5	0.0	35.0	1,033.5	1,630.0	0.0	0.0	1,630.0
Minnesota	129.2	0.0	38.8	90.4	134.0	0.0	40.2	93.8
Mississippi	8.0	0.0	4.8	3.2	8.0	0.0	4.8	3.2
Montana	15.0	0.0	0.0	15.0	18.0	0.0	0.0	18.0
Nebraska	41.8	0.0	31.3	10.5	41.8	0.0	31.3	10.5
Nevada	5.1	0.0	0.5	4.6	5.1	0.0	0.5	4.6
New Jersey	620.7	0.0	0.0	620.7	923.0	0.0	0.0	923.0
New Mexico	32.0	0.0	24.0	8.0	32.0	0.0	24.0	8.0
New York	300.0	0.0	0.0	300.0	500.0	0.0	0.0	500.0
Ohio	.	.	.	.	885.0	0.0	44.0	821.0
Oklahoma	71.5	0.0	0.0	71.5	78.6	0.0	0.0	78.6
Oregon	46.8	0.0	4.8	42.0	67.3	0.0	37.5	29.9
Pennsylvania	71.0	0.0	0.0	71.0	75.0	0.0	0.0	75.0
South Carolina	149.5	0.0	0.0	149.5	171.7	0.0	14.7	157.0
South Dakota	16.0	0.0	13.0	3.0	16.0	0.0	13.0	3.0
Vermont	169.0	0.0	139.3	29.8	169.0	0.0	139.3	29.8
Virginia	50.0	0.0	0.0	50.0	50.0	0.0	0.0	50.0
Washington	34.3	0.0	34.3	0.0	40.5	0.0	40.5	0.0
Wisconsin	41.0	0.0	0.0	41.0	41.0	0.0	0.0	41.0
Total	6,664.9	2,000.0	509.7	4,155.2	7,638.3	0.0	584.2	7,054.1
Average	229.3	74.1	17.4	142.9	254.1	0.0	20.0	234.8
Number of Respondents	29	27	29	29	30	27	29	30

Note: These total funding levels are subject to possible revision using different interpretations of the data. For example, Florida listed \$2 million of CERCLA funding for spill response in fiscal year 1983. The accuracy of this estimate is uncertain since the source and use of the funds are undocumented.

Source: ASTSWMO survey.



- The states contributed 89 percent of total state spill response funding for fiscal year 1983, and 93 percent in fiscal year 1984. States that made the most dramatic percentage increase in funding include Delaware (8.5 fold); Massachusetts (53 percent); New Jersey (50 percent); and Oregon (44 percent).

Technical Expertise and Resources. In general, limited data are available on the technical expertise and resources that are available for spill response activities at the state level. A survey of 11 states in July 1982 indicated that each of the states surveyed had safety equipment, and 4 of the states surveyed had specially equipped vehicles for responding on-scene to spills.<sup>11</sup> Although many of the states surveyed in 1982 mentioned plans to upgrade their spill response capabilities, there has been no comprehensive study of state emergency response expertise and equipment.

The recent ASTSWMO survey of state hazardous waste cleanup programs indicates that state staff have received significant training in spill response procedures. Exhibit 2-12 identifies the spill response training programs attended by state personnel from 1981 to 1983. The exhibit shows that a total of 208 state personnel have participated in training in emergency incident response, an average of 8 people per responding state. In addition, a total of 335 people have attended training programs on the use of protective and safety equipment. Most of the training was sponsored by EPA.

#### Analysis of Immediate Removal Data

State and EPA immediate removal activities are arrayed by state in Exhibit 2-13. EPA has tracked its own removal efforts and those of the Coast Guard on a site-by-site basis since fiscal year 1981.

State data are from the ASTSWMO survey, which asked states to identify the number of short-term cleanups (exclusive of Superfund cleanups) they conducted in fiscal years 1981-1983. Short-term cleanups were defined in the questionnaire as actions costing less than \$1 million or requiring less than six months to complete, which is similar to EPA's definition of immediate removals.

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<sup>11</sup>For further information on the survey of state resources for responding to releases of hazardous substances, see ICF Incorporated, Regulatory Impact Analysis for Reportable Quantities under CERCLA sections 102 and 103 (July 1982), Chapter 6.

## EXHIBIT 2-12

STATE SPILL RESPONSE TRAINING  
1981-1983 a/

<u>State</u>	<u>Emergency Incident Response b/</u>		<u>Use of Protection and Safety Equipment</u>	
	<u>Number of staff trained</u>	<u>Days of training</u>	<u>Number of staff trained</u>	<u>Days of training</u>
Alabama	15	2		
Arkansas	1	5	7	5
Delaware	1	5	1	5
District of Columbia			2	5
Florida			23	5
			1	2
Georgia	18	5		
Illinois			30	5
Kansas	7	5		
Kentucky	2	5		
Maryland			5	5
Massachusetts	7	5	35	5
Minnesota			1	5
			2	1
Mississippi	2	3		
Montana	4	5		
	2	5		
New Jersey	8	5		
New York	25	5	70	5
			50 <u>c/</u>	5
Nevada			1	5
New Hampshire			8	5
Oklahoma			3	3
Oregon	40	2		
Ohio			4	1
South Carolina			60	4
			30	5
South Dakota			1 <u>c/</u>	.
Tennessee	67	2		
Texas	4	3		
Vermont	3	2	1	2
Washington	2	2		
TOTALS	208	66	355	78
NUMBER OF RESPONDENTS	27			

EXHIBIT 2-12 (continued)

STATE SPILL RESPONSE TRAINING  
1981-1983 a/

FOOTNOTES

a/ More than one training session may be included in a particular state's figures.

b/ Emergency incident response training includes training in incident mitigation and other hazardous substance emergency operation procedures.

c/ Included in the training for state staff identified by New York and South Dakota in the ASTSWMO survey was a training program on hazardous materials transportation sponsored by the U.S. Department of Transportation.

Source: ASTSWMO survey.

## EXHIBIT 2-13

## FEDERAL AND STATE IMMEDIATE REMOVALS FOR FISCAL YEARS 1981-1983 a/

States	FY 81		FY 82		FY 83		FY 84 <sup>b/</sup>		Total	
	Federal	States	Federal	States	Federal	States	Federal	States	Federal	States
Alabama	2	5		5	1	6	3		6	16
Alaska							1		1	
American Samoa							4		4	
Arizona			1	3		1	1		2	4
Arkansas				1						1
California	2	24	3	18	10	6	6		21	48
Colorado					1		2		3	
Connecticut		5		5	1	5	1		2	15
Delaware		2	1	4		10	2		3	16
District of Columbia		1		2						3
Florida			1	1	10	2	8		19	3
Georgia		1				1	12		12	2
Hawaii							1		1	
Idaho			1		2	1			3	1
Illinois		1	2	3	8	5	8		18	9
Indiana	1		3		5		3		12	
Iowa			1				1		2	
Kansas		3		15		6				24
Kentucky	1		1		1		4		7	
Louisiana					3		1		4	
Maine					2		3		5	
Maryland			2		1		7		10	
Massachusetts		1	1	3	5	2	3		9	6
Michigan	3		8		6		6		23	
Minnesota			1				4		5	
Mississippi		3	1	2	2	1	5		8	6
Missouri			1		4		10		15	
Montana						6				6
Nebraska							3		3	
Nevada					2	4			2	4
New Hampshire	4			1	3		3		10	1
New Jersey	4	18	3	12	6	15	8		21	45
New Mexico		1	1	3	1		1		3	6
New York	3		5		2	8	4		14	8
North Carolina	1				2		7		10	
North Dakota							1		1	
Ohio	4		9		4		3		20	
Oklahoma					2	2	1		3	2
Oregon		1		3	1		1		2	6
Pennsylvania	4		2		13		13		32	
Rhode Island	2						1		3	
South Carolina	1		1	1	1	1			3	2
South Dakota		1				5	1		1	6
Tennessee				2	2	10	2		4	12
Texas	3		4		10		10		29	

EXHIBIT 2-13 (continued)

FEDERAL AND STATE IMMEDIATE REMOVALS FOR FISCAL YEARS 1981-1983 a/

States	FY 81		FY 82		FY 83		FY 84 b/		Total	
	Federal	States	Federal	States	Federal	States	Federal	States	Federal	States
Trust Territor- ies of the Pacific							32		32	
Vermont					1	46			1	46
Virginia				1	1		1		2	1
Washington			1		2		2		5	
West Virginia			2	1	6	5	3		11	6
Wisconsin		20		20	1	5			1	45
Wyoming	1								1	
TOTALS	36	87	56	106	120	157	193		405	350
NUMBER OF RESPONDENTS ON STATE SURVEY:	29									

a/ Federal immediate removal figures include both EPA and Coast Guard immediate removals. The Coast Guard conducted a total of 38 removal actions between fiscal year 1982 and September 30, 1984. Data do not include planned removals. Data concerning state actions pertains only to activities that did not involve EPA Superfund monies. Although no breakdown is available, activities in this category may include short term cleanups undertaken at sites that are not listed on the National Priorities List and privately financed cleanups at listed sites.

b/ Data for spill response activities conducted by the states in fiscal year 1984 were not available.

Sources: Federal spill response data were obtained from the EPA Emergency Response Division, September 30, 1984.

The ASTSWMO questionnaire asked states to report their "short term clean-ups" that have not involved EPA Superfund and that cost less than \$1 million or required less than six months to complete. The short-term site cleanups are defined similarly to "immediate removals" in the National Contingency Plan. Therefore, state data on short-term cleanup activities are comparable to EPA data for immediate removals.

The data collected in the ASTSWMO study may not provide comprehensive information on all state immediate removal activities. Although most states collect information on their immediate removal activities, some do not report this information to a central source. Certain states report this information to regional EPA offices or maintain their own individual files.

As illustrated in Exhibit 2-13, both EPA and state immediate removal activities have progressively increased each year since 1981. Between fiscal years 1981 and 1982, federal activity increased by sixty percent. An even greater increase occurred between 1982 and 1983 when federal removals more than doubled. A total of 212 federal removal actions were conducted between FY81 and FY83 with an additional 193 removals conducted in FY84.

State immediate removals have also increased significantly; a total of 350 were conducted during this period. As was true for the federal government, the greatest increase in immediate removal actions took place between 1982 and 1983 (an increase of 48 percent for 29 reporting states). In 7 states, immediate removals in fiscal year 1983 increased over the previous year. Five of the most active states (New Jersey, New York, Delaware, Vermont, and Tennessee) implemented almost 60 percent of all immediate removals in fiscal year 1983.

#### Effect of Resources and EPA Policies on State Participation in Sudden Releases and Short-Term Cleanups

As described in Chapter 1, EPA policies concerning removals have changed since the beginning of the program. Many changes implemented in 1983 may affect state participation in responding to sudden releases or conducting short-term cleanups. These policy changes and their potential effect on state participation are discussed below.

- Criteria for Immediate Removals -- In early 1983, EPA broadened the criteria used to determine whether an immediate removal action can be conducted.
- Limited Delegation of Authority -- Delegation of authority to the regions in 1983 to obligate up to \$250,000 for immediate removal actions may substantially reduce the time needed to process immediate removal requests.

Because the policy changes facilitate federal involvement in conducting immediate removals, the states may direct more resources toward responding to sudden releases, or toward conducting removals that may differ in scope from EPA removals. It appears from the ASTSWMO study that states generally assume responsibility for sudden releases (over 8,000 annually) and conduct a portion of removals (350). The removals conducted by states may differ from those conducted by EPA, since EPA usually conducts removals at existing hazardous waste sites.

### 2.3 ENFORCEMENT<sup>12</sup>

This section describes the role and participation of states in the Superfund enforcement program. Unlike the remedial program, enforcement efforts under CERCLA have involved relatively little coordination between EPA and the states. A major reason for this is the language of the law itself: CERCLA's enforcement authorities are almost exclusively federal authorities. States must derive most of their enforcement authority from state laws, which differ from state to state.

The primary sources of EPA's civil enforcement authorities under CERCLA are Sections 106 and 107 of the Act. Section 106(a) authorizes EPA to issue administrative orders or to commence civil judicial actions to abate the threats posed by a release of a hazardous substance, if it is determined that such release "may present an imminent and substantial endangerment to public health or welfare or the environment." This authority allows EPA to order unilaterally a responsible party<sup>13</sup> to conduct specific cleanup actions or to cease certain actions that pose a potential danger. EPA may also, after negotiating with potentially responsible parties, issue an administrative consent order specifying the actions to be taken. Consent orders are signed by EPA and the parties, whereas unilateral orders are signed only by an EPA regional administrator. CERCLA Section 106(b) establishes penalties for non-compliance with an order issued under Section 106(a). Alternatively, under Section 106, EPA may seek action or restraint by the responsible party by requesting that the Department of Justice file a complaint in federal district court against the potentially responsible parties.

Section 107(a) of CERCLA makes responsible parties liable for:

- The costs incurred by the state or the federal government in responding to an actual or threatened release of a hazardous substance;
- The costs incurred by any other person in responding to a release consistent with the National Oil and Hazardous Substances Pollution Contingency Plan; and
- Damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss.

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<sup>12</sup>A detailed discussion of enforcement is contained in Chapter 4 of the 301(a)(1)(A) analysis.

<sup>13</sup>Potentially responsible parties are persons potentially responsible for a release of a hazardous substance. Such parties may include owners and operators of a facility and anyone who transports, generates, uses, stores, handles, treats, or disposes of the hazardous substances.

In addition, CERCLA Section 107(c)(3) makes responsible parties liable for up to three times the cost of any government response actions necessitated by the failure, without sufficient cause, of such parties to comply with an administrative order issued pursuant to section 106(a).

Of these enforcement provisions available to EPA, only the liability provisions of CERCLA Section 107 are available to the states. States may sue responsible parties to recover costs of state response under Section 107. In addition, states are granted an independent federal cause of action under CERCLA Section 107(f) to sue for damages to natural resources "within the State or belonging to, managed by, controlled by, or appertaining to such State."

States are not authorized to issue administrative orders or commence civil actions under CERCLA Section 106. Many states may have passed laws granting the state government similar authorities, but a detailed review of state laws would be required to determine whether states may apply the authorities under the same circumstances or whether states have penalties and damages comparable to the penalties and treble damages authorized by CERCLA. States vary in their willingness and capability to pursue enforcement action. EPA has little information about the status of enforcement action at NPL sites classified as state enforcement leads.

#### State Resources for Enforcement<sup>14</sup>

In the majority of the states, lack of funds and personnel has been the greatest obstacle to effective state enforcement efforts. Exhibits 2-14 and 2-15 present figures on enforcement resources available to the states for fiscal years 1983 and 1984. Exhibit 2-14 shows, for each state responding to the survey, the amount of funds available for state enforcement in fiscal years 1983 and 1984 from EPA, state, and other federal (i.e., non-EPA) sources. Exhibit 2-15 shows, for each state, the number of state enforcement staff in fiscal years 1983 and 1984 supported by state, EPA, and non-EPA federal funds. The most striking feature of these data is the concentration of funds and staff in a few states. For example, of the more than \$4 million reported for state enforcement use in fiscal year 1983, approximately 40 percent was spent by New York, with the majority of the remaining funds spent by a few other states (Minnesota, New Jersey, New Hampshire). For fiscal year 1984, New York's share of the total projected expenditures drops somewhat, but 85 percent of budgeted expenditures are concentrated in five states: New York, California, New Jersey, New Hampshire, and Minnesota. The data on enforcement staff show similar results, with roughly two-thirds of the total for fiscal year 1983 concentrated in five states and roughly 95 percent of the total for fiscal year 1984 concentrated in six states.

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<sup>14</sup>ASTSWMO survey responses were provided by state hazardous substance cleanup offices. State attorney general offices, which are often central to state enforcement actions, were not surveyed.



## EXHIBIT 2-14

## STATE ENFORCEMENT FUNDS, FISCAL YEARS 1983-1984

STATE	1983 Funds				1984 Funds			
	Enforcement Total	Paid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds	Enforcement Total	Paid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds
Alabama	.	.	.	.	.	.	.	.
Alaska	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Arizona	31.0	0.0	31.0	0.0	31.0	0.0	31.0	0.0
Arkansas	.	.	.	.	.	.	.	.
California	0.0 *	0.0	0.0	.	1,234.5	0.0	951.0	281.5
Colorado	60.0	40.0	0.0	60.0	100.0	40.0	0.0	60.0
Connecticut	.	.	.	.	.	.	.	.
Delaware	5.0	0.0	0.0	5.0	5.0	0.0	0.0	5.0
District of Columbia	17.9	0.0	12.0	5.1	17.1	0.0	12.0	5.1
Florida	64.0	0.0	24.0	64.0	60.0 *	0.0	.	60.0
Georgia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Idaho	0.0 *	0.0	.	.	.	.	.	.
Illinois	0.0 *	0.0	.	.	0.0 *	0.0	.	.
Indiana	20.0	0.0	15.0	5.0	20.0	0.0	15.0	5.0
Iowa	.	.	.	.	.	.	.	.
Kansas	16.0	0.0	4.0	12.0	21.5	0.0	6.5	15.0
Kentucky	.	.	.	.	.	.	.	.
Maryland	.	.	.	.	.	.	.	.
Massachusetts	52.5	0.0	52.5	0.0	0.0	0.0	0.0	0.0
Michigan	.	.	.	.	.	.	.	.
Minnesota	499.7	81.0	0.0	418.7	521.0	81.0	0.0	440.0
Mississippi	0.0	0.0	4.0	3.2	0.0	0.0	4.0	3.2
Missouri	.	.	.	.	.	.	.	.
Montana	10.0	0.0	10.0	0.0	36.0	36.0	0.0	0.0
Nebraska	3.5	0.0	0.0	3.5	3.5	0.0	0.0	3.5
Nevada	3.2	0.0	0.9	2.3	3.2	0.0	0.9	2.3
New Hampshire	289.4	0.0	275.7	113.7	686.0	0.0	175.7	510.3
New Jersey	896.6	0.0	0.0	896.6	1,000.0	0.0	0.0	1,000.0
New Mexico	52.0	0.0	24.0	0.0	40.0	0.0	52.0	16.0
New York	1,762.3	0.0	0.0	1,762.3	1,500.0	0.0	0.0	1,500.0
North Dakota	.	.	.	.	.	.	.	.
Ohio	127.5	1.0	0.0	127.5	127.5	0.0	0.0	127.5
Oklahoma	17.5	0.0	0.0	17.5	19.3	0.0	0.0	19.3
Oregon	10.0	1.0	6.2	4.6	11.6	.	6.7	4.9
Pennsylvania	100.0	0.0	0.0	100.0	100.0	.	0.0	100.0
South Carolina	11.5	0.0	0.0	11.5	26.2	.	16.7	11.5
South Dakota	2.0	0.0	1.0	1.0	2.0	.	1.0	1.0
Tennessee	200.0 *	0.0	.	200.0	.	.	.	.
Texas	0.0	0.0	0.0	0.0	0.0	.	0	0.0
Vermont	30.0	0.0	15.0	15.0	30.0	.	0	15.0
Virgin Islands	.	.	.	.	.	.	.	.
Virginia	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0
Washington	4.0	0.0	0.0	4.0	20.0	.	0.0	20.0
West Virginia	0.0	0.0	0.0	0.0	100.0 *	.	.	100.0
Wisconsin	33.0	0.0	0.0	33.0	33.0	0	0.0	33.0
Total	4,455.4	121.0	484.9	3,849.5	5,787.2	157.0	1,290.3	4,339.9
Average	123.0	3.4	14.7	116.7	170.2	4.0	41.6	131.5
Number of Respondents	36	36	33	33	36	33	31	33

\* One or more subtotals were omitted in the survey responses of these states. Total projections may therefore understate the actual projections.

Source: ASTSWMO Survey.

Note: Figures were reported by the states; it is not clear why some states reported CERCLA funds. Superfund monies may not be used for state enforcement activities.

## EXHIBIT 2-15

## STATE ENFORCEMENT STAFF FOR FISCAL YEARS 1983-1984

STATE	1983 Staff				1984 Staff			
	Total Enforcement	Paid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds	Total Enforcement	Paid by CERCLA Funds	Paid by Other Federal Funds	Paid by State Funds
Alabama	0.125	0.0	0.1	0.025	0.6	0.0	0.6	0.0
Alaska	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Arizona	0.3	0.0	0.5	0.0	0.3	0.0	0.3	0.0
Arkansas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California	0.0	0.0	4.0	4.0	12.0	0.0	4.0	4.0
Colorado	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Connecticut	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.2
Delaware	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1
District of Columbia	0.9	0.0	0.9	0.0	1.3	0.0	1.3	0.0
Florida	2.6	0.0	0.5	2.1	3.3	0.0	0.5	3.0
Georgia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Idaho	-	-	-	-	-	-	-	-
Illinois	0.5	0.0	0.0	0.5	0.5	0.3	0.0	0.0
Indiana	0.7	0.0	0.0	0.7	2.0	0.0	0.0	2.0
Iowa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kentucky	0.0	0.0	0.2	0.6	1.0	0.0	0.3	0.7
Maryland	1.2	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Massachusetts	1.5	0.0	1.5	0.0	2.0	0.0	2.0	0.0
Michigan	11.0	0.0	0.0	11.0	11.0	0.0	0.0	11.0
Minnesota	13.0	2.0	0.0	11.0	13.0	2.0	0.0	11.0
Mississippi	0.3	0.0	0.2	0.1	0.3	0.0	0.2	0.1
Missouri	1.5	0.0	0.0	1.5	11.0	0.5	0.5	10.0
Montana	0.3	0.0	0.3	0.0	1.0	1.0	0.0	0.0
Nebraska	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1
Nevada	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1
New Hampshire	2.0	0.0	0.0	2.0	0.0	0.0	-	0.0
New Jersey	15.0	0.0	0.0	15.0	15.0	0.0	0.0	15.0
New Mexico	1.0	0.0	0.0	0.3	2.0	0.0	1.3	0.3
New York	29.0	0.0	0.0	29.0	46.0	0.0	0.0	46.0
North Dakota	-	-	-	-	-	-	-	-
Ohio	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0
Oklahoma	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Oregon	0.2	0.0	0.1	0.1	0.2	0.0	0.1	0.1
Pennsylvania	7.0	0.0	2.0	4.2	-	-	-	-
South Carolina	0.5	0.0	0.0	0.5	1.0	0.0	0.5	0.5
South Dakota	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1
Tennessee	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0
Texas	0.0	0.0	0.0	0.0	1.0	0.0	0.6	0.4
Vermont	1.0	0.0	0.0	0.3	1.0	0.0	0.8	0.3
Virgin Islands	-	-	-	-	-	-	-	-
Virginia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington	0.1	0.0	0.0	0.1	0.5	0.0	0.0	0.3
West Virginia	-	-	-	-	-	-	-	-
Wisconsin	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0
Total	106.6	2.0	12.0	91.7	136.5	4.0	15.6	116.9
Average	2.6	.0	0.3	2.2	3.4	0.1	0.4	2.9
Number of Respondents	41	41	41	41	40	40	39	40

Source: ASTSWMO Survey.

Note: Figures were reported by the states; it is not clear why some states reported CERCLA funds. Superfund monies may not be used for state enforcement activities.

Because Fund monies may not be used for state enforcement activities, funding for state enforcement programs generally comes from the states themselves. Exhibit 2-14 shows that Fund monies apparently contribute a negligible portion of total expenditures by the states; such monies may have been used for sampling purposes. Other federal sources provide additional funds but, with the exception of a large (\$953,000) grant to California in fiscal year 1984, total federal funding for state enforcement covers less than 30 percent of total expenditures in both fiscal years.

Despite the generally low level of resources available, many states have conducted active enforcement programs. The next section describes this activity and relates it to EPA's enforcement activity under the Superfund program.

#### Analysis of Enforcement Data

As might be expected from the resource distribution described in the previous section, most state enforcement activity tends to be concentrated in certain states - particularly New Jersey and California. In general, however, the levels of civil and administrative activity are relatively high in a number of states for which available funding and staff resources were relatively low. Exhibit 2-16 presents the numbers of civil and administrative enforcement actions conducted by states from 1981 to November 1983 and the number of those actions resulting in private party cleanup. Because enforcement authorities, site priorities, and resource levels vary from state to state, it is difficult to draw conclusions from these data.

#### Effect of Resources and EPA Policies on State Participation in the Superfund Enforcement Program

Direct state participation in the Superfund enforcement program is limited by the language of the Act itself. Civil and administrative actions conducted by states are based on widely varying state laws. This section of the report has attempted to analyze state enforcement activity within these parameters. In general, state enforcement programs have been relatively active. As federal policy and guidance to assist and support state actions evolve, it is likely that a set of enforcement objectives will emerge that will provide a greater degree of consistency in state action at state-lead enforcement sites. EPA is beginning to develop more specific policies with regard to state enforcement which may provide for more effective coordination between EPA and the states. If these policies are accompanied by a greater diversion of federal resources to state-lead enforcement sites, as the Agency is currently considering, then the effectiveness of state enforcement efforts over the next few years could increase significantly.

## EXHIBIT 2-16

SITES SUBJECT TO STATE ENFORCEMENT ACTIONS  
SINCE 1981

State	Number of Sites Subject to State Enforcement Actions a/	Sites Subject to Administrative Enforcement		Sites Subject to Judicial Enforcement	
		Number	Number Resulting in Private Party Cleanup	Number	Number Resulting in Private Party Cleanup
Alabama	1	1	1	0	0
Alaska	6	6	3	3	3
American Samoa	-	-	-	-	-
Arizona	5	5	3	1	0
Arkansas	3	2	1	1	1
California	399	362	47	37	3
Colorado	1	0	0	1	0
Connecticut	95	95	95	3	0
Delaware	1	0	0	1	0
District of Columbia	0	0	-	-	-
Florida	67	13	2	29	6
Georgia	1	0	0	0	0
Guam	-	-	-	-	-
Hawaii	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	56	3	0	48	12
Indiana	9	3	3	6	3
Iowa	-	-	-	-	-
Kansas	12	12	4	0	0
Kentucky	22	22	5	0	0
Louisiana	-	-	-	-	-
Maine	-	-	-	-	-
Maryland	27	14	6	13	3
Massachusetts	30	30	10	8	8
Michigan a/	96	24	-	72	-
Minnesota	67	67	13	2	1
Mississippi	11	11	8	0	0
Missouri	-	-	-	-	-
Montana	0	0	0	0	0
Nebraska	0	0	0	0	0
Nevada	3	3	3	0	0
New Hampshire	7	5	1	1	0
New Jersey	692	500	250	50	2
New Mexico	3	3	0	0	0

## EXHIBIT 2-16 (continued)

SITES SUBJECT TO STATE ENFORCEMENT ACTIONS  
SINCE 1981

State	Number of Sites Subject to State Enforcement Actions a/	Sites Subject to Administrative Enforcement		Sites Subject to Judicial Enforcement	
		Number	Number Resulting in Private Party Cleanup	Number	Number Resulting in Private Party Cleanup
New York	77	23	18	23	12
North Carolina	-	-	-	-	-
North Dakota	0	0	0	0	0
Ohio	50	40	20	10	7
Oklahoma	5	3	0	2	1
Oregon	6	5	5	1	1
Pennsylvania	50	40	20	10	3
Puerto Rico	-	-	-	-	-
Rhode Island	-	-	-	-	-
South Carolina	30	28	12	6	4
South Dakota	1	0	0	1	1
Tennessee	27	27	11	0	0
Texas	40	31	12	9	5
Trust Territories of the Pacific	-	-	-	-	-
Utah	-	-	-	-	-
Vermont	13	11	10	3	0
Virginia	22	18	18	4	4
Virgin Islands	-	-	-	-	-
Washington	40	40	-	1	0
West Virginia	0	0	0	0	0
Wisconsin	100	90	25	10	5
Wyoming	-	-	-	-	-
TOTALS	2,075	1,537	606	356	85
NUMBER OF RESPONDENTS	43	43	40	42	41

a/ Figures are for pending or resolved civil enforcement actions in 1983. A site may be subject to both administrative and judicial actions, and some states did not classify all of their sites as being subject to either an administrative or judicial action. It is unknown whether or not these sites are on the National Priorities List.

Source: ASTSWMO survey.

### 3. STATE HAZARDOUS SUBSTANCE CLEANUP PROGRAMS

This chapter describes the programs states have developed to address hazardous substance problems within their borders. Section 3.1 assesses state funding levels. Section 3.2 examines how funding limitations, along with legal and institutional restrictions, have affected states' efforts to staff their cleanup programs and to acquire needed equipment and services.

The data presented here, as in other chapters of this report, were obtained from a survey conducted by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) in July to October 1983. In the survey, states were asked to describe their entire cleanup programs, including resources devoted to both the national Superfund program and to state cleanup efforts. Funding figures include evaluations of the amounts available to the Superfund program. Information concerning staff and equipment, however, pertains to both components of states' programs.

#### 3.1 STATE FUNDS

The ASTSWMO questionnaire asked recipients a series of questions concerning state funding of hazardous waste cleanups. Responses to that questionnaire were supplemented and clarified as needed through a series of telephone contacts. The responses obtained through the questionnaire and the follow-up conversations represent the best information obtained directly from the states pertaining to their funding of hazardous substance responses.

The funding section of the questionnaires was completed by forty-two states and the District of Columbia. These jurisdictions are listed alphabetically in Exhibit 3-1, along with the sources and amounts of funding reported by each jurisdiction. As the exhibit reveals, five of these forty-three responding jurisdictions (Alabama, Hawaii, North Dakota, Oklahoma, and West Virginia) indicated that they had no existing source of cleanup funds. Five others (Colorado, Georgia, Idaho, Maryland, and Oregon) listed a projected source of funds but were unable to provide estimates of the amounts that would become available. The analysis in this section focuses on the remaining thirty-three states, those that provided information concerning both the sources and amounts of cleanup appropriations. The two parts of this discussion summarize, respectively, the amounts and sources of the funds these states had spent or planned to spend on hazardous waste cleanups as of late 1983 when the survey was conducted, and the proportion of these funds states designated as available for Superfund cost shares.

##### 3.1.1 Sources and Amounts of Cleanup Funds

Exhibit 3-1 contains brief descriptions of the various sources of funds employed to finance state and territorial response efforts. These figures

Exhibit 3-1

STATE HAZARDOUS WASTE CLEANUP FUNDS  
SOURCES, TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE

STATE	SOURCE	AMOUNT BY SOURCE (in thousands of \$)	AMOUNT AVAILABLE FOR CERCLA COST SHARE (in thousands of \$)
Alabama	NONE	.	.
Alaska	* OIL AND HAZARDOUS MATERIAL SPILL FUND	1,000.0	.
	* GENERAL FUNDS	0.0	.
	TOTAL	1,000.0	.
Arizona	* STATE APPROPRIATION	802.5	.
	* WATER QUALITY REVOLVING FUND (FOR SEVERAL YEARS)	700.0	700.0
	* STATE EMERGENCY FUND (FOR 1 MPL SITE)	600.0	.
	TOTAL	2,102.5	700.0
Arkansas	* PERMITS, APPROPRIATIONS, MANIFESTS	177.2	.
	TOTAL	177.2	.
California **	* HAZARDOUS SUBSTANCE ACCOUNT	38,500.0	.
	TOTAL	38,500.0	.
Colorado	* GENERAL FUND	.	.
	* APPROPRIATIONS FOR SPILLS	.	.
	TOTAL	.	.
Connecticut	* STATE SPILL FUND	450.0	.
	* STATE GENERAL FUNDS	.	.
	* GENERATOR TAX	.	.
	TOTAL	450.0	.
Delaware	* STATE REVENUES FOR SPILL RESPONSE	1,500.0	1,500.0
	TOTAL	1,500.0	1,500.0
District of Columbia	* D.C. GOVERNMENT GENERAL FUND	66.8	.
	TOTAL	66.8	.
Florida	* WATER QUALITY ASSURANCE TRUST FUND	22,500.0	.
	* STATE GENERAL FUND	885.0	.
	* HAZARDOUS WASTE TRUST FUND	100.0	.
	TOTAL	23,485.0	.
Georgia	* HAZARDOUS WASTE PROGRAM LEGISLATIVE APPROPRIATIONS		
	* HAZARDOUS WASTE TRUST FUND		
	TOTAL		
Hawaii	NONE		

Exhibit 3-1 (continued)

STATE HAZARDOUS WASTE CLEANUP FUNDS  
SOURCES, TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE

STATE	SOURCE	AMOUNT BY SOURCE (in thousands of \$)		AMOUNT AVAILABLE FOR CERCLA COST SHARE (in thousands of \$)	
Idaho	* HAZ. WASTE MANAGEMENT ACT--ALLOWS EXPENDITURES WITH COST RECOVERY TOTAL				
Illinois	* HAZARDOUS WASTE FUND	2,700.0		500.0	
	* GENERAL REVENUES	2,700.0		300.0	
	TOTAL		5,400.0		800.0
Indiana	* HAZARDOUS WASTE TRUST FUND -- MATCHES FEDERAL SUPERFUND \$ TOTAL	380.0	380.0	380.0	380.0
Kansas	* STATE GENERAL FUND (GENERAL REVENUES APPROPRIATION) TOTAL	375.0	375.0		
Kentucky	* GENERAL REVENUES	120.0			
	* HAZARDOUS WASTE MANAGEMENT FUND	615.0		615.0	
	TOTAL		735.0		615.0
Maryland	* HAZARDOUS SUBSTANCES CONTROL FUND TOTAL				
Massachusetts	* STATE SUPERFUND OF 83--BOND	25,000.0		25,000.0	
	* CAPITAL OUTLAY BUDGET OF 1979 -- EXHAUSTED	5,000.0		0.0	
	TOTAL		30,000.0		25,000.0
Michigan	* STATE GENERAL FUNDS APPROPRIATIONS (ANNUALLY) TOTAL	20,000.0	20,000.0	20,000.0	20,000.0
Minnesota	* STATE SUPERFUND	5,000.0		15,000.0	
	* GENERAL STATE APPROPRIATIONS	3,171.4		0.0	
	TOTAL		8,171.4		15,000.0
Mississippi	* STATE GENERAL FUND TOTAL	48.0	48.0		
Missouri	* LAND DISPOSAL FEES	3,750.0			
	* HAZARDOUS WASTE GENERATION FEES	1,200.0			
	* STATE GENERAL FUND (\$3.3 M FOR TIMES BEACH)	4,500.0		3,750.0	
	TOTAL		9,450.0		3,750.0
Montana	* STATE GENERAL FUND TOTAL	330.0	330.0	330.0	330.0



Exhibit 3-1 (continued)

STATE HAZARDOUS WASTE CLEANUP FUNDS  
SOURCES, TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE

STATE	SOURCE	AMOUNT BY SOURCE (in thousands of \$)		AMOUNT AVAILABLE FOR CERCLA COST SHARE (in thousands of \$)	
Nebraska	* GENERAL REVENUES	24.5		.	
	TOTAL		24.5		.
Nevada	* GENERAL FUND FY83 AND FY84, POSSIBLY FY85 (ANNUALLY)	36.0		.	
	* HAZARDOUS WASTE PENALTY FUND FY83 AND FY84, POSSIBLY 85 (ANNUALLY)	60.0		60.0	
	TOTAL		96.0		60.0
New Hampshire	* WASTE END TAX OF \$.04/KG; PROJECTED REVENUE	1,230.0		.	
	* APPROPRIATION	1,500.0		.	
	TOTAL		2,730.0		.
New Jersey	* SPILL FUND	20,000.0		20,000.0	
	* HAZARDOUS SUBSTANCES DISCHARGE BOND ACT OF 1981	100,000.0		100,000.0	
	TOTAL		120,000.0		120,000.0
New Mexico	* HAZARDOUS SUBSTANCE RESPONSE FUND (LEGISLATIVE)	130.0		.	
	* LEGISLATIVE APPROPRIATION FOR PERSONNEL	120.0		.	
	TOTAL		250.0		.
New York	* HAZARDOUS WASTE FEE REVENUE	5,300.0		.	
	* GENERAL FUND	3,630.0		.	
	TOTAL		8,930.0		.
North Dakota	NONE	.		.	
Ohio	* HAZARDOUS WASTE CLEANUP ACCOUNT (MATCHABLE) -- FROM 3 SETTLEMENTS	350.0		350.0	
	* 608 SPILL ACCOUNT (GENERAL REVENUE FUND) -- NOT FOR MATCH	12.6		0.0	
	TOTAL		362.6		350.0
Oklahoma	NONE	.		.	
Oregon	* GENERAL APPROPRIATION AND NEW DISPOSAL FEE	.		.	
	TOTAL		.		.
Pennsylvania	* LEGISLATIVE APPROPRIATION FY83	3,000.0		.	
	* STATE SOLID WASTE ABATEMENT FUND (FINES, PENALTIES ETC)	200.0		.	
	TOTAL		3,200.0		
South Carolina	* CONTINGENCY FUND	1,901.0		.	
	* STATE BUDGET APPROPRIATIONS	779.0		.	
	TOTAL		2,680.0		

Exhibit 3-1 (continued)

STATE HAZARDOUS WASTE CLEANUP FUNDS  
SOURCES, TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE

STATE	SOURCE	AMOUNT BY SOURCE (in thousands of \$)		AMOUNT AVAILABLE FOR CERCLA COST SHARE (in thousands of \$)	
South Dakota	* STATE FUNDS FROM GENERAL REVENUES (USED FOR COST SHARING)	15.0		15.0	
	TOTAL		15.0		15.0
Tennessee	* STATE GENERAL FUNDS	1,000.0		.	
	* GENERATOR FEES (ANTICIPATED)	1,000.0		.	
	TOTAL		2,000.0		.
Texas	* STATE DISPOSAL FACILITY RESPONSE FUND	5,550.0		5,550.0	
	TOTAL		5,550.0		5,550.0
Vermont	* SPECIAL STATE HAZ. WASTE APPROPRIATION (FOR NPL AND RELATED SITES)	200.0		200.0	
	* STATE POLLUTION CONTINGENCY FUND (REVOLVING FUND)	10.0		0.0	.
	TOTAL		210.0		200.0
Virgin Islands		.		.	
Virginia		.		.	
Washington	* GENERAL FUND FY83	4,300.0		.	
	* HAZ. WASTE CONTROL AND ELIMINATION ACCOUNT -- FUNDS TO BE ACCRUED	.		.	
	* STATE REFERENDA 38 AND 39 -- SOME PORTION SHOULD FINANCE CLEANUP	.		.	
	TOTAL		4,300.0		.
West Virginia	NONE	.		.	
Wisconsin	* PROGRAM REVENUES	150.0		.	
	* GENERAL REVENUES	132.0		.	
	TOTAL		282.0		.
TOTALS		292,801.0		194,250.0	

\*\* California listed a single mechanism for funding remedial responses, its Hazardous Substance Account, but indicated that the account would be supported by both lump sum and annual appropriations.

Source: ASTSWMO Survey.

represent total funds and include funds for spill response, remedial response, and enforcement that were discussed in Chapter 2. The funding sources may be classified by reference to two broad types of administrative mechanisms: lump sum appropriations which, like the CERCLA Response Trust Fund, are drawn upon as the need arises over an indefinite timespan, and annual appropriations, which are established and administered under usual budgetary procedures. For funding sources that fit the latter classification, jurisdictions were asked to estimate expenditures for fiscal years 1983, 1984, and 1985. Entries in Exhibit 3-1 for funding sources that are administered through the annual appropriations process represent aggregates of the amounts given for all three fiscal years.

The descriptions of funding sources contained in the Exhibit 3-1 generally provide a fair indication of whether a given funding mechanism conforms to the lump sum or fiscal year model. Response funds, spill funds, and state Superfunds were generally listed by jurisdictions as lump sum sources from which funds could be drawn as needed. General revenues, legislative appropriations, and generator or disposal fees, on the other hand, were usually classified as yearly appropriations. In some instances, however, the labels affixed to funding mechanisms may be misleading. Several states (e.g., Kentucky and New Jersey) reported having spill funds or waste funds from which annual appropriations are drawn. Conversely, legislative appropriations were listed by some states as the source of lump sum funds (e.g., Nebraska and New Hampshire). A more detailed version of Exhibit 3-1, which is presented in Appendix A to this report, indicates the classification jurisdictions gave for each funding source.

Results from the ASTSWMO survey suggest that jurisdictions rely more frequently on annual appropriations rather than lump sum funds as a source of cleanup funds. Of the thirty-three jurisdictions that provided information on funding sources, fifteen reported lump sum funds, while twenty-four reported cleanup financing through annual legislative appropriations. (The numbers of jurisdictions relying on each type of financing mechanism sum to thirty-nine, not thirty-three, because six states reported reliance on both types.) Moreover, ten jurisdictions reported two or three sources of annual appropriations (e.g., Wisconsin listed annual funding amounts from both "program revenues" and "general revenues"), while only four states reported having more than one lump sum funding source.

Cleanup funds that jurisdictions have budgeted or expect to budget on an annual basis are most often derived from general state revenues. Nineteen of the twenty-four jurisdictions that reported reliance on annual appropriations listed general state revenues as the source. Dedicated taxes or fees, such as waste-end taxes (New Hampshire), fines and penalties (Pennsylvania), and permit fees (Arkansas) were cited as sources of annual cleanup appropriations by six jurisdictions. Finally, six jurisdictions listed trust funds as a source of annual budgetary appropriations for responses.

The questionnaire results do not provide a detailed picture of how jurisdictions have raised the revenues used to support lump sum funds. Some states (e.g., Ohio and New Jersey) described sources for lump sum funds, such as legal settlements or bond acts. Most, however, reported only that they have established a response fund or a "state Superfund".

The amounts that jurisdictions reported having spent or earmarked for hazardous waste cleanup vary widely. Amounts reported for annual appropriations range from \$5,000 (South Dakota in fiscal year 1985) to \$14 million (Florida in fiscal year 1985). Generally, fewer jurisdictions reported annual figures for 1985 than for 1983 and 1984, although the amounts that were reported for 1985 tend to be larger. Wide variation is also evident in the lump sum amounts that jurisdictions reported. Lump sum funds ranged from \$10,000 (Vermont's pollution contingency fund) to \$100 million (New Jersey's Hazardous Substance Discharge Bond authorization). Not surprisingly, the jurisdictions that reported the greatest expenditures and projected expenditures tend to contain numerous NPL sites. New Jersey, for example, which leads all jurisdictions listed in Exhibit 3-1 in the amount of funds committed to cleanups, contains eighty-five NPL sites. Michigan, Pennsylvania, New York, Minnesota, California, Massachusetts, and Florida, which rank high in their number of NPL sites, are also among the leading states in the amount of funds committed to waste cleanup.

### 3.1.2 Cost Share Funds

Not all of the funds that jurisdictions budget for hazardous waste cleanup are available for cost sharing under the Superfund program. Appropriations bills may reserve certain funds for cleanups of sites that are not listed on the NPL. Alternatively, governors or their appointees may be given broad discretion to allocate state cleanup funds. Policies developed by state executives who exercise this authority may reserve certain funds for state staffing needs or for response actions states might decide to take outside the Superfund program. In responding to questions concerning cost shares, some states who reported funding sources that were entirely available for cost sharing indicated that practical and political considerations might limit funds available for cost shares even though no statutory provisions or federal policies pertained.

The amounts, by funding source, that jurisdictions have available to meet cost share obligations are set out in column 4 of Exhibit 3-1. Jurisdictions reported \$194 million in funds available for cost sharing out of a total of \$293 million, a ratio of sixty-six percent. Appendix A presents a more detailed picture of the availability of state funds for cost share responsibilities. Examination of these disaggregated figures yields the following generalizations:

- There is a marked disparity between the proportions of lump sum funds and annual appropriations reported as available for cost sharing. Jurisdictions reported that the vast majority of lump sum appropriations, \$132 million out of \$156 million (eighty-four percent), could be used for cost shares, while only \$62 million out of \$137 million (forty-five percent) of amounts allocated to hazardous waste cleanup on an annual basis would be used to meet cost share requirements. The difference, however, results principally from the classification of the two largest lump sum funds, Massachusetts' \$25

million state Superfund and New Jersey's \$100 million fund, as entirely available for those states' cost share obligations. Of the \$31 million in lump sum funds reported by states other than New Jersey and Massachusetts, only \$7 million, or twenty-three percent, were described as available for cost share obligations.

- The types of funding mechanisms did not differ significantly in the percentage of funding instruments of each type that can be used as a source of cost share funds. Jurisdictions that reported on funding sources listed a total of thirty-seven types of annual appropriations and nineteen types of lump sum funds that they were using or expected to use to address hazardous waste releases. Of the thirty-seven funding sources described as annual appropriations, twelve, or thirty-two percent, could be used partly or wholly to meet state cost shares. Of the nineteen lump sum appropriations, six, or thirty-one percent, could be used to meet state cost share requirements.

### 3.2 STATE NEEDS

CERCLA cost-share provisions have encouraged states to establish or enlarge their capabilities to respond to hazardous substance releases. This incentive has arisen, however, during a period when states' budgets have been severely constrained. Budgetary pressures are manifested not only in the limits on the funding available for state cleanup efforts (reviewed in the preceding section) but also in legal and institutional restrictions on the expenditure of resources. This section assesses the effects of restrictions on two broad aspects of states' efforts to marshal resources for cleanup efforts: the hiring of additional staff and the procurement of needed equipment and services.

#### 3.2.1 Hiring Additional Staff

The ASTSWMO survey asked respondents to identify current and optimal staffing levels for both technical and administrative positions. Exhibits 3-2 and 3-3 set out the survey findings for technical and administrative positions, respectively. States reported equally pressing shortages with respect to technical and administrative positions. To reach optimal levels, they indicated that technical staffing would have to increase by eighty-four percent (from 492.6 to 907.1 person years) and that administrative staffing would have to increase by eighty-five percent (from 198 to 367 person years). In absolute terms, the largest shortages in technical manpower involved sanitary engineers, geologists, and chemists. Administrative positions for which states reported needing the most new personnel include clerks, contract and budget specialists, and policy analysts.

## EXHIBIT 3-2

CURRENT AND OPTIMAL TECHNICAL STAFFING LEVELS  
(Annual Totals for Respondent States in Person Years)

	<u>Number of Current Staff</u>	<u>Number of Optimal Staff</u>	<u>Number of Additional Staff Needed (Optimal- Current)</u>	<u>Percentage Increase Needed</u>
Civil Engineer	15.9	29.0	13.1	82
Sanitary Engineer	86.6	165.1	78.5	91
Environmental Engineer	35.7	96.6	60.9	171
Chemist	42.0	108.0	66.0	157
Biologist	46.7	55.7	9.0	19
Public Health Specialist	46.3	63.6	15.3	33
Geologist/Hydrologist	47.0	119.5	72.5	154
Soil Scientist	14.6	31.1	16.5	113
Other:				
- Agricultural Engineer	0.5	0.3	-0.2	-40
- Chemical Engineer	3.1	4.3	1.2	39
- Environmental Field Officer/Scientist Technician	27.2	42.9	15.7	58
- Field Inspectors	5.0	5.0	0.0	0.0
- Investigator	0.0	1.0	1.0	-
- Industrial Hygienist	0.8	1.5	0.7	88
- Pharmacist	1.0	1.0	0.0	0.0
- Specialists (radiation solid waste, environ- mental enforcement, environmental, pollution control, resource control, emergency response, water quality)	119.2	177.0	57.8	48
- Toxicologist	0.0	0.5	0.5	-
- Zoologist	1.0	5.0	4.0	400
TOTALS	492.6	907.1	414.5	84*

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\*Percentage increase of total current technical staff needed to achieve total optimal technical staff.

## EXHIBIT 3-3

CURRENT AND OPTIMAL ADMINISTRATIVE STAFFING LEVELS  
 (Annual Totals for Responding States in Person Years)

	<u>Number of Current Staff</u>	<u>Number of Optimal Staff</u>	<u>Number of Immediate Staff Needed (Optimal- Current)</u>	<u>Percentage Increase Needed</u>
Budget/Finance/Contract Specialist	21.3	56.8	35.5	166
Attorney	26.4	52.7	26.3	100
Steno/Clerk	76.9	131.1	54.2	70
Policy/Management Analyst	53.4	81.9	28.5	53
Other:				
- Accountant	0.5	0.5	0.0	0
- Data Manager	5.0	11.0	6.0	120
- Division Supervisor	0.5	0.5	0.0	0.0
- Executive Assistant	2.0	2.0	0.0	0
- Liberal Arts	2.0	-	2.0	-
- Planner	1.0	1.0	0.0	0.0
- Programmer	2.0	3.0	1.0	50
- Public information/ affairs/community relations	7.0	13.5	6.5	93
- Support	0.0	13.0	13.0	-
TOTALS	198	367	169	85*

---

\*Percentage increase of total current administrative staff needed to achieve total optimal administrative staff.

The survey also asked states to report existing and projected staff levels for fiscal years 1983, 1984, and 1985. Exhibit 3-4 presents the results of this inquiry. (The fiscal year 1983 total presented in Exhibit 3-4 is not equivalent to the sum of the figures for current technical and administrative staffing because not all respondents answered all parts of the survey.) Because a large number of states declined to provide projections for fiscal year 1985, comparisons involving totals for that year have been omitted. However, totals for fiscal years 1983 and 1984, which include essentially identical groups of states, indicate that states planned a substantial increase -- thirty-nine percent -- in total staff. Several states with large cleanup programs accounted for a large proportion of the projected aggregate increase in staffing (e.g., New Jersey, California, Massachusetts, and New York).

The survey revealed several legal and institutional factors that could impede states' efforts to achieve optimal, or even projected, staffing levels. Freezes on hiring by state governments represent one important impediment. Two-thirds of the survey respondents reported hiring freezes in effect during fiscal year 1983. Only about one-half the states with hiring freezes in place during 1983 anticipated that the restrictions would continue into 1984. States differed in their assessments of the effects of hiring freezes on their hazardous waste programs. Some states reported that hiring of needed personnel had been cancelled or postponed, resulting in increased workloads or reductions in the number of spills receiving attention. Other respondents stated that hiring had been slowed, but not eliminated. Several states, finally, indicated that hiring freezes had not significantly affected their programs.

The survey also investigated the effect of civil service regulations on state programs. The vast majority of respondents (80 percent) reported that the constraints imposed by civil service rules did not hinder their programs. The remaining respondents indicated that they were generally able to accomplish hiring goals within civil service restrictions by postponing hiring, creating new job descriptions, and searching for state employees to perform needed jobs. (States' responses concerning hiring restrictions are tabulated in Exhibit 3-5.) Generally, respondents indicated that restrictions such as mandatory hiring preferences presented a less significant obstacle to needed hiring than did restrictions on the salaries that states were able to pay for personnel with technical training.

### 3.2.2 Procurement

States were also asked to describe how restrictions on the procurement of equipment and services affected their cleanup programs. Because states often employ different procedures for procuring engineering or scientific consultants and for procuring construction contractors, the survey addressed these topics separately. Survey findings concerning the procurement of equipment and services are summarized briefly in this section.

Laboratory equipment shortages were cited as a problem by almost one-half (forty-seven percent) of the states that responded. Many states reported that



## EXHIBIT 3-4

## STAFF RESOURCES -- CURRENT AND PROJECTED TOTAL STAFF FOR FY 1983-FY 1985

State	FY 1983 Staff				FY 1984 Projected Staff				FY 1985 Projected Staff			
	Total	Rank	Percent State Funded	Percent Federally Funded	Total	Rank	Percent State Funded	Percent Federally Funded	Total	Rank	Percent State Funded	Percent Federally Funded
Alabama	2.2	30	25	75 (0)	7.4	20	1	99 (0)	0.0	32	-	- -
American Samoa	-	-	-	- -	-	-	-	- -	-	-	-	- -
Alaska	1.1	35	91	9 (0)	1.9	37	74	26 (0)	2.0	28	75	25 (0)
Arizona	7.3	17	69	31 (0)	10.3	18	32	68 (61)	12.3	12	57	43 (81)
Arkansas	6.0	20	100	0 (0)	6.0	24	100	0 (0)	-	-	-	- -
California	46.0	3	91	9 (0)	57.0	4	90	10 (0)	63.0	3	86	14 (0)
Colorado	2.5	29	100	0 (0)	2.5	34	100	0 (0)	2.5	27	100	0 (0)
Connecticut	9.8	16	29	71 (0)	10.8	17	35	65 (0)	10.8	15	35	65 (0)
Delaware	1.9	33	100	0 (0)	5.6	27	46	54 (0)	5.6	20	46	54 (0)
District of Columbia	5.5	23	22	78 (0)	7.3	21	32	68 (0)	9.3	16	36	64 (0)
Florida	11.3	14	91	9 (0)	20.8	13	98	2 (0)	20.8	10	98	2 (0)
Georgia	26.0	9	92	8 (0)	30.0	9	80	20 (0)	30.0	7	80	20 (0)
Guam	-	-	-	- -	-	-	-	- -	-	-	-	- -
Hawaii	0.0	40	-	- -	1.5	38	0	100 (0)	1.5	29	0	100 (0)
Idaho	-	-	-	- -	-	-	-	- -	-	-	-	- -
Illinois	5.0	25	80	20 (100)	5.5	28	54	46 (100)	5.5	21	36	64 (100)
Indiana	17.4	12	33	67 (69)	32.0	8	94	6 (0)	32.0	6	94	6 (0)
Iowa	-	-	-	- -	-	-	-	- -	-	-	-	- -
Kansas	0.5	39	25	75 (0)	0.5	41	25	75 (0)	0.5	32	25	75 (0)
Kentucky	7.0	18	89	11 (0)	13.2	16	55	45 (25)	11.9	13	66	34 (59)
Louisiana	-	-	-	- -	-	-	-	- -	-	-	-	- -
Maine	-	-	-	- -	-	-	-	- -	-	-	-	- -
Maryland	7.0	18	66	34 (0)	7.0	22	20	80 (0)	6.0	19	50	50 (0)
Massachusetts	46.0	3	91	9 (0)	59.5	3	82	18 (0)	-	-	-	- -
Michigan	32.0	7	81	19 (67)	49.0	5	71	29 (57)	157.0	2	77	23 (83)
Minnesota	38.5	6	71	29 (91)	36.0	7	75	25 (89)	36.0	5	75	25 (89)
Mississippi	3.6	27	42	58 (0)	3.5	31	42	58 (0)	3.5	24	42	58 (0)
Missouri	11.5	13	87	13 (0)	29.0	10	93	7 (25)	29.5	8	95	5 (0)
Montana	2.0	31	25	75 (0)	3.5	32	14	86 (100)	3.6	23	17	83 (100)
Nebraska	2.0	-	33	67 (0)	2.0	36	33	67 (0)	-	-	-	- -
Nevada	1.0	36	37	63 (0)	0.7	40	39	61 (0)	0.7	31	39	61 (0)
New Hampshire	6.0	20	100	0 (0)	6.0	24	100	0 (0)	-	-	-	- -
New Jersey	109.0	1	100	0 (0)	175.0	1	100	0 (0)	194.0	1	100	0 (0)
New Mexico	6.0	20	25	75 (0)	8.0	19	25	75 (0)	11.0	14	46	54 (0)
New York	80.0	2	91	9 (100)	142.0	2	95	5 (100)	112.0	-	-	- -
North Carolina	-	-	-	- -	-	-	-	- -	-	-	-	- -
North Dakota	-	-	-	- -	-	-	-	- -	-	-	-	- -
Ohio	18.7	11	84	16 (0)	24.7	12	55	45 (0)	-	-	-	- -
Oklahoma	2.7	28	13	87 (55)	3.7	30	13	87 (56)	-	-	-	- -
Oregon	1.8	34	63	37 (0)	4.2	29	26	74 (60)	2.7	26	31	69 (33)
Pennsylvania	29.5	8	60	40 (0)	-	-	-	- -	-	-	-	- -
Puerto Rico	-	-	-	- -	-	-	-	- -	-	-	-	- -
Rhode Island	-	-	-	- -	-	-	-	- -	-	-	-	- -
South Carolina	11.0	15	73	27 (100)	15.0	15	67	33 (0)	23.0	9	56	44 (0)
South Dakota	0.9	38	33	67 (0)	0.9	39	33	67 (0)	0.9	30	33	67 (0)
Tennessee	39.0	5	74	26 (100)	39.0	6	74	26 (100)	39.0	4	74	26 (100)
Texas	21.5	10	25	75 (53)	25.5	11	24	76 (54)	-	-	-	- -

EXHIBIT 3-4 (continued)

STAFF RESOURCES -- CURRENT AND PROJECTED TOTAL STAFF FOR FY 1983-FY 1985

State	FY 1983 Staff				FY 1984 Projected Staff				FY 1985 Projected Staff			
	Total	Rank	Percent State Funded	Percent Federally Funded	Total	Rank	Percent State Funded	Percent Federally Funded	Total	Rank	Percent State Funded	Percent Federally Funded
Trust Territories of the Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	5.0	25	25	75 (0)	7.0	22	19	81 (47)	7.0	18	19	81 (47)
Virginia	2.0	31	100	0 (0)	5.8	26	34	66 (100)	3.0	25	100	0 (0)
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-
Washington	5.2	24	50	50 (0)	17.3	14	87	13 (44)	19.3	11	78	22 (70)
West Virginia	0.0	40	-	-	2.3	35	100	0 (0)	5.3	22	100	0 (0)
Wisconsin	1.0	36	100	0 (0)	3.0	33	100	0 (0)	9.0	17	56	44 (100)
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS	632.4				881.8				758.2			
NUMBER OF RESPONDENTS	42				41				32			

Note: ( ) Indicates percent of total staff financed by CERCLA fund.

Source: ASTSWMO Survey.

## EXHIBIT 3-5

STATE RESPONSES CONCERNING HIRING RESTRICTIONS

State	Civil Service Rules					
	Hiring Freeze		State Restrictions on Federal Positions	Negative Impact	Mandatory Hiring Preferences	Problems With Hiring Preferences
	FY 1983	FY 1984				
Alabama	Y	N	N	Y	Y	Y
Alaska	Y	Y	Y	N	-	-
American Samoa	-	-	-	-	-	-
Arizona	N	-	N	N	N	-
Arkansas	Y	Y	Y	N	N	-
California	Y	Y	Y	Y	Y	Y
Colorado	Y	N	Y	Y	Y	Y
Connecticut	Y	Y	N	N	Y	N
Delaware	Y	N	N	Y	N	-
District of Columbia	N	-	N	N	N	-
Florida	Y	N	Y	N	Y	N
Georgia	N	-	N	N	N	-
Guam	-	-	-	-	-	-
Hawaii	Y	Y	N	N	N	-
Idaho	Y	N	N	-	Y	N
Illinois	Y	Y	Y	N	Y	Y
Indiana	Y	Y	N	Y	N	-
Iowa	-	-	-	-	-	-
Kansas	N	-	N	N	Y	N
Kentucky	Y	Y	N	N	Y	N
Louisiana	-	-	-	-	-	-
Maine	-	-	-	-	-	-
Maryland	Y	Y	Y	N	N	N
Massachusetts	Y	Y	Y	Y	Y	Y
Michigan	Y	Y	Y	Y	Y	Y
Minnesota	Y	N	Y	N	Y	N
Mississippi	Y	Y	N	N	Y	N
Missouri	N	-	N	N	N	-
Montana	N	-	N	N	Y	N
Nebraska	Y	N	N	N	N	-
Nevada	Y	Y	Y	N	N	-
New Hampshire	Y	N	Y	N	Y	Y
New Jersey	Y	Y	Y	Y	Y	Y
New Mexico	Y	N	Y	N	N	-
New York	Y	-	N	N	Y	-
North Carolina	-	-	.	-	-	-
North Dakota	Y	-	Y	-	N	-

## EXHIBIT 3-5 (continued)

STATE RESPONSES CONCERNING HIRING RESTRICTIONS

State	Hiring Freeze		State Restrictions on Federal Positions	Negative Impact	Civil Service Rules	
	FY 1983	FY 1984			Mandatory Hiring Preferences	Problems With Hiring Preferences
Ohio	Y	N	Y	N	-	N
Oklahoma	Y	Y	Y	N	Y	Y
Oregon	Y	Y	Y	N	Y	N
Pennsylvania	N	-	N	N	Y	N
Puerto Rico	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-
South Carolina	Y	N	N	N	Y	N
South Dakota	N	-	N	N	N	-
Tennessee	N	-	N	N	Y	N
Texas	N	-	N	N	N	-
Trust Territories of the Pacific	-	-	-	-	-	-
Utah	-	-	-	-	-	-
Vermont	N	-	N	N	Y	N
Virgin Islands	-	-	-	-	-	-
Virginia	N	-	N	N	N	-
Washington	N	-	N	N	N	-
West Virginia	Y	Y	N	-	Y	N
Wisconsin	N	-	N	N	Y	N
Wyoming	-	-	-	-	-	-
TOTALS						
Yes:	30	17	18	8	25	9
No:	14	11	26	33	17	17
NUMBER OF RESPONDENTS						
	44	28	44	41	42	26

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Source: ASTSWMO Survey.

equipment shortages limit their capacity to perform timely, complete analyses of site samples. The survey does not reveal, however, whether the shortages are attributable solely to funding shortages or whether other factors, such as time-consuming procedures or limits to the production capacity of equipment manufacturers, also contribute to the shortages.

Responses concerning the procurement of services addressed procedural obstacles in greater detail. Because investigations and cleanups of hazardous waste releases often require brief, intensive application of specialized skills, states often contract for consultants to provide engineering or scientific analyses. Exhibit 3-6 sets forth states' responses concerning the procedures used to contract for consultant services.

Over seventy percent of respondents have used engineering or scientific consultants. The contracting process can be time-consuming; the average consultant contract takes about eleven weeks to process. Over one-half (fifty-eight percent) of responding states reported delays in their contracting process. Such delays are attributed primarily to financial and legal reviews or contract negotiations. Requirements for ensuring competitive bidding and selection have also slowed down the process. Most states (seventy-eight percent) require consultant contracts to be subject to open bidding. Thirty-two percent of the respondents indicated that state legal requirements impeded their efforts to contract for consultants' services. These impediments contribute to the time delay between signing a cooperative agreement with a state and the actual beginning of work.

States reported having had less experience with construction contracts at the time of the survey. The majority of responding states (fifty-eight percent) reported that they had not yet issued construction contracts for hazardous substance cleanups. Many states, however, have rules on construction contracting that expedite procurement of qualified construction contractors. Open bidding requirements existed to promote competition in most (ninety-seven percent) of the responding states. A majority of states have procedures designed to expedite contracting by permitting prequalification of suitable contractors. Prequalification for construction work is permitted in 60 percent of responding states; prequalification for engineering consulting is allowed in fifty-nine percent. Exhibit 3-7 presents state-by-state breakdowns of contracting data.

### 3.2.3 Summary of State Needs

The data suggest that obtaining additional funding for personnel and equipment is a high priority for state cleanup programs. States' assertions that their programs needed eighty-five percent more personnel than they employed at the time of the survey suggest a critical need for additional hiring. Even with projected increases in state hiring in 1984, state staffing levels will still be approximately forty percent short of optimum levels. Equipment shortages, though less widespread, affected nearly one-half of the states that responded.

The survey also indicates that some state programs could benefit from certain administrative, institutional, and procedural changes. Hiring freezes and limitations on salaries for technical personnel were said to have impeded some state programs. Legal restrictions on the procurement of consulting services were identified as significant sources of delay in some instances. Similar problems may arise in the procurement of construction services. However, the limited experience of states with these services at the time of the survey precludes any clear assessment of how serious these problems may prove to be.

## EXHIBIT 3-6

CONTRACTING FOR CONSULTANT SERVICES

<u>State</u>	<u>Ever Contract Consultants?</u>	<u>Procure- ments Initiated In-House?</u>	<u>Length of Time to Procure (Weeks)</u>	<u>Do Delays Occur?</u>	<u>Is Com- petitive Bidding Required?</u>
Alabama	No	-	-	-	-
Alaska	Yes	-	-	-	-
American Samoa	-	-	-	-	-
Arizona	Yes	Yes	12	Yes	Yes
Arkansas	No	No	2	Yes	Yes
California	Yes	Yes	36	Yes	Yes
Colorado	Yes	No	2	Yes	Yes
Connecticut	Yes	Yes	18	No	Yes
Delaware	Yes	Yes	12	No	Yes
District of Columbia	-	-	8	Yes	Yes
Florida	Yes	Yes	5	No	-
Georgia	Yes	Yes	2	No	Yes
Guam	-	-	-	-	-
Hawaii	Yes	-	-	-	-
Idaho	No	-	-	-	-
Illinois	Yes	Yes	12	No	Yes
Indiana	Yes	Yes	24	Yes	No
Iowa	-	-	-	-	-
Kansas	Yes	Yes	8	No	No
Kentucky	No	Yes	7	Yes	Yes
Louisiana	-	-	-	-	-
Maine	-	-	-	-	-
Maryland	-	Yes	-	-	Yes
Massachusetts	Yes	Yes	10	Yes	Yes
Michigan	Yes	Yes	26	Yes	Yes
Minnesota	Yes	Yes	12	Yes	No
Mississippi	No	-	-	-	-
Missouri	No	-	-	-	-
Montana	Yes	Yes	6	No	Yes
Nebraska	-	-	-	-	-
Nevada	No	-	-	-	-
New Hampshire	Yes	Yes	4	Yes	No
New Jersey	Yes	-	10	Yes	Yes
New Mexico	No	Yes	9	No	Yes
New York	Yes	Yes	13	Yes	Yes
North Carolina	-	-	-	-	-
North Dakota	No	-	-	-	-
Ohio	Yes	Yes	25	Yes	Yes
Oklahoma	Yes	Yes	3	Yes	Yes
Oregon	No	Yes	8	No	Yes

## EXHIBIT 3-6 (continued)

CONTRACTING FOR CONSULTANT SERVICES

<u>State</u>	<u>Ever Contract Consultants?</u>	<u>Procure- ments Initiated In-House?</u>	<u>Length of Time to Procure (Weeks)</u>	<u>Do Delays Occur?</u>	<u>Is Com- petitive Bidding Required?</u>
Pennsylvania	Yes	Yes	12	Yes	Yes
Puerto Rico	-	-	-	-	-
Rhode Island	-	-	-	-	-
South Carolina	Yes	No	13	No	Yes
South Dakota	Yes	Yes	4	No	No
Tennessee	Yes	Both	14	Yes	Yes
Texas	Yes	Yes	10	No	No
Trust Territories of the Pacific	-	-	-	-	-
Utah	-	-	-	-	-
Vermont	Yes	Yes	3	No	Yes
Virginia	No	-	-	-	-
Virgin Islands	-	-	-	-	-
Washington	Yes	Yes	12	Yes	No
West Virginia	Yes	-	-	-	Yes
Wisconsin	No	-	-	-	-
Wyoming	-	-	-	-	-
TOTALS					
Yes:	29	27		18	25
No:	12	4		13	7
NUMBER OF RESPONDENTS	41	30*	31	31	32

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\*Includes one state (Tennessee) that responded "both."

Source: ASTSWMO Survey.



## EXHIBIT 3-7

## CONSTRUCTION CONTRACTS

State	Specific Regulations for Construction Contracts	Have You Ever Let a Construction Contract?	Can Contractors be Prequalified?		Do Any State Legal Requirements Impede Procurement?	Is Competitive Bidding Required?	
			Construction	Engineer		Construction	Engineer
Alabama	No	-	-	-	-	-	-
Alaska	-	-	-	-	Yes	-	-
American Samoa	-	-	-	-	-	-	-
Arizona	Yes	Yes	Yes	Yes	No	Yes	Yes
Arkansas	No	No	Yes	No	Yes	Yes	No
California	No	Yes	Yes	Yes	Yes	Yes	Yes
Colorado	No	No	Yes	Yes	Yes	Yes	Yes
Connecticut	No	No	No	No	No	Yes	Yes
Delaware	Yes	No	No	No	No	Yes	Yes
District of Columbia	-	-	-	-	-	-	-
Florida	Yes	Yes	-	-	No	-	-
Georgia	No	No	No	No	No	Yes	Yes
Guam	-	-	-	-	-	-	-
Hawaii	No	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-
Illinois	Yes	No	Yes	No	No	Yes	No
Indiana	Yes	Yes	Yes	Yes	Yes	Yes	No
Iowa	-	-	-	-	-	-	-
Kansas	Yes	No	-	-	No	-	-
Kentucky	Yes	No	Yes	Yes	No	Yes	Yes
Louisiana	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-
Maryland	No	No	Yes	Yes	Yes	Yes	Yes
Massachusetts	No	Yes	No	No	No	Yes	Yes
Michigan	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minnesota	No	No	No	Yes	No	Yes	No
Missouri	-	-	-	-	-	-	-
Mississippi	No	No	No	No	No	No	No
Montana	Yes	No	No	No	No	Yes	Yes
Nebraska	-	-	-	-	-	-	-
Nevada	No	No	No	No	-	Yes	Yes
New Hampshire	No	Yes	Yes	Yes	Yes	Yes	Yes
New Jersey	No	Yes	No	No	Yes	Yes	Yes
New Mexico	Yes	No	No	No	No	Yes	Yes
New York	Yes	Yes	Yes	Yes	No	Yes	-
North Carolina	-	-	-	-	-	-	-
North Dakota	-	-	-	-	-	-	-
Ohio	Yes	Yes	Yes	Yes	Yes	Yes	No
Oklahoma	No	Yes	-	-	-	Yes	Yes
Oregon	Yes	Yes	Yes	Yes	No	Yes	Yes
Pennsylvania	No	Yes	Yes	Yes	No	Yes	Yes
Puerto Rico	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-
South Carolina	Yes	Yes	Yes	Yes	No	Yes	Yes
South Dakota	Yes	No	-	-	No	-	No
Tennessee	No	Yes	Yes	Yes	No	Yes	Yes
Texas	No	No	Yes	Yes	No	Yes	Yes

EXHIBIT 3-7 (continued)

State	CONSTRUCTION CONTRACTS						
	Specific Regulations for Construction Contracts	Have You Ever Let a Construction Contract?	Can Contractors be Prequalified?		Do Any State Legal Requirements Impede Procurement?	Is Competitive Bidding Required?	
			Construction	Engineer		Construction	Engineer
Trust Territories of the Pacific	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-
Vermont	No	No	-	-	-	-	-
Virginia	No	No	No	-	-	-	-
Virgin Islands	-	-	-	-	-	-	-
Washington	No	No	No	Yes	No	Yes	No
West Virginia	-	No	-	-	-	-	-
Wisconsin	Yes	No	Yes	No	-	Yes	Yes
Wyoming	-	-	-	-	-	-	-
TOTALS							
Yes:	16	15	18	17	10	29	22
No:	21	21	12	12	21	1	8
NUMBER OF RESPONDENTS	37	36	30	29	31	30	30

Source: ASTSWM0 Survey.

## APPENDIX A

STATE HAZARDOUS WASTE CLEANUP FUNDS  
 SOURCES, TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE  
 (all figures in thousands of \$)

STATE	SOURCE	TOTAL APPR. LUMP SUM	TOTAL APPR. FY 83	TOTAL APPR FY84	TOTAL APPR FY85	COST SHARE AMOUNT LUMP SUM	COST SHARE AMOUNT FY83	COST SHARE AMOUNT FY84	COST SHARE AMOUNT FY85
Alabama	NONE	.	.	.	.	.	.	.	.
Alaska	* OIL AND HAZARDOUS MATERIAL SPILL FUND	1,000.0	.	.	.	.	.	.	.
	* GENERAL FUNDS	.	.	.	.	.	.	.	.
Arizona	* STATE APPROPRIATION	.	269.0	158.5	375.0	.	.	.	.
	* WATER QUALITY REVOLVING FUND (FOR SEVERAL YEARS)	700.0	.	.	.	700.0	.	.	.
	* STATE EMERGENCY FUND (FOR 1 MPL SITE)	.	.	600.0	.	.	.	.	.
Arkansas	* PERMITS, APPROPRIATIONS, MANIFESTS	.	.	177.2	.	.	.	.	.
California	* HAZARDOUS SUBSTANCE ACCOUNT	8,500.0	10,000.0	10,000.0	10,000.0	.	.	.	.
Colorado	* GENERAL FUND	.	.	.	.	.	.	.	.
	* APPROPRIATIONS FOR SPILLS	.	.	.	.	.	.	.	.
Connecticut	* STATE SPILL FUND	450.0	.	.	.	.	.	.	.
	* STATE GENERAL FUNDS	.	.	.	.	.	.	.	.
	* GENERATOR TAX	.	.	.	.	.	.	.	.
Delaware	* STATE REVENUES FOR SPILL RESPONSE	.	.	.	1,500.0	.	.	.	1,500.0
District of Columbia	* D.C. GOVERNMENT GENERAL FUND	.	24.3	23.3	19.3	.	.	.	.
Florida	* WATER QUALITY ASSURANCE TRUST FUND	.	.	8,500.0	14,000.0	.	.	.	.
	* STATE GENERAL FUND	.	365.0	260.0	260.0	.	.	.	.
	* HAZARDOUS WASTE TRUST FUND	.	100.0	.	.	.	.	.	.
Georgia	* HAZARDOUS WASTE PROGRAM LEGISLATIVE APPROPRIATIONS	.	.	.	.	.	.	.	.
	* HAZARDOUS WASTE TRUST FUND	.	.	.	.	.	.	.	.
Hawaii	NONE	.	.	.	.	.	.	.	.
Idaho	* HAZ. WASTE MANAGEMENT ACT-ALLOWS EXPENDITURES WITH COST RECOVERY	.	.	.	.	.	.	.	.
Illinois	* HAZARDOUS WASTE FUND	.	.	900.0	1,800.0	.	.	500.0	.
	* GENERAL REVENUES	.	.	900.0	1,800.0	.	.	100.0	200.0

STATE HAZARDOUS WASTE CLEANUP FUNDS  
SOURCES, TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE  
(all figures in thousands of \$)

STATE	SOURCE	TOTAL APPR. LUMP SUM	TOTAL APPR. FY 83	TOTAL APPR FY84	TOTAL APPR FY85	COST SHARE AMOUNT LUMP SUM	COST SHARE AMOUNT FY83	COST SHARE AMOUNT FY84	COST SHARE AMOUNT FY85
Indiana	* HAZARDOUS WASTE TRUST FUND -- MATCHES FEDERAL SUPERFUND \$	380.0	.	.	.	380.0	.	.	.
Kansas	* STATE GENERAL FUND (GENERAL REVENUES APPROPRIATION)	.	125.0	125.0	125.0	.	.	.	.
Kentucky	* GENERAL REVENUES	.	40.0	40.0	40.0	.	.	.	.
	* HAZARDOUS WASTE MANAGEMENT FUND	.	.	270.0	345.0	.	.	270.0	345.0
Maryland	* HAZARDOUS SUBSTANCES CONTROL FUND	.	.	.	.	.	.	.	.
Massachusetts	* STATE SUPERFUND OF 83--BOND	25,000.0	.	.	.	25,000.0	.	.	.
	* CAPITAL OUTLAY BUDGET OF 1979 -- EXHAUSTED	5,000.0	.	.	.	.	.	.	.
Michigan	* STATE GENERAL FUNDS APPROPRIATIONS (ANNUALLY)	.	3,800.0	6,200.0	10,000.0	.	3,800.0	6,200.0	10,000.0
Minnesota	* STATE SUPERFUND	5,000.0	.	.	.	.	5,000.0	5,000.0	5,000.0
	* GENERAL STATE APPROPRIATIONS	.	1,020.4	1,075.5	1,075.5	.	.	.	.
Mississippi	* STATE GENERAL FUND	.	16.0	16.0	16.0	.	.	.	.
Missouri	* LAND DISPOSAL FEES	.	1,250.0	1,250.0	1,250.0	.	.	.	.
	* HAZARDOUS WASTE GENERATION FEES	.	.	1,200.0	.	.	.	.	.
	* STATE GENERAL FUND (\$3.3 M FOR TIMES BEACH)	.	.	4,500.0	.	.	.	3,750.0	.
Montana	* STATE GENERAL FUND	.	110.0	110.0	110.0	.	110.0	110.0	110.0
Nebraska	* GENERAL REVENUES	24.5	.	.	.	.	.	.	.
Nevada	* GENERAL FUND FY83 AND FY84, POSSIBLY FY85 (ANNUALLY)	.	12.0	12.0	12.0	.	.	.	.
	* HAZARDOUS WASTE PENALTY FUND FY83 AND FY84, POSSIBLY 85 (ANNUALLY)	.	20.0	20.0	20.0	.	20.0	20.0	20.0
New Hampshire	* WASTE END TAX OF \$.04/KG: PROJECTED REVENUE	.	500.0	365.0	365.0	.	.	.	.
	* APPROPRIATION	1,500.0	.	.	.	.	.	.	.
New Jersey	* SPILL FUND	.	7,000.0	13,000.0	.	.	7,000.0	13,000.0	.
	* HAZARDOUS SUBSTANCES DISCHARGE BOND ACT OF 1981	100,000.0	.	.	.	100,000.0	.	.	.

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STATE HAZARDOUS WASTE CLEANUP FUNDS  
 SOURCES: TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE  
 (all figures in thousands of \$)

STATE	SOURCE	TOTAL APPR. LUMP SUM	TOTAL APPR. FY 83	TOTAL APPR FY84	TOTAL APPR FY85	COST SHARE AMOUNT LUMP SUM	COST SHARE AMOUNT FY83	COST SHARE AMOUNT FY84	COST SHARE AMOUNT FY85
New Mexico	• HAZARDOUS SUBSTANCE RESPONSE FUND (LEGISLATIVE)	130.0	.	.	.	.	.	.	.
	• LEGISLATIVE APPROPRIATION FOR PERSONNEL	120.0	.	.	.	.	.	.	.
New York	• HAZARDOUS WASTE FEE REVENUE	.	5,300.0	.	.	.	.	.	.
	• GENERAL FUND	.	3,630.0	.	.	.	.	.	.
North Dakota	NONE	.	.	.	.	.	.	.	.
Ohio	• HAZARDOUS WASTE CLEANUP ACCOUNT (MATCHABLE) -- FROM 3 SETTLEMENTS	350.0	.	.	.	350.0	.	.	.
	• 600 SPILL ACCOUNT (GENERAL REVENUE FUND) -- NOT FOR MATCH	12.6	.	.	.	.	.	.	.
Oklahoma	NONE	.	.	.	.	.	.	.	.
Oregon	• GENERAL APPROPRIATION AND NEW DISPOSAL FEE	.	.	.	.	.	.	.	.
Pennsylvania	• LEGISLATIVE APPROPRIATION FY83	.	3,000.0	.	.	.	.	.	.
	• STATE SOLID WASTE ABATEMENT FUND (FINES, PENALTIES ETC)	.	200.0	.	.	.	.	.	.
South Carolina	• CONTINGENCY FUND	.	465.9	683.3	751.7	.	.	.	.
	• STATE BUDGET APPROPRIATIONS	.	184.1	250.3	344.6	.	.	.	.
South Dakota	• STATE FUNDS FROM GENERAL REVENUES (USED FOR COST SHARING)	.	5.0	5.0	5.0	.	5.0	5.0	5.0
Tennessee	• STATE GENERAL FUNDS	1,000.0	.	.	.	.	.	.	.
	• GENERATOR FEES (ANTICIPATED)	1,000.0	.	.	.	.	.	.	.
Texas	• STATE DISPOSAL FACILITY RESPONSE FUND	5,550.0	.	.	.	5,550.0	.	.	.
Vermont	• SPECIAL STATE HAZ. WASTE APPROPRIATION (FOR NPL AND RELATED SITES)	.	200.0	.	.	.	200.0	.	.
	• STATE POLLUTION CONTINGENCY FUND (REVOLVING FUND)	10.0	.	.	.	.	.	.	.
Virgin Islands		.	.	.	.	.	.	.	.
Virginia		.	.	.	.	.	.	.	.
Washington	• GENERAL FUND FY83	.	4,300.0	.	.	.	.	.	.
	• HAZ. WASTE CONTROL AND ELIMINATION ACCOUNT -- FUNDS TO BE ACCRUED	.	.	.	.	.	.	.	.

APPENDIX - Page 4

STATE HAZARDOUS WASTE CLEANUP FUNDS  
SOURCES, TOTAL AMOUNTS, AND AMOUNTS AVAILABLE FOR COST SHARE  
(all figures in thousands of \$)

STATE	SOURCE	TOTAL APPR. LUMP SUM	TOTAL APPR. FY 83	TOTAL APPR. FY84	TOTAL APPR. FY85	COST SHARE AMOUNT LUMP SUM	COST SHARE AMOUNT FY83	COST SHARE AMOUNT FY84	COST SHARE AMOUNT FY85
Washington (con't)	* STATE REFERENDA 38 AND 39 -- SOME PORTION SHOULD FINANCE CLEANUP	.	.	.	.	.	.	.	.
West Virginia	NONE	.	.	.	.	.	.	.	.
Wisconsin	* PROGRAM REVENUES	.	50.0	50.0	50.0	.	.	.	.
	* GENERAL REVENUES	.	44.0	44.0	44.0	.	.	.	.
TOTALS		155,727.1	42,030.7	50,735.1	44,308.1	131,980.0	16,135.0	28,955.0	17,180.0

\*\* California listed a single mechanism for funding remedial responses, its Hazardous Substance Account, but indicated that the account would be supported by both lump sum and annual appropriations.

Source: ASTSWMO Survey.