

December 2000

BROWNFIELDS

Information on the Programs of EPA and Selected States



GAO

Accountability * Integrity * Reliability

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Abbreviations

BCRLF	Brownfields Cleanup Revolving Loan Fund
BMS	Brownfields Management System
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
EPA	Environmental Protection Agency
NPL	National Priorities List



United States General Accounting Office
Washington, D.C. 20548

December 15, 2000

The Honorable Thomas J. Bliley, Jr.
Chairman, Committee on Commerce
House of Representatives

Dear Mr. Chairman:

“Brownfields” are properties with real or perceived environmental contamination that hampers redevelopment efforts and encourages development in suburban “greenfields.” Brownfields are often abandoned, urban industrial properties whose redevelopment for commercial or residential uses could create jobs and increase tax bases in cities. In the past decade, the Environmental Protection Agency (EPA) and some states have established financial assistance programs, including grant and loan programs, to encourage the assessment, cleanup, and redevelopment of brownfields.

You asked us to provide information on (1) how the assistance¹ provided under EPA’s program to encourage the assessment and cleanup of brownfields compares with the assistance provided by selected states with respect to overall strategy, the forms of assistance, eligibility, and other factors; (2) the amounts of assistance provided by EPA and these states; and (3) the results reported by EPA and these states. To do this, we selected five states that were identified by EPA and other knowledgeable organizations as operating some of the largest or most innovative brownfields programs in the nation: Massachusetts, Michigan, New Jersey, Pennsylvania, and Wisconsin. We also contacted brownfields program managers in five cities that, according to EPA records, had achieved large numbers of cleanups, major redevelopment investments, or other results from their EPA funding. In addition, you asked us to provide information on other incentives, such as federal and state tax benefits for brownfields cleanup and state cleanup and liability rules intended to facilitate brownfields cleanups. We are providing information on these incentives in appendixes I through VI.

¹Throughout this report, we refer to grants and cooperative agreements as assistance or awards. Both provide organizations with funding to undertake certain activities. EPA uses grants when it does not expect to be substantially involved in the activities and cooperative agreements when it does expect to be involved.

Results in Brief

The EPA and state brownfields programs each provide financing (1) to assess environmental contamination at brownfields properties and (2) if necessary, to clean them up. However, the EPA and state programs differ in certain significant respects. For example:

- **Overall strategy.** EPA's assessment assistance, referred to as assessment pilot project awards, can be used to support brownfields assessment programs and to conduct site-specific assessments. For instance, assessment awards may be used to pay the salaries of municipal brownfields staff who work on assessment-related activities. In contrast, the selected states generally provide assistance to assess particular properties.
- **Forms of assistance.** EPA's cleanup funds are available to the parties cleaning up brownfields only as loans. In the states, most cleanup funds have been provided as grants.
- **Eligibility.** EPA provides all of its assessment and cleanup assistance to state, local or tribal governments, although these governments may lend funds to private parties for cleanup. Most of the selected states provide assistance directly to private parties and to local governments.
- **Other aspects.** EPA does not impose matching requirements on the recipients of its assessment assistance; the selected states do for their recipients. Because EPA administers brownfields assistance under the law authorizing its program to clean up hazardous waste sites—Superfund—recipients and borrowers in the brownfields cleanup loan program must comply with certain Superfund program restrictions, such as a prohibition on using funds to clean up sites contaminated solely by petroleum products. State grants and loans are not subject to such restrictions.

From fiscal years 1995 through 2000, EPA provided a total of \$246.9 million for brownfields assistance:

- \$123.6 million in pilot project assessment and related assistance to help identify, assess, characterize, and plan cleanup activities at contaminated brownfields sites targeted for redevelopment.
- \$64.8 million to capitalize revolving loan funds to assist government agencies and private parties clean up brownfields properties.

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- \$58.5 million for brownfields-related job training, the development of state cleanup programs, and other purposes.

According to the most recent available data at the time of our review, the five states combined had provided about \$136 million for brownfields assessments and cleanups to public and private entities. Of this total, about \$114 million was provided in grants and about \$22 million in loans. The states provided most of their grants to local governments.

Currently, the information EPA has collected on the results of its brownfields program is limited for a variety of reasons:

- While EPA maintains a database to track measures of program activities and outcomes reported by recipients of funds—such as the number of properties with cleanups completed or with redevelopment underway—the database is incomplete because most recipients have not reported on many of the measures. EPA has not required recipients to report on a specific set of program measures, partly out of concerns about imposing a burden on recipients, but it has encouraged them to report. Also, several years may elapse after an award before certain results, such as the creation of jobs, are realized. EPA data provided to us in June 2000 show that 48 recipients of pilot project assessment awards (about 16 percent of the 306 awards made at that time) had reported using their awards to help leverage cleanups at 130 properties, while 84 recipients (27 percent) reported that their awards helped leverage nearly \$2.2 billion for redevelopment.
- Prior to September 1999, EPA did not have nationwide guidance to help ensure its results were consistently recorded. We found inaccuracies in the results recorded in EPA's database for three of the five cities we contacted that had reported major results prior to September 1999.
- Brownfields program managers in these five cities generally believed that their EPA assessment funds had been useful or essential to their programs. However, measuring the results of brownfields assistance programs more quantitatively is difficult because it cannot be known with certainty whether cleanup and redevelopment might have occurred without government assistance.

States' information on the results of their brownfields programs was also limited. Two of the five states do not track the economic benefits of their

brownfields loan and grant programs, and the data collected by the other three states represent forecasted, rather than actual, results.

We are making recommendations to EPA aimed at improving its information on the results of its brownfields program.

EPA provided us with written comments on a draft of this report. EPA said that the five states we selected did not represent state brownfields programs nationwide, many of which have smaller brownfields programs. EPA also said that it is striving to improve the accuracy of its results data and has instituted quality controls over the data. EPA generally agreed with the substance of the report's recommendations.

Background

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (referred to as CERCLA or Superfund) authorizes the cleanup of hazardous waste sites and, to fund these cleanups, holds the parties responsible for the contamination liable for the cleanup costs. The act also gives EPA enforcement authority. Many states have laws with similar liability and enforcement provisions. In the 1990s, many of the states amended their cleanup laws and rules to encourage parties to clean up sites without direct enforcement action. They created "voluntary cleanup programs" that made cleanup rules less stringent and increased liability protection for the parties that cleaned up sites. According to officials in the five states, some of the properties cleaned up under their state voluntary cleanup programs are brownfields properties. Some states began to further encourage the cleanup and redevelopment of brownfields through financial assistance and tax incentives. (See app. I for information on federal brownfields cleanup tax incentives, and apps. II through VI for information on tax incentives in the five states.)

EPA also joined the effort to revitalize brownfields. It issued a "Brownfields Action Agenda" in 1995 and began an initiative that now includes assistance to states, local governments, and tribes to assess and clean up brownfields sites, build voluntary cleanup programs, and carry out other brownfields-related activities. In an effort to encourage the reuse of brownfields, EPA also issued guidance explaining that it would not hold property owners liable for cleanup under CERCLA in certain circumstances. (See app. I.) EPA defines brownfields as "abandoned, idled or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination."

In addition to providing financial assistance through its brownfields program, EPA helps support the assessment and cleanup of hazardous waste sites through other programs whose primary purpose is not brownfields redevelopment. Such sites, while not considered to be part of the brownfields program, could meet EPA's definition of brownfields. For example, the Superfund program assesses sites being considered for possible Superfund cleanup.

EPA and State Brownfields Programs Differ in Key Aspects

EPA and the states we selected provide various forms of financing and other assistance to encourage brownfields redevelopment. EPA's programs are similar to those in the states in one major respect: They both provide funds for assessing and cleaning up sites. However, the federal and state efforts differ significantly in other respects. Some of the major differences are discussed below.

Overall Strategies

The assessment and cleanup assistance programs operated by EPA and the selected states have different overall strategies. EPA's brownfields program focuses on funding assessments, building local capacity for planning and conducting brownfields activities, and developing brownfield program models in local governments that can be emulated by others. For example, EPA assessment assistance to state, local, and tribal governments may be used to pay staff salaries, revise regulations, and develop inventories of brownfields sites. Also, EPA does not target particular properties for cleanup assistance; rather, EPA provides money to capitalize state and local government revolving loan funds. Loans are available to local government agencies or private parties to clean up specific sites. In contrast, the states generally focus both their assessment and cleanup assistance on specific properties.

EPA also offers assistance to governmental entities and nonprofit organizations for job training in hazardous waste cleanup and to the states to develop their voluntary cleanup programs. The states generally do not have similar programs.

Forms of Assistance

EPA and the states differ in the forms of assistance provided. EPA provides assistance to states, political subdivisions, or Indian tribes for assessments and cleanups through the following programs:

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- **Assessment Pilot Projects:** EPA makes awards to pilot projects in state, local, and tribal governments to identify and assess potential contamination at brownfields and to plan cleanup if needed. Initial awards can be up to \$200,000 and may be followed with an another \$150,000 award. An additional \$50,000 is available for applicants who redevelop sites as greenspace, such as parks, playgrounds, or open space.
 - **Showcase Communities and Finalists:** EPA provides awards to communities that serve as models for collaborative efforts to assess, clean up, and reuse brownfields. Sixteen awards were made in fiscal year 1998, and 12 more will be made in fiscal year 2001. In fiscal year 1998, EPA committed to provide up to \$400,000 to each showcase community, including up to \$200,000 to pay for the temporary assignment of a federal staff person to assist the program. In fiscal year 2000, EPA offered \$100,000 in additional funding for the assignment of federal staff. Showcase finalists are those communities that submitted applications and were selected as finalists but not as showcase communities. The 24 finalists in fiscal year 1998 received up to \$200,000 each as either a supplement to an existing assessment pilot project or as a new assessment pilot award.
 - **Cleanup Revolving Loan Fund:** EPA awards up to \$500,000 to state, local, and tribal governments to help them create revolving loan funds that provide low-interest loans to public and private entities for site cleanup.
 - **Targeted Brownfields Assessments Awards:** EPA hires, or provides funds to states to hire, contractors to identify the extent of contamination at properties, when this option is preferable to awarding a pilot award. For example, a targeted assessment might be done at a property in a small town that did not plan to develop a general brownfields program. As of September 2000, EPA had funded 500 targeted assessments for about 470 properties.

In addition, EPA provides funds to the U.S. Army Corps of Engineers and the Department of the Interior's Bureau of Reclamation to provide technical assistance for brownfields redevelopment projects.² For a listing of EPA's brownfields assistance programs, see appendix I.

Each of the states we visited operates grant and/or loan programs to assist brownfields assessments and cleanups. States vary in the number of these

programs that they offer. Some of the states also address brownfields in other ways. For example, Michigan is starting a major program in which it will conduct brownfields cleanups; Massachusetts has created a special insurance program; and Pennsylvania funds contractors to conduct site assessments and prepare cleanup plans to facilitate the cleanup of abandoned industrial sites in prime locations. Pennsylvania's program is similar in purpose to EPA's targeted brownfields assessment program. Finally, some of the states have established brownfields inventories to assist in attracting developers. For a more detailed description of the five states' brownfields programs, see apps. II to VI.³

Eligibility

In general, both EPA and the states limit eligibility for assistance to parties that did not cause or contribute to the release of hazardous substances on the property or that were not subject to cleanup enforcement action. For example, Massachusetts officials stated that parties that caused or contributed to a hazardous substance release are prohibited from receiving state grant or loan assistance.

In other ways, EPA and the states' programs differ in their eligibility requirements. EPA makes assessment and cleanup awards only to governmental units.⁴ In contrast, three states, Massachusetts, New Jersey, and Pennsylvania, also lend private parties money for assessment and cleanups; and two states, New Jersey and Wisconsin, make grants to private parties for assessments or cleanups. Michigan was the only state that limited both grant and loan assistance to public entities.

Some of the states have other eligibility requirements, such as geographic location or economic potential. For example, Massachusetts limits grant and loan assistance to projects located in state-designated economically distressed areas. Funds awarded under Wisconsin's sustainable urban development zone program are reserved for five large communities in the

²EPA also uses its brownfields funds for grants to nonprofit organizations for outreach, technical assistance and research, and tribal support related to hazardous and solid waste issues. Little of this money, according to EPA officials, is directly related to brownfields.

³The state programs discussed in these appendixes are those aimed at the environmental assessment and cleanup of brownfields. The appendixes do not include state assistance and tax relief programs directed at economic revitalization that may encourage brownfields' reuse but do not provide special assistance for assessment and cleanup.

⁴As indicated above, recipients of cleanup funds may lend the funds to private parties.

state. To obtain financial assistance, some of the states require the applicant to demonstrate that the project will create jobs or contribute to the economic well-being of the community. For example, Michigan requires an applicant to demonstrate the project's potential to create jobs and regenerate economic activity. Likewise, Massachusetts requires project applicants to generate jobs or contribute to the economic or physical revitalization of the area where the project is located. EPA officials said that EPA does not have geographic limits on the use of its assessment or cleanup awards.

Other Aspects

Other differences in EPA and the selected state brownfields programs include the following:

- **Matching requirements.** EPA does not require recipients to provide matching funds for assessment assistance. The states impose matching requirements for assessment grants, with the size of the award or the specific requirements of the program determining the amount of the match.
- **Special federal requirements.** Because EPA administers brownfields assistance under CERCLA, recipients must comply with certain Superfund restrictions. These restrictions include prohibitions on the use of funds at certain sites, such as those contaminated solely by petroleum products. In addition, recipients of money from EPA-assisted revolving loan funds are required to file certain documents, including a community relations plan and a sampling and analysis plan. Officials in the five states said they require recipients of state brownfields funds to provide similar documents, but they believed their documents did not have to be as detailed or extensive as EPA's.

Amounts of Grants and Loans Provided for Assessments and Cleanups

From fiscal year 1995 through fiscal year 2000, EPA awarded assistance for brownfields-related purposes totaling \$246.9 million. Of this amount, \$155.6 million was accounted for by pilot project assessment awards, showcase community and finalist awards, and cleanup revolving loan fund awards. These are the forms of assistance most similar to the state assessment and cleanup grant and loan programs. The five states combined have made grants and loans for assessment and cleanup totaling about \$135.9 million over the lives of their programs.⁵

Table 1 presents EPA's obligations for brownfields assistance for fiscal years 1995 through 2000.

Table 1: EPA Brownfields Assistance Obligations, Fiscal Years 1995-2000

Dollars in millions

Initiative	Fiscal year						Total ^a
	1995	1996	1997	1998	1999	2000	
Pilot Project Assessment	\$5.0	\$7.9	\$7.6	\$22.2	\$15.3	\$20.8	\$78.9
Showcase Communities ^b				3.0	0.2	4.7	\$7.9
Showcase Finalists						4.0	\$4.0
Revolving Loan Fund			9.1		30.9	24.9	\$64.8
Targeted Brownfields Assessments			6.5 ^d	11.9	6.1	8.3	\$32.8
State Voluntary Cleanup Program			11.5 ^d	10.3	10.3	9.5	\$41.6
Job Training			0.4	2.1	1.5	2.8	\$6.9
U.S. Army Corps of Engineers and Bureau of Reclamation				2.5	2.5	3.5	\$8.4
Other ^c		0.4		0.9		0.3	\$1.6
Total^a	\$5.0	\$8.3	\$35.1	\$52.9	\$66.8	\$78.8	\$246.9

^aTotals may not add due to rounding.

^bIncludes the salary of federal staff assigned to communities and paid over a number of years.

^cBecause of unique circumstances, EPA regions have awarded additional resources to some pilots.

^dIncludes all amounts awarded before 1998. Annual amounts were not available for this period.

Source: GAO's analysis of EPA's data.

⁵The five states began these programs on various dates over the last several years. See apps. II to VI for details.

EPA's cleanup revolving loan fund program, which began in 1997, has awarded \$64.8 million to recipients through fiscal year 2000. Recipients had lent about \$1 million for five cleanup projects through September 2000.

Table 2 shows, for each of the five states, the numbers and amounts of grants and loans made for site assessment and cleanup. For each state, the data are cumulative from the beginning of the program through the most recent period for which the state provided data at the time of our review.⁶

Table 2: Number and Amount of Grant and Loan Awards at Selected States

Dollars in millions

State grants and loans	Assessment Grants		Assessment Loans		Cleanup Grants		Cleanup Loans		Total ^a	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Massachusetts	0	\$0.0	5	\$0.1	0	\$0.0	3	\$0.7	8	\$0.9
Michigan	101	8.0	15	5.0	59	34.5	0	0.0	175	\$47.5
New Jersey	^b	24.0	^b	0.0	^b	7.0	^b	11.5	610 ^b	\$42.5
Pennsylvania	120	7.7	5	0.3	60	17.1	5	3.5	190	\$28.6
Wisconsin	0	0.0	^c	^c	39	15.8	1	0.6	40	\$16.4
Total^a	221	\$39.7	25	\$5.4	158	\$74.4	9	\$16.3	1023	\$135.9

^aTotals may not add due to rounding.

^bNew Jersey has made 518 grants and 92 loans for a total of 610 grants and loans made. New Jersey did not provide us with the individual number of assessment grants, assessment loans, cleanup grants, and cleanup loans made.

^cWisconsin does not provide loans for site assessments.

Source: GAO's presentation of state data.

As the table shows, in total, two-thirds of the states' money, about \$91 million, was used for cleanups rather than assessments. Although individual states differed with respect to whether they favored grants or loans, most of their combined funding was provided as grants rather than loans. Michigan distributed the largest amount of cleanup funds, all as grants. Wisconsin and Pennsylvania also had substantial cleanup grant

⁶Massachusetts data are as of March 2000, Pennsylvania as of June 2000, Wisconsin as of January 2000, Michigan as of May 2000, and New Jersey as of January 2000.

programs. New Jersey made most of its cleanup financing in the form of loans. The Massachusetts program was recently established, and the state had limited its assistance to loans rather than grants so as to preserve its capital.

EPA and the States Have Limited Data on Results

Determining the results of EPA and state brownfields programs is difficult because the data are limited. Most recipients of EPA's brownfields pilot assessment assistance have not reported on measures of program results, such as sites cleaned up or redevelopment investments made.⁷ Reporting has been incomplete because assistance agreements did not require full reporting of results and because redevelopment may take several years or more to be completed. We also found inaccuracies in the results data for three of the five pilot assessment recipients that we reviewed. These pilot recipients reported some of the largest accomplishments in the program. Data on the results of the other EPA programs, such as the revolving loan fund program, are also limited. Two of the five states did not track the economic benefits of their loan and grant programs, and the data collected by the other three represent forecasted rather than actual results. Assessing the impact of brownfields programs is also difficult because reported results may be due, at least in part, to factors other than government assistance.

EPA's Data Are Limited

Information on brownfields program results is important for demonstrating program effectiveness and accountability. According to EPA, performance data are used to justify current activities, advocate future funding, and report progress under the Government Performance and Results Act. This act requires federal agencies to establish performance goals and measures to help move them toward managing for results. Performance goals and their associated measures are often expressed as end outcomes, intermediate outcomes, or outputs. End outcomes are the results of programs and activities compared with their intended purpose. Intermediate outcomes show progress toward achieving the end outcomes.

⁷As we reported in April 1999, other federal agencies also generally do not have the comprehensive data necessary to determine the extent to which brownfields programs' economic benefits will be achieved. See *Environmental Protection: Agencies Have Made Progress in Implementing the Federal Brownfield Partnership Initiative* (GAO/RCED-99-86, Apr. 9, 1999).

Outputs are typically activities or products, such as the number of regulations promulgated, and do not directly measure results.⁸

In part to compile information on the brownfields program's performance, EPA maintains a database—the Brownfields Management System—containing information on program outputs, such as the number of awards made, and outcomes,⁹ such as cleanups completed and redevelopment dollars leveraged. (App. I contains information as of March 31, 2000, on measures tracked by the system.) However, for a variety of reasons, program results data are limited.

Assessment Results

EPA's data on the results of its assessment assistance are derived from quarterly reports and other documents submitted by recipients; the data are accumulated in the management system. Not all recipients have reported on all data elements because they have not been required to and because some results may not occur for some time after awards are made. In addition, we noted some inaccuracies in data reported by three of the five recipients we contacted.

Recipients reported that assessments had been completed at 1,939 properties¹⁰ associated with the pilot projects through March 31, 2000. Table 3 shows the data reported for assessment awards through March 31, 2000.

⁸We have issued several reports and testimonies discussing EPA's lack of reliable data for assessing the results of its environmental programs. For example, see *Environmental Information: EPA Is Taking Steps to Improve Information Management, but Challenges Remain* (GAO/RCED-99-261, Sept. 17, 1999); *Managing for Results: EPA Faces Challenges in Developing Results-Oriented Performance Goals and Measures* (GAO/RCED-00-77, Apr. 28, 2000); and *Environmental Information: EPA Needs Better Information to Manage Risks and Measure Results* (GAO-01-97T, Oct. 3, 2000).

⁹In this report, we use the term "results" to signify intermediate and end outcomes.

¹⁰This number represents the total of 1,666 properties with brownfields assessments completed with pilot funding, and 273 properties with brownfields assessments completed with other funding. See table 3.

Table 3: Data on Assessment-Related Program Performance in the Brownfields Management System, as of March 31, 2000

Dollars in millions

Measure	Total
Assessment demonstration pilots awarded	306
Properties with brownfields assessments started with pilot funding	1,998
Properties with brownfields assessments completed with pilot funding	1,666
Properties with brownfields assessments completed with other funding	273
Properties assessed that do not require cleanup activities	623
Properties with brownfields cleanup activities started	236
Properties with brownfields cleanup activities completed	127
Properties with redevelopment activities underway	221
Cleanup dollars leveraged	\$147.6
Cleanup/construction jobs leveraged	1,541
Redevelopment/ construction dollars leveraged	\$2,189.4
Redevelopment jobs leveraged	5,104

Source: GAO's analysis of EPA's data.

EPA Does Not Have Results Data From All Pilot Assessment Recipients

At our request, EPA disaggregated its data on six measures of program results by the pilot projects—cities, states, or tribes—that reported them. The six measures are the number of (1) properties with cleanups completed, (2) properties with redevelopment underway, (3) cleanup dollars leveraged, (4) redevelopment and construction dollars leveraged, (5) cleanup jobs leveraged, and (6) redevelopment and construction jobs leveraged. As shown in table 4, 27 percent or less of the 306 pilots that had received awards reported results on any one of these six measures through June 2000.

Table 4: Data Reported by Brownfields Assessment Pilots on Six Measures, as of June 2000

Measure	Number of pilots reporting on the measure	Percent of 306 pilots reporting on the measure
Properties with completed cleanups leveraged	48	16
Properties with redevelopment underway	64	21
Redevelopment/construction dollars leveraged	84	27
Cleanup dollars leveraged	76	25
Cleanup jobs leveraged	24	8
Redevelopment/ construction jobs leveraged	30	10

Note: We received these data from EPA in June 2000. According to EPA, these data were the most recent information reported by the grantees and entered into the database at that time.

Source: GAO's analysis of EPA's data.

The results reported by the pilot projects varied widely. For example, the pilot projects reported that their awards had helped to leverage from as little as \$6,700 to as much as \$650 million in redevelopment and construction funding, and from as few as 1 to as many as 1,400 jobs. Five pilot projects accounted for 75 percent of the redevelopment dollars leveraged, and 26 projects accounted for 75 percent of the reported cleanups. According to EPA officials, a larger portion of recipients, an estimated 85 percent or more, have reported on the number of assessments accomplished than on the program measures shown in table 4.

EPA requires pilot assessment recipients to report on how they spent award funds and the work accomplished but does not require recipients nationwide to report the results (intermediate and end outcomes) achieved from their use of the awards. According to EPA officials, the Paperwork Reduction Act and Office of Management and Budget rules on collecting information from recipients limit the agency's ability to require national, uniform reporting of results. However, according to EPA officials, the regional offices administering the assessment awards have encouraged recipients to report their results. In September 1999, EPA defined a set of accomplishment measures that regions could require of pilots in new or amended agreements after September 30, 1999. However, headquarters' officials in charge of the brownfields program do not track the extent to which regions have incorporated these optional requirements and

therefore do not know the extent to which recipients will be expected to report on such measures in the future.

Moreover, data on certain measures—for example, redevelopment dollars invested or numbers of jobs created—may be available only from private-sector entities that may not wish to divulge the information. In addition, reporting may be limited in the six categories because some results, such as cleanups completed and investments in redevelopment, might not occur for some years after an award is made, and thus it would not yet be possible for the recipients to report such information. EPA made 121 awards in fiscal year 1997 or earlier; 71 percent of the pilots that reported results in one or more of the six categories received awards in that period. Pilot project recipients that received awards in later years may report results as time goes on.

Some Reported Results Were Inaccurate

To discuss reported results, we contacted five recipients, all city governments, that reported large numbers of sites cleaned up, redevelopments underway, and redevelopment/construction dollars and jobs leveraged. These cities are Dallas, Texas; Houston, Texas; Emeryville, California; Shreveport, Louisiana; and Baltimore, Maryland. According to the EPA data provided to us in June 2000, these cities represented 36 percent of the reported properties with cleanups completed, 30 percent of the number of properties with redevelopment underway, 80 percent of the redevelopment and construction dollars leveraged, and 35 percent of the jobs leveraged.

The managers of three of these cities' brownfields programs said that some of the results recorded in the Brownfields Management System were inaccurate. In particular:

- In the case of Shreveport, the reported number of properties with cleanups completed was overstated. This number of properties with completed cleanups should have been reported as 2, not 22. According to EPA, the city had been counting the cleanups performed on segments of properties; however, under EPA's current guidelines, pilots report the number of properties with completed cleanups instead of segments of properties. According to the information EPA provided to us in October 2000, Shreveport had continued to clean up properties, bringing its total of properties with completed cleanups to seven at that time.
- In Baltimore, the amount of cleanup dollars leveraged, reported as \$4 million, was incorrect. Of the \$4 million, \$3 million was leveraged from a

fund that pays for cleanup and noncleanup actions on brownfields. According to the city's brownfields program manager, \$2.4 million of the fund had been expended mostly for noncleanup actions and was incorrectly counted as dollars leveraged for cleanup actions. According to EPA, the \$2.4 million should have been counted as redevelopment or construction dollars leveraged.

- In Houston, the number of redevelopment/construction dollars reported as leveraged was inaccurate. According to EPA data, \$175 million of the city's reported leveraged redevelopment/construction dollars was funds received by the city from the Department of Housing and Urban Development under the Department's Section 108 loan guarantee program. According to the city's brownfields coordinator, the \$175 million was not leveraged through the use of EPA brownfields funds. EPA told us that the \$175 million accomplishment was erroneous and has been removed from the city's total count of redevelopment/construction dollars leveraged. According to the city's brownfields coordinator, the city has actually leveraged over \$500 million, but this was not reflected in the EPA data we received in June 2000.

EPA's 1999 guidance to pilot assessment recipients defines in some detail the requirements for such measures as cleanups completed and dollars leveraged. These guidelines may facilitate more consistent, accurate reporting. EPA also operates a quality control process for its program results data that EPA officials said involves reviews of the data by regional and headquarters officials and discussions of any questionable items with recipients. Also in 1999, EPA began to review the results data reported by recipients in the past. According to EPA officials, most of the errors detected in this review have been corrected and they are currently attempting to resolve remaining issues.

Limited Reporting of Results for Other Forms of Brownfields Assistance

The Brownfields Management System also contains information on awards to capitalize revolving loan funds, such as the numbers of sites with cleanups started and with cleanups completed using loans from a revolving fund. According to EPA data, recipients of revolving loan fund capitalization awards had made three loans as of March 31, 2000, and these loans contributed to the completion of the cleanup of one property. Through September 30, 2000, recipients had made five loans of about \$1 million in total, but results data through that date were not available.

EPA officials believe that the program's relatively recent start, a lack of loan administration capability in the recipient governments, and restrictions associated with the award money have impeded lending. For example, according to EPA's Director of the Office of Special Programs, which oversees the brownfields program, the prohibition against using revolving loan funds to clean up petroleum products is a significant barrier to cleaning up brownfields because it prevents using the funds at sites formerly occupied by gas stations. Such sites are often brownfields properties. Officials in the states we visited believed that other Superfund requirements, such as those related to community relations and environmental sampling, were also limiting loans from the EPA-assisted revolving loan funds. EPA has implemented a number of administrative changes to make its cleanup assistance less restrictive, such as highlighting areas of flexibility within the program, issuing guidance, and providing training. EPA is also supporting proposed legislation that would provide greater flexibility in using award funds. In fiscal year 2001, EPA will begin making awards to states from its Leaking Underground Storage Tank Trust Fund to assist in cleaning up gasoline-contaminated brownfields.

The management system also contains information on the Job Training and Development Demonstration Pilot awards. Measures reported for these awards include the number of participants completing training or obtaining employment. For example, the report for the job training awards shows the number of participants obtaining employment—378 through March 31, 2000. (See app. I.)

Linkages Between Program and Results Are Difficult to Establish

Brownfields program managers in the five cities we contacted generally believed that the EPA funds were useful or even essential to their programs. Four said that their cities would not have had brownfields programs without EPA funds. However, tying the cleanup or redevelopment of a particular property, or other result, to an award can be difficult.

According to EPA guidance, results are leveraged if there is a "link or nexus" to the efforts of an EPA-pilot funded activity or the EPA-pilot funded activity is a "catalyst" for the results. However, it cannot be known with certainty whether private money or other federal money might have been invested, at some time, in a given property without EPA's help. It is especially difficult to link EPA's assessment awards to the redevelopment of specific properties because these awards can be spent for assessment-related purposes, such as preparing inventories of brownfields properties or facilitating community involvement, rather than for assessing the

particular property whose cleanup and redevelopment are counted as program results. In addition, results such as cleanup or redevelopment may occur because of funding provided jointly by EPA and other sources. EPA's Brownfields Management System collects data, for example, on the number of "partnerships" formed with other government and nongovernment entities and on the amounts of funding leveraged through such entities.

State Data Are Also Limited

Three of the five states we contacted—Wisconsin, Massachusetts, and Michigan—attempt to measure the impact of their brownfields financial assistance programs on jobs or other economic benefits. Wisconsin reports the accomplishments of its brownfields grant program in terms of potential jobs created, potential increase in taxable property values, and potential acres returned to productive use. Massachusetts reports potential private investment and potential jobs created as a result of its brownfields redevelopment fund assistance and its insurance subsidy program. Michigan reports the amount of estimated private investment and estimated jobs created at sites where state funds were used to assess and clean up brownfields. (See apps. II, III, and VI.) However, the source of the estimates for each state is information submitted by assistance applicants. In contrast, according to EPA officials, results from the agency's pilot assessment awards are recorded in its database only if they have been achieved or recipients have demonstrated that there has been a redevelopment commitment, such as a contract. State attempts to track program accomplishments are limited, as are EPA's, by an inability to know with certainty whether the government's assistance was essential to achieving a cleanup, redevelopment, or other result.

Conclusions

EPA has taken steps to obtain information on the results of its brownfields program, but the data available thus far are limited. In prior reports, we have pointed out that EPA has long used activity, or output measures, such as awards made, to manage its programs, and has found it challenging to develop more results-oriented performance measures. Spurred by the requirements of the Government Performance and Results Act of 1993, EPA has made some progress in recent years in measuring the outcomes of its programs, although—as we recently reported¹¹—relatively few of its performance measures are end outcomes. EPA is now attempting to track certain outcomes of its brownfields program in terms of jobs created and redevelopment investments. This effort is worthwhile and could produce data useful for managing the program and assessing its results. However,

most recipients have not reported on these program measures, and small proportions of those that have account for most of the program's reported results in these areas. Also, we found inaccuracies in the data for recipients that accounted for some large reported results—data that were reported before EPA's existing reporting guidelines were developed. Accurate data on the results achieved by recipients are useful for evaluating the success of the program overall and the effectiveness of individual recipients' programs. Comparative information about the recipients would be useful for identifying best practices among their programs and for making decisions about further funding. EPA instituted new quality control procedures in 1999 and began a review of previously reported data and is in the process of resolving remaining data issues.

EPA officials acknowledge the need for accurate data on the results of the brownfields program. Recently, EPA authorized its regions to require new fund recipients to report their results and developed definitions of performance measures, which may improve both the quantity and quality of data reported. However, brownfield program managers at EPA will need to follow through on regional efforts to improve recipients' results reporting. At present, the extent to which all regions are incorporating reporting requirements in recipient agreements is unknown. We recognize that EPA faces a challenge in balancing the need for data with the need to avoid placing overly burdensome reporting requirements on recipients. However, the importance of information for evaluating the success of the program justifies greater efforts by EPA to obtain more complete data on the results recipients achieve.

Recommendations for Executive Action

In order to produce better information on the impact of the brownfields assistance program, we recommend that the Administrator, EPA,

- continue to review data reported by recipients before EPA's new guidelines for results were put in place and make any corrections needed to ensure that the data are consistent with the current guidelines; and
- monitor the extent to which EPA regions succeed in improving recipients' reporting of data on key results measures and, if warranted,

¹¹*Environmental Information: EPA Needs Better Information to Manage Risks and Measure Results* (GAO-01-97T, Oct. 3, 2000).

consider additional action to encourage reporting, such as making it clear to recipients that follow-on awards depend on reported results.

Agency Comments

We provided a draft copy of this report to EPA for its review and comment. In written comments, EPA said it had a number of concerns about our review's methodology and findings. EPA's principal concerns and our responses are summarized below. The full text of EPA comments and our detailed response are presented in appendix VII.

EPA said national conclusions could not be drawn on the basis of the five states we selected, which have more established brownfields programs than many other states. As our report indicates, we selected states that operate some of the largest or most innovative brownfields programs in the nation. Our intent was to compare the practices of EPA's program with these state programs, and our report draws no national conclusions on the basis of our review of the five state programs. EPA also said that our review of the program results reported for five assessment recipients was too small and too unrepresentative to justify our characterization of the quality of the program's results data as "uncertain." Based on further information provided by EPA officials about their efforts to correct errors in program results data, we have removed this characterization from the report. However, we believe our findings indicate that EPA should continue its effort to improve its data because (1) we found inaccuracies in three of the five pilots we examined, (2) these pilots represented a significant portion of the results reported for the program, and (3) most of the program's results were reported before EPA established national definitions for program measures. EPA said that it did not disagree with the substance of our recommendations but had some concerns with their wording. We discussed these concerns with EPA officials and made changes where appropriate.

Scope and Methodology

We performed our work at EPA headquarters in Washington, D.C. and in five states. To develop information on EPA's brownfields program, including the financial assistance provided and EPA's cleanup and enforcement policies relevant to brownfields, we contacted officials in EPA's Office of Special Projects Staff within the Office of Solid Waste and Emergency Response. We obtained and reviewed various program and funding documents. To obtain information on the program's reported results, we discussed reporting policies with staff from the Office of

Special Projects and reviewed reporting instructions on the accomplishments. We also asked EPA to prepare a report from its Brownfields Management System showing which of the recipients had reported results in certain categories: properties with completed cleanups, jobs leveraged, dollars leveraged, and properties with redevelopment underway. We examined the recipients' reports to EPA, which were the source of these data, and contacted some of the recipients by telephone to discuss their use of the EPA award and its contributions to the reported results.

We selected five state brownfields programs to compare with the EPA program in terms of financial assistance provided and results reported. We selected states that were known to have large active brownfields programs or that offered unique forms of assistance and that offered grants and loans for site assessments and cleanup. We identified these states through consultation with EPA and professional organizations, such as the U.S. Conference of Mayors and the National Governors Association. For each of the states we selected—Massachusetts, Michigan, New Jersey, Pennsylvania, and Wisconsin—we contacted officials in the state departments of environmental protection and commerce to discuss the states' brownfields programs and activities. Details on the state programs are contained in appendixes to this report. The material in these appendixes is based on discussions with state officials and the documents they provided. In addition, we provided officials in each state with a draft version of the report sections describing that state's programs; the officials provided technical clarifications, which we incorporated where appropriate.

We did not independently verify the data provided by EPA and the states.

We performed our work from March through November 2000 in accordance with generally accepted government auditing standards.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies of this report to the Honorable Bob Smith, Chairman, and the Honorable Max Baucus, Ranking Minority Member, Senate Committee on Environment and Public Works; the Honorable John D. Dingell, Ranking Minority Member, House Committee on Commerce; and the Honorable Carol M. Browner,

Administrator, EPA. We will also make copies available to others upon request.

If you or your staff have any questions about this report, please contact me at (202) 512-3841. Key contributors to this report were Jim Donaghy, Stephen Jones, and Les Mahagan.

Sincerely yours,

David G. Wood

David G. Wood
Director, Natural Resources
and Environment

EPA's Brownfields Program

Program Authority and Structure

The Environmental Protection Agency (EPA) established its Brownfields Economic Redevelopment Program administratively under the aegis of the Superfund program in 1993 to help communities restore less seriously contaminated sites that have the potential for economic development. EPA administers its brownfields program under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Fiscal year 1997 was the first year the brownfields program became a separate budgetary line item.

According to EPA, the brownfields program helps states, localities, and other agents of economic redevelopment revitalize brownfield properties both environmentally and economically, mitigate potential health risks, and restore economic vitality to surrounding areas. Through brownfield agreements, EPA awards funds to eligible states, political subdivisions, or Native American tribes. Assistance is provided for site assessment, site cleanup, job training, community outreach, and for other purposes.

EPA has also developed guidance to provide some assurance that, under specified circumstances, prospective purchasers, lenders, and property owners do not need to be concerned with Superfund liability. This guidance states that EPA will use its enforcement discretion not to pursue certain parties associated with a site. EPA expects that these statements about its position will alleviate concerns parties may have in becoming involved in the cleanup and redevelopment of previously used properties.

The Outreach/Special Projects Staff within EPA's Office of Solid Waste and Emergency Response is responsible for managing the brownfields program. Award oversight is done by designated staff within EPA's 10 regional offices.

The federal government also provides a tax benefit to encourage brownfields cleanup and redevelopment. Under federal law, certain environmental cleanup costs at targeted sites may be fully deducted from federal income taxes by eligible taxpayers in the year in which they are paid or incurred. The tax incentive is applicable to properties that meet specified land use, geographic, and contamination conditions.

Major Program Elements

The major elements of EPA's brownfields financial assistance are presented below.

**Appendix I
EPA's Brownfields Program**

Table 5 describes, for each applicable element of the program, the number of awards made, the amount of obligations incurred by fiscal year, and the purpose of the program element.

Table 5: EPA's Brownfields Financial Incentives and Federal Tax Incentive

Dollars in millions

Initiative	Total number of awards fiscal years 1995-2000	Total amount of obligations fiscal years 1995-2000	Purpose
Assessment Pilot Projects	362	\$ 78.9	<ul style="list-style-type: none"> • Through cooperative agreements, EPA provides funding to state, local, and tribal governments. Each pilot, as the recipients are called, can be funded for up to \$200,000 over 2 years. In fiscal year 2000, an additional \$50,000 could be awarded to an applicant to assess the contamination at sites that will be used for green space. Starting in fiscal year 2000, previous recipients could receive a supplemental award of \$150,000. • Funds must be used to identify, assess, characterize, and plan responses or plan cleanup activities at contaminated sites targeted for redevelopment or can be used for a broad range of support activities. • Funds may only be used at sites where there has been or may be a release of a CERCLA hazardous substance or of a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare. • Funds may be used for public/community involvement activities to explain site selection, assessment, characterization, or cleanup planning activities at a site or set of sites. • No recipient match is required.

**Appendix I
EPA's Brownfields Program**

(Continued From Previous Page)

Dollars in millions

Initiative	Total number of awards fiscal years 1995-2000	Total amount of obligations fiscal years 1995-2000	Purpose
Cleanup Revolving Loan Fund	105	\$ 64.8	<ul style="list-style-type: none"> • EPA provides funds to state, local, and tribal governments to create revolving loan funds to provide public and private entities with low-interest loans to facilitate the cleanup and redevelopment of brownfields. Each pilot may be funded at up to \$500,000. • Eligible applicants are states; political subdivisions (including, cities, towns, and counties); and Native American tribes that were awarded Assessment Pilot assistance and political subdivisions that received Targeted Brownfields Assessment funds. • Eligible properties are brownfields sites where there has been or may be release of a hazardous substance or of a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare. • Any entity, public or private, may borrow from a loan fund. Funds may be loaned to an owner/operator of the site only if the owner/operator is not liable for cleanup under CERCLA or EPA could use its enforcement discretion not to pursue the party in question under CERCLA, as described by EPA guidance. • Brownfield Cleanup Revolving Loan Fund (BCRLF) cleanups must meet the regulatory requirements identified for non-time-critical removal actions for which a planning period of at least 6 months exists.^a • BCRLF pilot funds may not be used to clean up products that are part of the building structure and result in exposure within residential buildings or business or community structures, for example, interior lead-based paint contamination or asbestos, which results in indoor exposure. • BCRLF pilot funds may not be used to clean up petroleum products, unless they are believed to be commingled with a hazardous substance, pollutant, or contaminant. • No recipient match is required.
State Voluntary Cleanup Programs		\$ 41.6	<ul style="list-style-type: none"> • EPA provides funds to state and tribal governments to enhance and develop voluntary cleanup programs that frequently address brownfields. States and tribes use the funds to <ul style="list-style-type: none"> • complete regulations for voluntary cleanup programs, • purchase equipment to support program administration, • pay the salaries of agency staff to develop program procedures, • build their own capacity to oversee cleanups, and • promote greater community involvement.

**Appendix I
EPA's Brownfields Program**

(Continued From Previous Page)

Dollars in millions

Initiative	Total number of awards fiscal years 1995-2000	Total amount of obligations fiscal years 1995-2000	Purpose
Targeted Brownfields Assessments	500	\$ 32.8	<ul style="list-style-type: none"> EPA uses these funds to enter into agreements whereby states can hire contractors to identify the extent of contamination at brownfields, especially those that have not received funding under EPA's Assessment Demonstration Pilots program. EPA may also hire the contractors itself. Funds can only be used at sites that are, or are suspected to be, contaminated with hazardous substances. Funds are subject to CERCLA requirements. Funds are generally not available for assessments at sites where the owner is responsible for the contamination on the site unless there is a clear means of recouping EPA expenditures. Funds may not be used to conduct cleanup or building demolition activities.
Job Training	37	\$ 6.9	<ul style="list-style-type: none"> EPA makes awards to colleges, universities, nonprofit training centers, community job training organizations, and governmental units. Each job training pilot can be funded up to \$200,000 over 2 years. Funds may be used (1) to train residents in communities affected by brownfields in the procedures for handling and removing hazardous substances and (2) for outreach to improve participation in training. Recipients must be located within or near one of the brownfields assessment pilot communities. Proposed training programs must establish procedures to ensure that participants are recruited from the neighborhoods where the brownfields sites are located and graduates are employed in cleaning up hazardous waste facilities. Funds should, whenever possible, be used to ensure that those training participants include, but are not limited to, the unemployed; those in welfare-to-work programs and environmental justice communities, and those who are members of other disadvantaged populations.
Showcase Communities	16	\$ 7.9	<ul style="list-style-type: none"> EPA provides funds to showcase communities that represent national models for collaborative efforts to assess, clean up, and reuse brownfields. The funds can be used for the same activities that are allowed under EPA's assessment pilot projects initiative. EPA announced additional showcase communities in October 2000.
Showcase Finalists	24	\$ 4.0	<ul style="list-style-type: none"> Of 40 showcase finalists, only 16 were chosen in fiscal year 1998 as showcase communities. The remaining 24 finalists also received financial support from EPA, but in smaller amounts than the showcase communities.
U.S. Army Corp of Engineers and Bureau of Reclamation		\$ 8.4	<ul style="list-style-type: none"> EPA funds the U.S. Army Corps of Engineers and the Department of the Interior's Bureau of Reclamation to provide technical assistance in connection with brownfields redevelopment projects.
Other		\$ 1.6	<ul style="list-style-type: none"> Because of unique circumstances in certain pilots, EPA regions have awarded additional resources to some pilots. For example, at the closeout of one pilot, another pilot was awarded the remaining funds to allow it to continue brownfields efforts that benefit both communities.

**Appendix I
EPA's Brownfields Program**

(Continued From Previous Page)

Dollars in millions

Initiative	Total number of awards fiscal years 1995-2000	Total amount of obligations fiscal years 1995-2000	Purpose
Total		\$246.9^b	
Brownfields Tax Incentive			<ul style="list-style-type: none"> • The Brownfields Tax Incentive allows taxpayers to deduct from their income eligible cleanup expenses in targeted areas. Such expenses might otherwise have to be capitalized and depreciated over a period of years. This incentive was created by the Taxpayer Relief Act of 1997. • The taxpayer must hold the property for business or income generation. • A state agency must certify that the property for which a deduction is being claimed is located in certain low-income or industrial areas or in a jurisdiction that received an assessment pilot award prior to February 1997. • Incentives are only available at sites where there has been a release or threat of a release of a hazardous substance. • All eligible expenses must be incurred after August 5, 1997 and before January 1, 2002.

^aThe Superfund program has two basic types of cleanups: (1) remedial cleanups, which are generally long-term cleanup actions at sites on the National Priorities List (NPL), EPA's list of the nation's worst hazardous waste sites, and (2) removal cleanups, which generally mitigate more immediate threats at both NPL and non-NPL sites. EPA's removal cleanups include (1) emergency removals for threats requiring immediate action, (2) time-critical removals for threats requiring action within 6 months, and (3) non-time-critical removals for threats where action can be delayed for at least 6 months in order to adequately plan for cleanups.

^bEPA also uses brownfields funds for awards to nonprofit organizations for outreach, technical assistance and research and tribal support related to hazardous and solid waste issues. Little of this money, according to EPA officials, is directly related to brownfields.

Source: GAO's analysis of EPA's information.

Accomplishments Resulting From Brownfields Program

EPA tracks its accomplishments through its Brownfields Management System (BMS). BMS contains information on the Brownfields Assessment Demonstration Pilots, Brownfields Showcase Communities, Brownfields Cleanup Revolving Loan Fund pilots, and Brownfields Job Training and Development Demonstration pilots. Data in BMS is taken from applications, quarterly reports submitted by recipients, and other documented sources. According to EPA, the data collected serve as performance indicators and allow EPA to justify current activities, advocate future funding, demonstrate vital success stories, and allow a large number of communities to benefit from successful brownfields innovations.

Table 6 shows selected accomplishments reported by BMS for the program through March 31, 2000, the latest information available at the time of our review.

Table 6: Selected BMS Accomplishments as of March 31, 2000	
Dollars in millions	
Accomplishment	Total through March 2000
Assessment demonstration pilots and showcase communities	
Demonstration pilots awarded	306
Properties with assessments started or completed	
Properties with assessments started with pilot funding	1,998
Properties with assessments completed with pilot funding	1,666
Properties with brownfields assessments completed with other funding	273
Properties assessed that do not require cleanup activities	623
Properties with cleanup activities started or completed	
Properties with brownfields cleanup activities started	236
Properties with brownfields cleanup activities completed	127
Properties with redevelopment activities underway	221
Cleanup and redevelopment jobs and dollars leveraged	
Cleanup/construction jobs leveraged	1,541
Cleanup dollars leveraged	\$ 147.6
Redevelopment jobs leveraged	5,104
Redevelopment/construction dollars leveraged	\$ 2,189.4
Job training and development demonstration pilots	
Training and development demonstration pilots	
Pilots announced	21
Pilots awarded	21
Participants in job training and development demonstration pilots	
Entered in training	725
Completing training	529
Obtaining employment	378
Cleanup revolving loan fund	
Pilots awarded	68
Number of loans	
Applications received	5

(Continued From Previous Page)

Dollars in millions

Accomplishment	Total through March 2000
Loans made	3
Amount of funds loaned	\$0.5

Source: GAO's analysis of EPA's data.

EPA Efforts to Address Liability and Cleanup Issues

The potential for being held liable under CERCLA for the contamination on brownfield properties is a significant barrier to redevelopment, according to lenders; property purchasers, such as developers; and property owners. Most brownfields are not likely to be added to the list of potential NPL sites because they are not severely contaminated. However, investors are still wary of the cleanup liability provisions of both federal and state legislation because these can apply even at non-NPL sites. As a result, lenders and developers may avoid investing in potentially contaminated properties, and current owners may avoid selling them. Some of the actions EPA has taken to lower the barriers to brownfield redevelopment include the following guidance:

- A general policy statement on the liability of owners of uncontaminated property containing groundwater that has been contaminated by a neighboring property. This policy statement provides assurance that EPA does not anticipate suing the property owner for groundwater contamination if the owner did not cause or contribute to the contamination.
- Guidance that expands the circumstances under which EPA will enter into agreements with prospective purchasers of brownfields. The guidance states the conditions under which EPA will not sue prospective purchasers for contamination that existed before the purchase.
- A policy explaining when lenders and municipalities that are involved with brownfields are exempt from CERCLA.
- Soil screening guidance to help decision makers quickly determine which portions of a site require further study and which pose little risk to human health and therefore may be ready for development without extensive cleanup.
- A rule that limits the regulatory obligations of financial institutions and others who hold security interests in property on which petroleum underground storage tanks are located.

In addition, EPA removed about 30,000 sites from its list of potential Superfund sites. By reducing the possibility of Superfund liability for purchasers of these properties and others, EPA may encourage the properties' redevelopment.

Federal Tax Incentive

Under the Taxpayer Relief Act, environmental cleanup costs for properties in targeted areas are fully deductible in the year in which they are incurred, rather than having to be capitalized. To take advantage of the deduction, taxpayers must get an eligibility certification from the state environmental agency prior to filing their tax returns.

To qualify for the federal tax deduction, the taxpayer must meet the following criteria:

- The property must be "held by the taxpayer," i.e., owned by the taxpayer. Some types of long-term lease arrangements may qualify.
- The taxpayer must hold the property for business or income generation purposes. This may include trade or business property, investment property, or property held for inventory, but it does not include personal use property.
- There must have been a release, or threat of a release, of a hazardous substance on the property.
- The eligible property must be located in an area that falls into at least one of the following four categories:
 - A census tract with a poverty rate of 20 percent or more;
 - A census tract with a population of less than 2,000 people that has more than 75 percent of the tract zoned for commercial or industrial use and that is located next to another census tract with a poverty rate of 20 percent or more;
 - A federally designated Empowerment Zone or Enterprise Community; or
 - An EPA brownfields pilot site designated prior to February 1997.

According to officials in the Department of the Treasury, the Department does not regularly track how often this deduction has been used or the dollar amount of the deductions claimed. However, we asked officials in the states we visited how many eligibility certifications had been requested by taxpayers. Table 7 shows the total number of requests for these states as of August 31, 2000.

Appendix I
EPA's Brownfields Program

Table 7: Eligibility Certification Requests, as of August 31, 2000

State	Number of requests
Massachusetts	3
Michigan	3
New Jersey	3
Pennsylvania	6
Wisconsin	8
Total	23

Source: GAO's analysis of EPA's information.

Massachusetts' Brownfields Program

Program Authority and Structure

Massachusetts' brownfields program, enacted in 1998, provides various forms of financial assistance to encourage the cleanup and redevelopment of brownfield properties. The legislation created a Brownfields Redevelopment Fund to make grants and loans to public and private entities to clean up and redevelop brownfield properties in economically distressed areas and authorized state subsidies to purchase insurance to protect parties that conduct or finance brownfields cleanups. The state also gives state income tax credits for brownfields cleanup expenses and authorizes local real estate tax abatements for brownfields developers. These benefits are available at any site subject to the state superfund law. While there is no statutory definition, program documents defined brownfields as properties that are contaminated with oil or hazardous materials and have been used for commercial or industrial activities.

Legislation in 1992 and 1998 amended the state's cleanup and liability rules to encourage the cleanup and redevelopment of contaminated properties. The law authorized licensed site professionals to oversee cleanups and provided flexible, risk-based cleanup standards. The statutory changes also provided greater liability protection for parties that cleanup brownfields and exemptions for certain parties, such as lenders, who finance site cleanups.

Responsibility for the state's brownfields program is distributed among the following state offices and agencies and a private corporation:

- The Governor's Office for Brownfields Revitalization markets the benefits of the state's brownfields program and provides technical assistance by helping brownfields developers locate financing and sites.
- The Massachusetts Development Finance Agency, referred to as MassDevelopment, approves specific projects to receive grants or loans from the Brownfields Redevelopment Fund.
- The Department of Environmental Protection, through its Bureau of Waste Site Cleanup, is responsible for all hazardous waste site cleanup programs and regulations as well as for developing cleanup standards. Most cleanups, including those done at brownfields, are overseen by licensed site professionals and are subject to audit by the Department.
- The Office of the Attorney General has authority to enter into individually tailored brownfields covenants, known as not-to-sue agreements, to provide liability relief to current or prospective property owners.

-
- The Massachusetts Business Development Corporation, a private sector company that provides private financing and financial services, is responsible for all aspects of the state's environmental insurance program.

Major Program Elements

The major components of the state's brownfields program, including financial and non-financial incentives are described below.

Financial Incentives

Grants and loans are available from the Brownfields Redevelopment Fund for public and private entities to conduct site assessments and cleanups in state-designated economically distressed areas. MassDevelopment is responsible for establishing the terms and conditions for receiving and using grants and loans. Because the fund has been given a one-time state appropriation, MassDevelopment, in order to preserve the fund principal, has awarded only loans thus far.

To further encourage brownfield site cleanup and redevelopment, the state provides tax incentives both at the state and local level. The state allows private entities a credit against their state income taxes for 25 or 50 percent of cleanup costs, depending on the thoroughness of the cleanup. The state has also given municipalities the authority to negotiate with developers to reduce or eliminate delinquent real estate taxes on brownfields properties in exchange for cleaning up and redeveloping them.

The state encouraged brownfields cleanup and redevelopment further by negotiating an environmental insurance policy with an insurance company that is available to developers, including potentially responsible parties, and lenders at reasonable premiums. In addition, the state will pay 50 percent of the insurance premiums. This incentive is available to any party in the state that undertakes a cleanup or lends funds for the cleanup of a contaminated site.

Table 8 describes the state's brownfields financial assistance programs, the amount of authorized funding, the source of program funds, and the purpose of the program.

**Appendix II
Massachusetts' Brownfields Program**

Table 8: Massachusetts' Brownfields Financial Incentives

Program	Amount of funding authorized	Source of funding	Program purpose
Brownfields Redevelopment Fund	\$ 30,000,000	One-time state appropriation in fiscal year 1999	Authorized to provide low-interest and no-interest loans and grants to public and private entities for site assessment and cleanup.
Brownfields Redevelopment Access to Capital	\$ 15,000,000	One-time state appropriation in fiscal year 1999	Provides environmental insurance for parties that are involved in cleanup and redevelopment to cover cleanup cost overruns and for the lenders of cleanup and construction loans to cover loss owing to a default. The state will pay 50 percent of the insurance premium.
State Tax Credit	25 percent or 50 percent of eligible cleanup costs	Reduction in state income tax	Provides credit to private entities that clean up and redevelop contaminated sites in economically distressed areas.
Municipal Tax Abatement		Reduction in property tax	Enables municipalities to negotiate reductions in outstanding tax obligations at contaminated sites in exchange for a commitment from a new party to clean up and redevelop the sites and return them to the community's tax rolls.

Source: GAO's analysis of Massachusetts' information.

Table 9 presents available data on each financial assistance program, such as the number and amount of grants and loans awarded, and describes recipient eligibility and other requirements for the programs.

**Appendix II
Massachusetts' Brownfields Program**

Table 9: Massachusetts' Brownfields Financial Incentives Awards and Requirements

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Brownfields Redevelopment Fund			
Assessment grants	0		Common requirements for site assessment and cleanup funding: <ul style="list-style-type: none"> • Project proponents must not have caused or contributed to the releases or have owned or operated the sites when the releases occurred. • Projects must generate jobs or contribute to the economic or physical revitalization of the area. • Projects must result in a significant level of community benefit. • Brownfields redevelopment funding must be necessary to make the proposed reuse feasible. • Projects must be located in an economically distressed area. • Projects must not be eligible for funding under the state program that provides funds to cleanup petroleum spills. Special requirements for site assessment and cleanup funding: <ul style="list-style-type: none"> • The maximum amount for site assessments is \$50,000. • The maximum amount for site cleanups is \$500,000. • 30 percent of funds is earmarked for grants and loans for site assessments. • For grants, 20 percent match by the recipient is required. • For loans, some match by the recipient is required and is determined by the specific project. The match may be waived.
Assessment loans	5	\$148,168	
Cleanup Grants	0		
Cleanup Loans	3	\$ 732,300	

**Appendix II
Massachusetts' Brownfields Program**

(Continued From Previous Page)

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Brownfields Redevelopment Access to Capital			
Brownfields Insurance Premiums	25 policies	Value of insurance coverage: \$142.5 million Value of premium: \$ 1.0 million State share of premium: \$ 0.3 million Developer share of premium: \$ 0.7 million	Environmental insurance for parties conducting cleanups and redevelopment covers: <ul style="list-style-type: none"> • Any party performing a site cleanup. • Cleanup costs that exceed the planned costs for an approved cleanup plan. The standard deductible is 15 percent of cleanup costs but is negotiable. • Cleanup costs for unknown pollution conditions discovered during cleanup within the property boundaries. • Coverage for cleanup costs, property damage, and personal injury resulting from preexisting, unknown conditions beyond the insured's property boundaries; a deductible applies. • Business interruption because of pollution discovered outside the planned cleanup area; a deductible applies. • Legal defense for claims arising from pollution conditions outside of planned cleanup area. • Maximum five-year term, but is negotiable. Secured creditor coverage provides: <ul style="list-style-type: none"> • Protection for lenders against loss on cleanup loans and contemporaneous related construction loans. This coverage protects the lender from default on project loans arising from unanticipated environmental costs in the unlikely event that the environmental insurance coverage is insufficient.
State Tax Credit			
Tax Credits	Not available at the time of our visit	Not available at the time of our visit	<ul style="list-style-type: none"> • Project proponents, or other persons, must not have caused or contributed to the releases or have owned or operated the sites when the releases occurred. • Projects must be located in an economically distressed area. • Properties must be owned or leased for business purposes. • A 25- or 50-percent tax credit is available for project cleanup costs depending on whether the use of the property is restricted after cleanup. • Tax credit is available for cleanup costs incurred between August 1, 1998 and January 1, 2005. • Cleanup must begin on or before August 5, 2001. • Tax credit may be taken upon completion of cleanup conducted in accordance with applicable laws. • Cleanup costs must be equal to or exceed 15 percent of the prerediation assessed value. • Tax credit may be carried forward for 5 years.

**Appendix II
Massachusetts' Brownfields Program**

(Continued From Previous Page)

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Municipal Tax Abatements			
Municipal taxes abated	Not available at the time of our visit	Not available at the time of our visit	<ul style="list-style-type: none"> • Eligible entities are municipalities and private purchasers that did not cause or contribute to the release and did not own or operate the site when the release occurred. • Property must be zoned for commercial or industrial use. • Agreement must specify details such as the amount of outstanding tax obligation, payment term, interest rate, and any other contractual obligations.

Source: GAO's analysis of Massachusetts' information.

Nonfinancial Incentives

The state offers three major nonfinancial incentives to parties performing site assessments and cleanups: flexible, risk-based cleanup standards, greater liability protection, and reduced state oversight.

The state's current cleanup rules, adopted in 1993, establish flexible, risk-based cleanup standards that permit parties performing the cleanups to more accurately determine the costs of the cleanups in advance and may make cleanups less costly. For example, the regulations establish numerical standards for deciding "how clean is clean enough" for 107 of the most common contaminants in soil and groundwater. The changes also provide the ability for parties to factor in site-specific information to modify the numerical standards when appropriate.

In addition to revised cleanup standards, the state provides statutory liability protection to parties that did not cause or contribute to the contamination at a site, or that were not the owners of or operators at the site at the time of the release, but who clean up the site. Upon achieving a permanent cleanup or a remedy operation status, the parties are protected from state claims for cleanup costs and natural resource damages and from third-party claims for cleanup costs and property damage. The liability protection is transferable to subsequent property owners that meet the same eligibility requirements noted above. In addition, the amended rules clarified liability protection for lenders whose loans are secured by brownfields. These revisions encourage cleanups by providing a more certain exemption from liability, resulting in more opportunities for parties to obtain financing from institutions that were once reluctant to provide loans for brownfield projects because of the threat of potential liability.

The Attorney General has authority to enter into individually tailored brownfields covenants, referred to as not-to-sue agreements. These agreements provide liability protection from suits brought by the Commonwealth as well as contribution protection from third-party claims under state law and common law property damage claims. Brownfields covenants offer additional liability protection beyond that offered by the statute itself, including increased flexibility, and broader eligibility and liability relief. For example, agreements can provide liability limits prior to completing the cleanup, as compared with the liability relief available directly under the statute, which comes at the end of the cleanup process. Moreover, parties that actually caused the contamination are eligible for the brownfields covenant program even though they are generally not eligible for relief offered by the statute.

One of the key features in the 1993 changes was the reduction in direct state oversight of site assessments and cleanups. The state relies on state-licensed site professionals, experts in assessment and cleanup, to oversee the assessments and cleanups of most sites. According to the state, using a licensed site professional allows the assessment and cleanup to proceed at most sites without the delay sometimes resulting from the need to obtain state approvals before initiating the work. The state audits 20 percent of the sites where licensed site professionals oversee the cleanup and directly oversees the worst sites. Massachusetts is one of a small number of states that rely upon these licensed environmental professionals to oversee waste site cleanups.

Accomplishments of State Program

MassDevelopment, in its 2000 annual report to the state legislature, reported on the number of potential jobs and the potential private investment that may result from loans made from the Brownfields Redevelopment Fund. The Massachusetts Business Development Corporation, a private company that administers the insurance program, also reported to us information on the number of potential jobs and the potential private investment that may result from participation in the state's environmental insurance program. The information being reported comes from applications for assistance.

Appendix II
Massachusetts' Brownfields Program

Table 10: Massachusetts' Brownfields Program Accomplishments, Fiscal Year 2000

Dollars in millions

Accomplishments	Number or amount
Brownfields Redevelopment Fund:	
Potential private investment	\$ 74.0
Potential jobs created	325
Insurance Program:	
Potential jobs created	2,000
Potential private investment	\$ 50

Source: GAO's analysis of Massachusetts' information.

Michigan's Brownfields Program

Program Authority and Structure

In the early 1990s, Michigan began to offer grants and loans to municipalities to assess and clean up brownfields. In 1995, as an incentive to brownfields redevelopment, Michigan amended its laws to offer nonfinancial incentives to cleanup and redevelopment through the use of state-established cleanup standards and relief from liability from past contamination on a site. In 1999, the state supplemented these earlier programs with the Clean Michigan Initiative program to fund state-run cleanups of brownfields with the potential for redevelopment. This program was just getting started at the time of our review. The Department of Environmental Quality oversees the operation of the state's brownfields programs, including grant and loan assistance.

Michigan has also authorized local tax incentives for brownfields cleanup. Municipal and other local government organizations can form agencies that can pay for cleanup costs incurred at a site by capturing local tax funds generated by newly redeveloped properties.

Major Program Elements

The major elements of the state's brownfields program: financial incentives, liability relief, and cleanup standards are discussed below.

Financial Incentives

The state conducts cleanups of brownfields and offers grants and loans to municipalities to assess and remediate brownfields. Through the Clean Michigan Initiative, a state bond issue in 1999, the state obtained \$235 million to fund state cleanup of contaminated publicly owned sites with the potential to be redeveloped. Under the program, the state selects sites that have been nominated by municipalities, and it cleans up the sites. As of July 2000, the state had selected sites for cleanup under the program, but no site cleanups had yet been completed. Also, through the state bond issue, the state obtained \$20 million to provide brownfields redevelopment grants to municipalities to assess and clean up brownfields.

According to state officials, the Clean Michigan Initiative and Brownfields Redevelopment Fund program replace earlier state programs for assessment and cleanup that may run out of funding in the near future. For example, since 1994, the state has provided over \$7 million in grants to municipalities through its Site Assessment Program. The state originally appropriated \$10 million for the program. The state legislature does not plan to provide additional funding to the program once the funding runs

out. Since 1997, the state has offered loans to municipalities under the Revitalization Loan Program to fund site assessments as well as removal actions needed for site assessment and demolition.

Under the Site Reclamation Program, the state has provided grants to municipalities to conduct cleanups at the site of a new development. The state has provided \$32 million of the \$35 million that was originally appropriated for the program. The state legislature does not plan to provide additional funding to the program once the funding runs out.

The state offers tax incentives to conduct assessments and cleanups at brownfields through the Brownfield Redevelopment Authorities. The authorities are municipalities that have the ability to capture the revenue generated by new taxes created by redeveloped properties. The authorities can use the tax revenues to reimburse the cleanup costs on the redeveloped property. After the expenses are paid, the authorities can continue to capture taxes for 5 years and use these funds for remediation costs at other sites.

Table 11 describes the state's brownfields financial assistance programs, the amount of authorized funding, the source of program funds, and the purpose of the program.

**Appendix III
Michigan's Brownfields Program**

Table 11: Michigan's Brownfields Financial Incentives

Dollars in millions

Program	Amount of funding authorized	Source of funding	Program purpose
Site Assessment Program	\$10	1988 state bond issue	Grants to municipalities for assessments
Brownfields Redevelopment Loans	\$5	State appropriation	Loans to municipalities for site assessments and demolition and removal actions needed for site assessment and demolition
Site Reclamation Grants	\$35	1988 state bond issue	Grants to municipalities to conduct cleanups
Clean Michigan Initiative (CMI) Brownfields Redevelopment Grants	\$20	1999 state bond Issue	Grants to municipalities to conduct assessments or cleanup. This program replaces the Site Reclamation Program. According to state officials, once funding for the Site Reclamation program runs out, the state legislature will not provide additional funding.
CMI	\$ 235.0	1999 state bond issue	State selects sites with redevelopment potential that are nominated by municipalities, and state conducts cleanup.
Brownfields Redevelopment Authorities		Capture of property taxes	These authorities are municipal entities that reimburse cleanup costs by capturing tax revenues from newly redeveloped properties and can capture taxes for up to 5 years after reimbursement for cleanup expenses at other properties.

Source: GAO's analysis of Michigan's information.

Table 12 presents available data on the number and amount of grants and loans awarded for each financial assistance program and describes recipient eligibility and other program requirements.

**Appendix III
Michigan's Brownfields Program**

Table 12: Michigan's Brownfields Financial Incentives Awards and Requirements

Dollars in millions

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Site Assessment Program			
Assessment grants	101	\$ 8	<ul style="list-style-type: none"> • Maximum grant of \$1 million per project. • In applying for funds, municipality must demonstrate a potential for economic development on property.
Revitalization Loan Program			
Assessment loans	15	\$ 5	<ul style="list-style-type: none"> • Loans must be repaid in 15 years at an interest rate of 2.5 percent. • No payment has to be made on the loan for the first 5 years of the repayment term. • Loans may be issued to a Brownfield Redevelopment Authority and repaid with tax increment financing.
Site Reclamation Program			
Cleanup grants	57	\$33	<ul style="list-style-type: none"> • Maximum grant of \$1 million per project and maximum of 1 grant per community per fiscal year. • According to Michigan program policy, at a minimum, private investment must be twice the amount of the grant or loan the person receives. • Funded projects must also create jobs and/or increase property value. • Funded projects must show economic development, such as having an operational building on the property within 2 years of completing activities using grant funds or the state can ask for repayment of some or all of grant.
Brownfields Redevelopment Grants			
Cleanup grants	2	\$ 1.5	<ul style="list-style-type: none"> • Maximum grant of \$1 million per project and maximum of 1 grant per community per fiscal year. • According to Michigan program policy, at a minimum, the private investment must be twice the amount of the grant offered to the community. • Funded projects must also create jobs, and/or increase property value. • Funded projects must show economic development, such as having an operational building on the property within 2 years of completing activities using grant funds or the state can ask for the repayment of some or all of the grant.
Clean Michigan Initiative Bond Fund			
State-funded cleanups	85	\$34.4	Eligible sites must have potential to be redeveloped and must be publicly owned. Eighty-five brownfield properties were approved for funding through 9/30/99. According to state officials, cleanup contractors were being selected for these cleanups during the summer of 2000.

Source: GAO's analysis of Michigan's information.

Nonfinancial Incentives

According to Michigan officials, state cleanup standards and state laws that provide relief from liability of past contamination at a site encourage the assessment and cleanup of brownfields.

The state cleanup standards dictate the amount of contaminant that has to be removed from the site for it to be considered safe for humans and the environment under state law. According to state officials, these standards provide certainty in estimating cleanup costs and reduce the cost of site-specific environmental studies. The state has defined generic and limited cleanup standards that are based on the end use of the property and its current zoning.

Under state liability rules, purchasers of property who are not responsible for causing contamination are not held liable for cleaning up past contamination of the site if they conduct a baseline environmental assessment of the property. This assessment, provides the basis for identifying any new contaminant release for which the new owner or user would be responsible. In addition, new users of a property must ensure that "due care" is taken in the use of the property. Due care requires that existing releases are not exacerbated and that the users of the property and third parties are not exposed above the applicable standard. According to state officials, prior to the passage of state liability amendments, the fact that persons who did not cause the contamination on a site could be held liable for past contamination was the major impediment to encouraging people to clean up and redevelop brownfields.

Accomplishments of State Program

Michigan tracks the estimated private investment and estimated jobs created at sites where state funds were used to assess and clean up brownfields. As of May 2000, Michigan estimated that the properties at which its grant and loan programs were used produced \$1.3 billion in private investment and 6,436 jobs. The state obtains these estimates of private investment and jobs created from the recipients of the funds at the time they apply for the state funding. The state requires recipients of state funds to report every 6 months for 2 years after the completion of state funded work on the status of development—including the amount of private investment and jobs created—at the sites where the funds were used. According to state officials, many recipients are not reporting these data to the state.

New Jersey's Brownfields Program

Program Authority and Structure

Since 1994, New Jersey has provided grants and loans to municipalities and private citizens for assessing and cleaning up hazardous waste sites, including brownfields, through its Hazardous Discharge Site Remediation Fund. In addition, the state offers tax incentives for brownfields redevelopment. The state defines brownfields as “any former or current commercial or industrial site that is currently vacant or underutilized and on which there has been, or there is suspected to have been, a discharge of contamination.”

As a further incentive for brownfields redevelopment, in 1998, the state legislature passed a law that provides certain liability protection from past contamination for persons who are not in any way responsible for causing the contamination at a site that clean up contaminated properties, including brownfields. According to state officials, using state-developed cleanup standards, entities can easily determine the approximate cleanup costs at a site and use of the state technical requirements for cleanups offer predictability in the cleanup process by providing a definite endpoint to many cleanups. This may encourage entities to become more involved in cleanups.

The New Jersey Department of Environmental Protection and the New Jersey Economic Development Authority jointly administer the state grants and loans for assessment and remediation. According to state environmental officials, the state environmental department performs a technical review of applications for funding to make sure that the applicant is eligible and that cleanup plans are appropriate. The state economic development authority performs a financial review of the application.

Major Program Elements

The major elements of the state's brownfields program: financial incentives, cleanup standards, and liability relief are discussed below.

Financial Incentives

New Jersey provides grants to municipalities to conduct assessments of brownfields. To qualify for assistance, the municipalities must have a development or redevelopment plan for the site or be able to demonstrate a realistic opportunity for redeveloping the site.

The state offers both municipalities and private parties funding to conduct cleanups. Municipalities can receive loans to conduct a cleanup if they

used an assessment grant. Also, municipalities are eligible for loans to clean up sites that present an imminent threat to public health or the environment. Municipalities can receive up to \$2 million per year in financial assistance from the state for assessing and cleaning up brownfields.

Private parties are eligible for grants and loans to conduct cleanups. They can receive grants to conduct cleanups if they use innovative technology; acquired the site before December 31, 1983, and it had existing contamination that they did not cause; or if they do cleanups that do not require engineering controls—physical barriers, such as soil caps—to prevent exposure to contaminants.

New Jersey provides cleanup loans to private parties in specific situations. First, parties conducting cleanups in qualifying New Jersey municipalities, as defined by state law, are eligible for loans. Second, private parties and municipalities are eligible for loans to clean up sites that contain an imminent threat to health or environment. Third, private parties are eligible for loans if they conduct voluntary remediation that is not required by the state or a court. Fourth, private parties that conduct cleanups required by the state as a condition of closure, transfer, or termination of operations can receive loans to pay for the cleanup costs.

Under the Brownfields Reimbursement Fund program and Environmental Opportunity Zone program, New Jersey offers tax incentives to parties that clean up contaminated sites. Under the Brownfields Reimbursement Fund program, a party that conducts a cleanup can enter into an agreement with the state to receive up to 75 percent of the cost of the cleanup from state property tax revenues from the site that has been cleaned up. To be eligible for the program, the site must be an integral part of a local redevelopment strategy. Under the Environmental Opportunity Zone program, municipalities can offer abatements of local property taxes for up to 15 years to parties that clean up sites. Environmental Opportunity Zones are created by municipal ordinance.

Table 13 describes the state's brownfields financial assistance programs, the amount of authorized funding, the source of program funds, and the purpose of the program.

**Appendix IV
New Jersey's Brownfields Program**

Table 13: New Jersey's Brownfields Financial Incentives

Program	Amount of funding authorized	Source of funding	Program purpose
Hazardous Discharge Site Remediation Fund	\$75,000,000	State appropriations and bond fund	<p>State offers 10 categories of grants and loans to municipalities and private persons to conduct assessments and cleanups of contaminated sites. Each year the state allocates a percentage of the fund to each of the categories as follows:</p> <ul style="list-style-type: none"> • Grants for assessments and loans for remediation to municipalities (10 percent) • Loans to private parties to conduct cleanups in qualifying municipalities selected by the state (15 percent) • Loans to private parties or municipalities to remediate imminent environmental threats (15 percent) • Loans to private parties to conduct voluntary remediations that have not been required by the state or a court (10 percent) • Loans to private persons for state-required remediation as a condition of the closure, termination of operations, or transfer of the property (15 percent) • Grants to innocent private parties for up to 50 percent of remediation costs, maximum \$1 million per grant (15 percent) • Loans to private parties for cleanup in a New Jersey Environmental Opportunity Zone (5 percent) • Grants to private parties of up to 25 percent of project costs for cleanup using innovative technology, maximum \$100,000 (5 percent) • Grants to private parties up to 25 percent of project cost for cleanups without engineering controls, maximum \$100,000 (5 percent) • Reserve fund category—money in this fund can be allocated to the other nine funds if needed (5 percent)
Brownfields Reimbursement Fund		Taxes generated from the property cleaned up	The site must be an integral part of a local redevelopment strategy.
Environmental Opportunity Zone		Abatement of property taxes	Municipalities can offer tax abatements of local property taxes for up to 15 years to parties that clean up sites.

Source: GAO's analysis of New Jersey's information.

Table 14 presents available data on each financial assistance program, such as the number and amount of grants and loans awarded, and describes recipient eligibility and other program requirements.

**Appendix IV
New Jersey's Brownfields Program**

Table 14: New Jersey's Brownfields Financial Incentives Awards and Requirements

Dollars in millions

Hazardous Discharge Site Remediation Fund	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Assessment grants	^a	\$24.0	<ul style="list-style-type: none"> • For municipalities to be eligible, they must create a development plan or be able to demonstrate a realistic opportunity for redeveloping the site. • Municipalities are not required to provide matching funds.
Cleanup grants	^a	\$7.0	<ul style="list-style-type: none"> • Private parties are eligible for grants to conduct cleanups if they use innovative technology, are innocent parties⁹, or conduct cleanups that do not use engineering controls—physical barriers such as a soil cap to prevent exposure to contamination. • For innovative technology cleanups, a person must provide matching funds equal to 25 percent of the amount provided by the state and have net worth less than \$2 million. The grants are up to 25 percent of remediation costs and cannot exceed \$100,000. • To receive innocent party grants, a person must own the property and have acquired the property before December 31, 1983, and must not have used or discharged the hazardous substance on the site. New Jersey provides grants to innocent parties of up to 50 percent of a site's remediation cost and up to \$1 million. • To receive grants for cleanups that do not require engineering controls, a party must provide matching funds equal to 25 percent of the grant provided by the state and the party must have less than \$2 million in net worth. The grants are up to 25 percent of costs of a cleanup and cannot exceed \$100,000.
Cleanup loans	^a	\$11.5	<p>Private parties are eligible for cleanup loans if they</p> <ul style="list-style-type: none"> • conduct cleanups in qualifying New Jersey municipalities as defined by the state; • conduct voluntary remediation of sites that are not required by the state or a court; • clean up sites that contain an imminent threat to public health or the environment; or • conduct a cleanup required by the state as a condition of closure, transfer, or termination of operations of a facility. <p>Municipalities are eligible for cleanup loans if they received an assessment grant or clean up sites that contain an imminent threat to public health or the environment. Municipalities are eligible for up to \$2 million per year in grants to assess sites or loans to remediate properties.</p> <ul style="list-style-type: none"> • The state requires loans be paid back within 10 years and charges an interest rate that is 2 percent below the federal discount rate, with a minimum of 3 percent charged.

^aNew Jersey has made 518 grants and 92 loans for a total of 610 grants and loans made. New Jersey did not provide us with the individual number of assessment grants, assessment loans, cleanup grants, and cleanup loans made.

^bThe state defines innocent parties as persons who acquire a site where there has been a discharge of a hazardous substance that was not used by the new property owners.

Source: GAO's analysis of New Jersey's information.

Nonfinancial Incentives

According to state officials and documents, three nonfinancial incentives to cleaning up and redeveloping contaminated sites, including brownfields, are state cleanup standards guidance, the state voluntary cleanup program, and state laws that provide purchasers who conduct cleanups relief from liability for past contamination not caused by the purchaser. According to state officials in the Department of Environmental Protection, using the state's cleanup standards guidance, a party can easily determine the cleanup costs at a site, which may encourage developers to become involved in cleanups. Furthermore, according to state officials, the new standards guidance offers a sense of finality and predictability in that there is an endpoint to the cleanup of a site and to the state's involvement at the site. The standards guidance does not require a site-specific study to be used at the site. In addition, the cleanup remedy is based on the planned end use of the site.

According to the state, its voluntary cleanup program encourages cleanups of contaminated properties, including brownfields. Under the Voluntary Cleanup program, private parties and municipalities clean up contaminated sites under state oversight. Under the program, parties enter into voluntary agreements with the state to establish the scope and schedule of cleanup activities. The agreements may encourage cleanups because they are not state enforcement documents and, thus, do not contain penalties, which, according to state documents, may have prevented cleanups from occurring in the past.

Other incentives to encourage cleanup and attract private investment in brownfields are state laws that provide purchasers who conduct cleanups with relief from liability. Under a 1998 state law, purchasers who did not cause the past contamination on the site can clean it up and will not be required by the state to conduct additional cleanup work in the future on previously undiscovered contamination.

Accomplishments of State Program

New Jersey tracks the accomplishments of its brownfields incentives by tracking the amount of funds it gives to municipalities and private parties each year and the program's success stories. In the annual report for the Hazardous Discharge Site Remediation Fund and in other documents, the state publishes examples of sites that have been cleaned up or assessed using state funds. According to state officials, the state does not currently track the amount of private investment or jobs created at brownfields where state funds were used for assessment or cleanup.

Pennsylvania's Brownfields Program

Program Authority and Structure

Pennsylvania provides financial assistance in various forms to stimulate the cleanup and redevelopment of brownfield properties. It makes grants and loans to municipal and other developers for property assessments and cleanups and publishes an inventory of brownfields properties to assist in marketing the properties. Grants and loans for assessing and cleaning up brownfields were authorized by the state in 1995. While the state has not defined brownfields in its statutes or regulations, according to a Pennsylvania official, it targets its brownfields assistance to the same types of sites as EPA's brownfields program.

In 1995, the Pennsylvania legislature also amended the state's cleanup requirements to authorize more flexible cleanup standards and to provide greater protection from further liability for parties that cleaned up contaminated properties. These changes applied to all contaminated sites cleaned up under state law, not just brownfields. The flexible cleanup standards and liability relief are intended to encourage cleanups by reducing costs and providing certainty in the cleanup process.

The Department of Community and Economic Development is responsible for administering grants and loans for site assessments and cleanups, developing regulations to administer these incentives, and determining which sites will be funded. The Bureau of Land Recycling and Waste Management, within the Department of Environmental Protection, is responsible for the state's hazardous waste site cleanup programs, including establishing cleanup standards and overseeing site assessments and cleanups performed at brownfields and other properties by private parties. The state does not accept any funding from EPA for its brownfields program.

Major Program Elements

The major elements of the state's brownfields program, financial incentives, flexible cleanup requirements, and liability relief for certain parties, are discussed below.

Financial Incentives

Grants and loans are available from the Industrial Sites Cleanup Fund for government and private entities to conduct environmental assessments and cleanups. Grants are also available from the Industrial Sites Environmental Assessment Fund for government entities and nonprofit economic development agencies to conduct environmental assessments located in targeted areas. The two funds are administered through the Industrial Sites

Reuse Program. Money for the assessment and cleanup funds comes out of the Hazardous Cleanup Fund, the state's main cleanup fund, which receives the proceeds from waste disposal fees. The Department of Environmental Protection, through the Key Sites Initiative, uses state-funded contractors to conduct environmental assessments on publicly owned sites that are contaminated, or suspected to be contaminated, and have a high potential for redevelopment.

The state recently revised its Industrial Sites Reuse Program to allow the Department of Economic and Community Development to make performance-based loans for the cleanup of nonhazardous waste or debris at brownfield sites. A performance-based loan may be forgiven to the extent that agreed-upon performance measures are met by the loan recipient. Performance measures are based on the magnitude and timeliness of the cleanup, resulting economic benefit of the cleanup to the state, and method used to dispose of the waste or debris.

In an effort to market brownfield properties for redevelopment, the Department of Environmental Protection established the Brownfields Inventory Grant Program. Municipalities and economic development agencies receive a \$1,000 grant payment from the state for each brownfields property they list on the Pennsylvania Brownfields Directory. The Directory, which is available on the Internet, will provide an estimate of the number of brownfield sites in the state and increase the opportunity for sites to be assessed, cleaned up, and redeveloped.

Table 15 describes the state's brownfields financial assistance programs, the amount of authorized funding, the source of program funds, and the purpose of the program.

**Appendix V
Pennsylvania's Brownfields Program**

Table 15: Pennsylvania's Brownfields Financial Incentives

Dollars in millions

Program	Amount of funding authorized	Source of funding	Program purpose
Industrial Sites Environmental Assessment Fund	\$ 2	Transfer of funds from the Hazardous Sites Cleanup Fund	<ul style="list-style-type: none"> Grants are provided to public entities for site assessments of properties located in designated communities as well as targeted areas.
Key Sites Initiative	No limit	Hazardous Sites Cleanup Fund	<ul style="list-style-type: none"> State-funded contractors conduct site assessments and prepare cleanup plans to encourage and facilitate the voluntary cleanup and reuse of abandoned industrial sites in prime locations. No maximum authorization has been established for the program.
Industrial Sites Cleanup Fund	\$ 39	Transfer of funds from the Hazardous Sites Cleanup Fund	<ul style="list-style-type: none"> Grants and low-interest loans are provided to public and private entities for site assessments and cleanup. State statute requires that 20 percent of the yearly amount appropriated be used for grants and the remaining 80 percent for loans.
Brownfields Inventory Grants	\$ 2	Transfer of funds from the Hazardous Sites Cleanup Fund	<ul style="list-style-type: none"> Grants are available to municipalities and economic development agencies to inventory brownfield properties in their areas.

Source: GAO's analysis of Pennsylvania's information.

Table 16 presents available data on each financial assistance program, such as the number and amount of grants and loans, and describes recipient eligibility and other requirements for the program.

**Appendix V
Pennsylvania's Brownfields Program**

Table 16: Pennsylvania's Brownfields Financial Incentives Awards and Requirements

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Industrial Sites Reuse Program			
Assessment grants	120	\$ 7,664,661	Grant and loan conditions: <ul style="list-style-type: none"> • Grant and loan applicants must not have caused or contributed to the contamination at a site. • The maximum grant or loan amount for assessments may not exceed 75 percent of the assessment cost, or \$200,000, in a single fiscal year, whichever is less. • The maximum grant or loan amount for remediation may not exceed 75 percent of the remediation cost, or \$1,000,000 in a single fiscal year, whichever is less. • A 25-percent match is required.
Assessment loans	5	\$ 278,062	
Cleanup grants	60	\$ 17,144,408	Special grant conditions: <ul style="list-style-type: none"> • Grants for site assessments are available to municipalities, counties, municipal authorities, redevelopment authorities, and economic development agencies for projects located in targeted communities as designated by the Department of Community and Economic Development. • Grants for site remediation are available to municipalities, counties, municipal authorities, redevelopment authorities, and economic development agencies for projects that they own and provided they oversee the cleanups. Special loan conditions: <ul style="list-style-type: none"> • Loans are available to all eligible applicants, government and private sector. • Loan interest rate is 2 percent. • The maximum loan term for site assessments is 5 years. • The maximum loan term for site remediation depends on the loan awarded but may not exceed 15 years. • All loans must be sufficiently secured with business or personal guarantees, real estate mortgage, letters of credit, or other forms of collateral. • As of June 2000, the program had pending 31 loan requests for \$20.4 million and 64 grant requests for \$4.3 million, for a total of \$24.7 million.
Cleanup loans	5	\$ 3,529,792	
Key Sites Initiative			
Site Assessments	9 sites	\$ 3 million expended	State assistance is available to municipalities and redevelopment authorities that own contaminated properties but lack the funding or the expertise to implement site assessment and planning.

**Appendix V
Pennsylvania's Brownfields Program**

(Continued From Previous Page)

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Brownfields Inventory Grants			
Grants	40 approved applicants	\$ 51,000	<ul style="list-style-type: none"> • Grants are for local governments and economic development agencies to inventory the brownfield properties in their areas. • Grant recipients may receive up to \$1,000 for each brownfield site listed in the state's brownfields directory. • Each grant is limited to \$50,000 per year. • Applicant must submit a claim for reimbursement of expenses incurred in inventorying the sites.

Source: GAO's analysis of Pennsylvania's information.

Nonfinancial Incentives

The two primary nonfinancial incentives that the state provides to parties that clean up and redevelop brownfields are (1) flexible and more clearly defined cleanup requirements and (2) liability relief. The state's current cleanup rules and liability standards were adopted in 1995, in an effort to encourage more cleanups of hazardous waste sites by private parties and to get the sites back into productive use.

Prior cleanup policies required that contaminated sites be restored to "pristine" conditions—a standard so rigorous that compliance was prohibitively expensive and virtually unattainable, according to Pennsylvania program information. According to the state, these policies were impractical and contributed to the abandonment of thousands of industrial sites throughout Pennsylvania. According to state officials, cleanups under the Pennsylvania's new cleanup standards may be less costly than if performed under EPA's Superfund program.

For example, state laws and regulations establish statewide cleanup standards that prescribe the maximum concentrations of contaminants by environmental media, such as soil and water. These standards may be used at most sites instead of cleanup levels determined by site-specific studies. The standards permit the party performing the cleanup to more accurately determine cleanup costs in advance and to do less site-specific study. The standards have proven popular with parties performing cleanups and have been used at 75 percent of sites in recent years, according to Pennsylvania program reports.

In addition, special cleanup provisions are available for parties developing properties formerly used for industrial activities where there is no

responsible party to pay for cleanup or the property is located within a state-designated area. A baseline remedial investigation of the property must be done by the developer and documented in a report. The developer is only responsible for remediating immediate, direct, or imminent threats to the public health or the environment that would prevent the property from being used. The developer is not responsible for any other contamination identified in the report.

Pennsylvania also changed its liability rules. Prior laws held current owners responsible for cleanup, even though the contamination on their properties may have been caused by previous owners. This unlimited liability often made it preferable to abandon a site rather than to restore it, according to the state. The revised liability rules encourage cleanups by providing a more certain end to liability after cleanup by limiting future liability when cleanup standards are achieved and by expanding the opportunities for parties to obtain financing from institutions that were once reluctant to provide financing for brownfields because of the threat of potential liability.

According to the revised Pennsylvania liability rules, any party that demonstrates compliance with the state's cleanup standards is to be relieved of further liability for the site cleanup and is not to be subject to citizen suits or actions to force a contribution to cleanup costs. The liability relief attaches to the property and continues with the property through future property transfers. This protection applies to

- the current or future owner or any other party who participated in the remediation of the site,
- a party that develops or otherwise occupies the site,
- a successor or assignee of any party to whom liability protection applies, and
- a public utility to the extent that it performs activities on the identified site.

The scope of liability relief has certain limitations. Liability relief received from the state does not affect the responsible parties' liability under CERCLA. Contaminants not identified prior to and during the cleanup action that are later identified are not covered by the liability relief. Nor is there any release of liability for contamination caused by a party after cleanup.

The revised Pennsylvania rules expands liability relief for certain parties, such as lenders and economic development agencies that hold an interest in properties, unless they directly cause an immediate release or directly exacerbate a release of contaminants.

Accomplishments of State Program

Neither the Department of Environmental Protection nor the Department of Community and Economic Development formally tracks accomplishments that arise from the state's program of brownfields financial assistance. At the time of our review, the Department of Community and Economic Development was developing a database that will track the activities and accomplishments resulting from its financial assistance at properties.

Wisconsin's Brownfields Program

Program Authority and Structure

Wisconsin's brownfields initiative comprises a number of programs that provide financial assistance and technical assistance to parties cleaning up and redeveloping brownfield properties. These programs provide funding to public and private parties for site assessments and cleanups, and tax relief for parties that cleanup and redevelop brownfield properties. The state has also enacted legislation to bring finality to liability after cleanup. A state statute defines brownfields as abandoned, idle, or underused industrial or commercial facilities or sites, the expansion or redevelopment of which is adversely affected by actual or perceived environmental contamination, a definition very similar to EPA's. Wisconsin officials estimate that 10,000 brownfield sites exist throughout the state.

The state's brownfields initiative is administered by three state agencies: the Department of Commerce, the Department of Natural Resources, and the Department of Revenue.

The Department of Commerce, Division of Community Development, is responsible for the following programs.

- The Wisconsin Brownfields Grant Program, the most mature of the state's financial assistance programs, provides grants to local development agencies, municipalities, and private parties for cleanup and redevelopment.
- The Wisconsin Community Development Zone Program assists those seeking to start or expand a business in, or relocate a business to, designated areas in Wisconsin. The program offers a tax credit against income taxes of 50 percent of all eligible cleanup costs.
- The Wisconsin Enterprise Development Zone Program also encourages businesses to locate their projects in areas designated as high economic distress areas. The enterprise development zones are smaller than the community development zones and comprise only a single business. The program offers a tax credit against state income taxes of 50 percent of all eligible cleanup costs.
- The Department of Commerce is preparing a listing of brownfield properties in a state-developed inventory to assist in marketing these properties.

The Department of Natural Resources' Bureau for Remediation and Redevelopment has full responsibility for the following initiatives:

- The Site Assessment Grant for Local Governments is a new program that provides funding to local government units to make preliminary assessments at brownfields sites.
- The Land Recycling Loan Program is also a new program that provides loans to local governments to investigate and remediate municipal-owned contaminated properties, including landfills. The funding for this program is provided by a set-aside of \$20 million from the state's clean water revolving fund¹ to assist the municipalities.
- The Sustainable Urban Development Zone Program is a pilot program that provides grants to five Wisconsin communities to promote the cleanup and redevelopment of certain brownfields in their communities.

The Department of Revenue is responsible for administering the Environmental Remediation Tax Incremental Financing Program. This program allows political subdivisions to pay for site investigations and cleanups from the increased property taxes generated by redeveloped properties. In addition, Wisconsin counties and the city of Milwaukee have authority from the state legislature to cancel all or part of delinquent property taxes and the associated interest and penalties on contaminated properties in exchange for getting the properties cleaned up and redeveloped.

Major Program Elements

The major elements of the state's brownfields program including various forms of financial assistance, state-developed inventories of brownfield sites, and expanded liability protection, are discussed below.

Financial Incentives

Table 17 describes the state's brownfields financial assistance programs, the amount of authorized funding, the source of program funds, and the purpose of the program.

¹ States establish state clean water revolving funds through capitalization grants provided by EPA and a state match. Loans are made from the funds to address wastewater treatment and water quality issues.

**Appendix VI
Wisconsin's Brownfields Program**

Table 17: Wisconsin's Brownfields Financial Incentives

Program	Amount of funding authorized	Source of funding	Program purpose
Site Assessment Grants for Local Governments	\$ 1.45 million	One-time state appropriation	New program that began in the summer of 2000. Funds are available to local government units to assess contaminated brownfield properties.
Brownfields Grant Program	\$ 22.2 million	Biennial state appropriation	Funds are available to public and private parties to clean up brownfields projects that promote economic development.
Land Recycling Loan Program	\$ 20.0 million	Clean water revolving loan fund	Low-interest loans are available for investigating and remediating municipal-owned contaminated properties, including landfills.
Sustainable Urban Development Zone Program	\$ 2.38 million	State appropriation	New pilot program that provides grants to five Wisconsin communities to create a comprehensive set of financial incentives to promote the cleanup and redevelopment of certain brownfield areas in a community.
Cancellation of Delinquent Taxes		Reduction in property tax	Wisconsin counties and the city of Milwaukee can cancel all or part of delinquent property taxes, interest, and penalties on a contaminated property in exchange for cleanup and redevelopment. Of the 10,000 estimated brownfields in the state, 1,500 are believed to be tax delinquents.
Environmental Remediation Tax Incremental Financing	No limit on the amount of eligible costs	Reduction in property tax	Governmental entities, such as counties, cities, villages, and towns, can recover their cleanup costs on properties they transfer to other parties through the increased property taxes produced by subsequent redevelopment.
Community Development Zone Program	\$ 38.16 million in tax benefits available	Reduction in state income tax	An environmental remediation tax credit is available to parties expanding or starting businesses in, or relocating current businesses to, 1 of 20 community development zones.
Enterprise Development Zone Program	Maximum of \$3 million per each of the 79 designated zones	Reduction in state income tax	A tax credit is available for environmental remediation to parties that start or expand businesses in distressed areas. A zone is "site-specific" and applies to only one business.

Source: GAO's analysis of state information.

Table 18 presents available data on each financial assistance program, such as the number and amount of grants and loans, and describes recipient eligibility and other requirements for the program.

**Appendix VI
Wisconsin's Brownfields Program**

Table 18: Wisconsin's Brownfields Financial Incentives Awards and Requirements

Dollars in millions

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Site Assessment Grants for Local Governments			
Grants	Not available at the time of our visit	Not available at the time of our visit	<ul style="list-style-type: none"> • Eligibility is limited to local governments that did not cause the contamination at the site. • Applicant may be awarded up to 15 percent of the funds available in each fiscal year. • The party causing the contamination must be unknown, unable to be located, or unable to pay for the cleanup. • Local governments are reimbursed for 80 percent of the assessment costs. • The state has received 85 applications requesting \$1.8 million. Only \$1 million is available.
Brownfields Grant Program			
Grants	39	\$ 15.8	<ul style="list-style-type: none"> • Eligible parties are local development authorities, municipalities, and private parties. • Grants are awarded competitively and can be used for environmental remediation and redevelopment. • Matching requirements increase from 20 to 50 percent as the size of the grant increases. • Program has received 106 requests totaling \$51.5 million during the first three rounds of competition. Of the 106 requests, only 39 grants, totaling \$15.8 million, were awarded.

**Appendix VI
Wisconsin's Brownfields Program**

(Continued From Previous Page)

Dollars in millions

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Land Recycling Loan Program			
Loans	1	\$ 0.6	<ul style="list-style-type: none"> • Eligible entities are local governments, including community development and housing authorities, that own the property and, except for landfills, did not cause the contamination. • Funds are loaned at no interest to pay for site assessments and remediation. • The maximum loan term is 20 years. • An applicant can receive no more than 25 percent of the \$20 million program funds authorized. Only 40 percent of the loans in each fiscal year can be used for landfills. • Awards are based on a project's ability to reduce environmental pollution, threats to human health, and for non-landfill projects, the extent to which the project will prevent the development of undeveloped land. • Funds are to be used for projects that remedy contamination that affects or threatens to affect groundwater or surface waters. • No recipient match is required. • Preliminary applications received exceeded the \$20 million set aside for this program. State officials anticipate that not all applicants who submitted a preliminary application will submit a full application.
Sustainable Urban Development Zone Program			
Grants	3 communities	Not available at the time of our visit	<ul style="list-style-type: none"> • Program eligibility is limited to the following communities: Milwaukee, Green Bay, Oshkosh, La Crosse, and Beloit. • Fund provides grants to assess, investigate, and clean up brownfield properties. • No recipient match is required. • To date, three communities have contracts with the state and have started their projects. The state is negotiating contracts with the remaining two communities. Each community gets a share of the \$2.38 million.

**Appendix VI
Wisconsin's Brownfields Program**

(Continued From Previous Page)

Dollars in millions

Program	Cumulative number of awards	Cumulative award amounts	Selected program requirements
Cancellation of Delinquent Taxes			
Property Tax Abatements	5 sites	Not available	<ul style="list-style-type: none"> • Eligible parties are property owners or potential owners. • Authorized bodies may forgive a portion or all of the delinquent property taxes.
Environmental Remediation Tax Incremental Financing			
Tax Credit	3 communities are considering this program	Not applicable	<ul style="list-style-type: none"> • Counties, cities, villages, and towns can establish environmental remediation tax increment districts on one or more contiguous properties they own and clean up to recover property assessment and cleanup costs. A district is created once the property is sold to a private party. • Eligible project costs include environmental investigation and remediation costs, as well as other costs. • There are no limitations on the amount of costs eligible for financing. • The maximum life of the tax increment financing is 16 years or when all eligible costs have been paid, whichever occurs first.
Community Development Zone Program			
Property Tax Credit	Not available at the time of our visit	Not available at the time of our visit	<ul style="list-style-type: none"> • Eligible parties are individuals and businesses who locate their new or expanded business projects within one of 20 development zones. • The credit is 50 percent of all eligible remediation costs. Credits for remediation plus nonremediation credits provided to business cannot exceed \$38 million for all zones.
Enterprise Development Zone Program			
Property Tax Credit	Not available	Not available	<ul style="list-style-type: none"> • Eligible parties are individuals and businesses who locate or expand their businesses in an economically distressed area. • The Department of Commerce can designate up to 79 zones, 10 of which must be for environmental remediation and can vary the zone benefits to encourage projects in areas of high distress. • Zones can exist for up to 7 years. • The credit is 50 percent of all remediation costs. Credits for remediation plus nonremediation credits provided to businesses that locate in a designated area cannot exceed \$3.0 million for each zone.

Source: GAO's analysis of Wisconsin's information.

Nonfinancial Incentives

In addition to financial incentives, Wisconsin provides nonfinancial incentives to further encourage the cleanup and redevelopment of brownfield properties: an inventory system that links properties with potential developers and expanded liability protection.

The Department of Commerce is developing a Web-based system, the Brownfields Location Information System, to list brownfield sites in order to promote their potential reuse by allowing users to locate properties that meet their specific redevelopment criteria. Any party owning a brownfield site in the state can complete and submit a form to the Department to have the property listed.

The state has created a number of specific liability protections to facilitate brownfields redevelopment. For example, Wisconsin law exempts lenders, owners of properties contaminated by off-site sources, and local governments from cleanup liability in certain circumstances. Parties that conduct cleanups of contaminated properties are also given protection from further liability, such as for contamination unknown at the time of cleanup.

Accomplishments of State Program

At the time of our visit, the Department of Commerce had only provided accomplishments for the Brownfields Grant Program. Table 19 shows the accomplishments reported under this program as of January 2000. The source of the accomplishments is grant applications.

Table 19: Brownfields Grant Program Accomplishments

Accomplishments	Number or amount
Potential jobs created	3,364
Potential increase in taxable property values	\$227 million
Potential acres returned to productive use	507

Source: GAO's analysis of Wisconsin's information.

Comments From the Environmental Protection Agency

Note: GAO's comments supplementing those in the report text appear at the end of this appendix.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 22 2000

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Mr. David G. Wood, Director
Natural Resources and Environment
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Wood:

Thank you for providing EPA the opportunity to review and comment on the draft copy of the U.S. General Accounting Office's (GAO) report entitled, "*Brownfields: Information on the Programs of EPA and Selected States* (GAO-01-52, code 160515)." After reading the draft report, we have several concerns that we believe reflect considerable legal and policy-based issues and are significant enough to require substantive retooling of the report and its analysis prior to its final release.

In testimony before the U.S. Senate Subcommittee on Superfund, Waste Control, and Risk Assessment, Committee on Environment and Public Works in March 1997, GAO stated that, "over the past few years, the EPA and the Congress have provided some funds which states and localities have used for activities such as developing an inventory of brownfield properties." It goes on to say that funding provisions, "would continue and expand the support and respond to the states' and localities' needs." The March 1997 testimony, which took a broad look at the program, was fairly positive from the Agency's perspective. The current report, however, which takes a much narrower look at the program, seems to cast an unfavorable aura over the program.

Several conclusions are drawn in the current draft report that I find to be disconcerting, because my staff, along with EPA's Office of General Counsel (OGC), have met with GAO several times to explain the various elements that make up EPA's Brownfields Initiative. Further, I do not believe this report illustrates a balanced comparative analysis of State and Federal Brownfields programs, which we were told was the intent of the study during the entrance conference on February 2, 2000. My primary concerns with the report are listed below, however, I have also attached a copy of the draft report with hand written comments that I hope you will consider before issuing the final report.

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Comments From the Environmental
Protection Agency**

See comment 1.

Methodology

- *Methodology.* EPA believes that there are serious flaws in the methodology used to prepare this report. No common set of criteria, or measuring stick, is applied across both state and Federal programs for either the number or cost of assessments. In addition, it is not accurate to draw national conclusions based on the programs in the five states selected for the study. The five states reviewed are large states that have well established Brownfields programs and are not necessarily representative of other state programs around the nation.

See comment 2.

- *Inaccurate Comparison.* The report compares the national brownfields program with the five states which have been most active and proactive in dealing with brownfields assessment, cleanup and redevelopment. These five states reflect highly developed and sophisticated State programs, which include information from State Superfund, State Voluntary Cleanup Programs (VCP), and State Brownfields programs. The report fails to recognize that a strong, broad based program is needed at the national level to spark brownfields redevelopment in communities whose states have not provided the needed incentives to place brownfields on a level playing field with unused "greenfields."

Many states, whose brownfields programs are not as well established as the five chosen for this report, depend on EPA's funding – either directly or indirectly. For example, Lakewood, Colorado, in EPA's Region 8, is having sites assessed that will eventually lead property owners to get their property cleaned up through the Colorado VCP. As a result, EPA's pilot program actually supports or complements the state program by assessing more sites and increasing the number of sites cleaned up under state programs.

See comment 3.

Now on p. 6.

- *Measurement.* The report appears to be unequal in its comparison of EPA and State measures. It notes that state information on program results is limited and that two of the five states examined do not track the economic benefits of their brownfields programs. The data collected by the other three states is forecasted, not actual. (pg.4) Although States have yet to collect any information, EPA is attempting to secure this information, given the constraints of the laws within which we must work. Furthermore, EPA is continually working to improve the quality of outcome-based data and does not feel it is appropriate to be criticized for attempting to collect this type of data.

See comment 4.

- *Quality Assurance/Control.* EPA is constantly striving to improve the accuracy of data reported. At this time, data are reported from the Brownfields Management System on a monthly basis. Regional Brownfields Coordinators review the data and investigate anomalies. The Regions then make adjustments to correct any problem data. This is how the Shreveport case, where the number of properties with cleanups completed was overstated, was discovered by EPA and corrected. After working with the City of

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Now on p. 17.

Shreveport, EPA's Region VI discovered, as early as April 2000, that the pilot had previously been counting cleanups by parcels, instead of properties on two complicated properties. The number of properties with leveraged completed cleanups was changed to two, from 22. (pg.16) While the Shreveport pilot initiated a shift from measuring parcels to measuring properties, it is improper to characterize this as a misrepresentation. It is important to recognize that Shreveport conducted much activity on 22 parcels that is not reflected in the summary measure of two properties. EPA feels the Shreveport example should be reported as successful quality assurance, not as representative of "uncertain quality."

See comment 5.

- *Statistical Insignificance.* The report draws the conclusion, based on five assessment pilots or approximately 1 percent of all EPA assessment pilots, that "EPA's data are of uncertain quality" (pg.4). Furthermore, the five pilots were not representative nor chosen at random, but instead were targeted based on the fact that all had "reported large numbers of sites cleaned up, developments underway, and redevelopment/construction dollars and job leveraged." (pg.16) Characterizing EPA data as being of "uncertain quality" is an inaccurate statement based on a biased sample and inconsistent sampling methodology. Moreover, EPA has a quality assurance/quality control system in place which discovered two of the three reported inconsistencies prior to discussions with GAO.

Now on p. 17.

See comment 6.

- *Economic Data in its Infancy.* The ability to capture long term economic results from initial assessments is in its infancy at both State and Federal levels, however that point is not made. The report exclusively scrutinizes EPA's ability to measure data and accepts the states ability to do forecasting, without finding fault where no data is collected. (pg. 4) The Economic Development Administration (EDA) has, for many years, grappled with the issues of measuring and analyzing economic outcomes. EPA should be recognized for taking EDA's efforts and expanding them to include the economic outcomes of environmental protection. Not collecting such data, and/or relying on forecasting of data, have been the only options available to states. EPA has made strides in characterizing and reporting economic outcomes that result from assessing and cleaning up brownfield sites.

Now on p. 6.

Assessment Grants

See comment 7.

- *Reporting by Assessment Grantees.* The report inaccurately maintains "EPA does not have a national requirement that pilot assessment grantees report results achieved from the use of pilot grants." (pg.15) There is a national reporting requirement for assessment grants in place. Although it is subject to legal limits on the Agency's authority to collect information from grantees that is not directly related to expenditures of assistance funds, it does provide information on the results that grantees achieve.

Now on p. 16.

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The reporting of results is subject to the Paperwork Reduction Act and attendant OMB regulations governing information collection requests (ICR's), as well as the Agency's assistance regulations. EPA requires under 40 CFR 35.6650 that grant recipients submit quarterly progress reports on activities which are delineated in the Scope of Work for the grant. The content of these reports are to include explanations of the work accomplished with grant funds during the reporting period (40 CFR 35.6650(b)(1)). [EPA may not require the submission of progress reports more often than quarterly (40 CFR 35.6650(a)).] However, under 40 CFR 35.6655(b), recipients are required to advise EPA of favorable developments which occur between reporting periods and which produce more beneficial results than originally planned. The reporting requirements that EPA imposes under both 40 CFR 35.6650 and 35.6655 must fall within the scope of the regulations. The information collection requirements associated with these regulations have been approved by OMB (OMB Control Number 2030-0040).

The draft report notes that in September of 1999 EPA Headquarters issued guidance to the Regions to standardize quarterly reporting of accomplishment measures for newly awarded and amended assessment grants. This guidance was developed by OSWER, in consultation with the Agency's Office of General Counsel, to ensure that the standardized information collected fell within the scope of regulations and the applicable OMB control number for quarterly reporting by assessment pilot recipients. Nonetheless, as the draft report acknowledges, **EPA cannot require private sector entities**, who do not receive EPA financial assistance, to provide information relating to such accomplishment measures as redevelopment dollars invested or numbers of jobs created. The Agency is limited to obtaining information from assessment pilot recipients on specific accomplishments attained with grant funds, such as properties assessed.

The draft report recognizes the challenges EPA faces when balancing the burdens that detailed reporting requirements place on grantees against the importance of information needed to evaluate the success of the Brownfields program. EPA believes that the September 1999 guidance on standardizing reporting strikes the proper balance. While the Agency does not take issue with the recommendations in the draft report to review and correct data and monitor regional success in improving grantee reporting, we do disagree with statements made that imply EPA does not have a functioning performance measurement system in place, and the tone which implies some "fault" on the part of the Agency for pioneering efforts to collect this information.

Use of Assessment Grants. The report states that, "EPA's brownfields initiative focuses on building local capacity for planning and conducting brownfields activities and developing brownfield program models in local governments that can be emulated by others." (pg. 6) This is not entirely correct. While capacity building is an important side benefit of site assessment, the focus of the program is on conducting the assessments themselves. Assessment pilot grantees may use their funds for other pre-cleanup

See comment 8.

Now on p. 7.

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See comment 9.
Now on pp. 11 and 12.

activities, such as community involvement and cleanup planning, as well as for administrative costs. However, the majority of EPA's assessment grant resources are spent on assessments, as is evidenced by the considerable success rate of approximately 1,700 completed with pilot funding.

- *Cost of Assessments.* The report shows that the five states combined have awarded approximately \$142 million over the life of their programs, compared to \$247 million by EPA since FY 1995. (pg. 10, 11) What the Report fails to analyze is the per assessment costs for State and Federal programs. After calculating the costs per assessment based on data in the Report, it costs states an average of over \$180 thousand per assessment and EPA an average of almost \$50 thousand per assessment. We believe this could be used as an analytical tool in comparing State and Federal Brownfields programs, assuming the assessments to be comparable.

State Programs

See comment 10.

- *Complementary Programs.* The report pits the States and EPA against each other in their brownfields efforts. The two are not competing against each other, but instead are working together as partners to assess and clean up brownfields so they may be returned to productive use. As stated previously, while some states have strong and growing programs to facilitate brownfields assessment, cleanup and redevelopment, many are lacking the needed tools to help communities struggling with brownfields. As stated in the U.S. Conference of Mayors February 2000 report, "Recycling America's Land: A National Report on Brownfields Redevelopment - Volume III," only 23 percent of cities rated their State VCP as excellent or very good, compared to 43 percent who rated satisfactory or lower. A strong tool box, which includes a national program and state programs/incentives, is necessary for our strong commitment to urban revitalization and for brownfields redevelopment to remain successful. The flexibility offered by complementary Federal and State brownfield programs allows communities to design a package of tools best suited to addressing their particular brownfield problems.

Recommendations

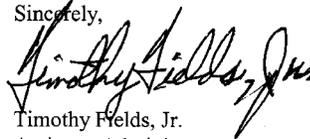
See comment 11.

- *Recommendations.* EPA noticed the absence of recommendations for state programs in the draft report. Further, we do not necessarily agree with the wording of the recommendations made to EPA in the draft report. As always, the Agency believes it is important to continue to improve the quality of our data collection.

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Comments From the Environmental
Protection Agency**

I thank you in advance for your attention to these concerns. If you have any questions, please contact me at 260-4610, or Linda Garczynski, Director of EPA's Brownfields Program Office at 260-4039.

Sincerely,



Timothy Fields, Jr.
Assistant Administrator

Attachment

The following are GAO's comments on the Environmental Protection Agency's letter dated November 22, 2000.

GAO's Comments

1. We believe that our methodology is appropriate for the findings presented in our report. Our report presents data on the awards made by EPA and states for assessments. It does not compare the number of assessments done by EPA or the states or compare the cost of assessments. We agree with EPA that it is not accurate to draw national conclusions on the basis of our review of five states, and we note that the report does not reach any such conclusions. We also agree with EPA that the five states we reviewed are not necessarily representative of other state programs, and, as we indicated at the beginning of our report, the states we selected were identified by EPA and other knowledgeable organizations as operating some of the largest or most innovative brownfields programs in the nation.
2. Our report briefly discusses state superfund and voluntary cleanup programs in the background section to provide some historical context for the state brownfields programs. It also presents information on the cleanup and liability standards adopted by the states for their voluntary cleanup programs because these standards govern the cleanup of sites that receive state brownfields financial assistance and because they are regarded by the states as incentives for brownfields cleanups. However, our comparison of funding provided by EPA and the states and our discussion of state accomplishments use data only from the states' brownfields programs. Our report does not discuss the need for a national program because this issue is not related to the objectives of our review.
3. Our report discusses the data EPA and the states have obtained on program results and the systems that EPA and the states have established to measure results, and concludes that data on both EPA and state programs are limited. We do not criticize EPA for attempting to collect program results data and, in fact, recommend that they increase efforts to get it.
4. We added more information to our report on EPA's efforts to assure data quality and to indicate that it is making a special review of the accuracy of previously reported data. EPA provided data to us from its Brownfields Management System in June 2000 showing that Shreveport had completed cleanups at 22 properties. EPA did not disclose to us in

June that the number of properties with completed cleanups was overstated for Shreveport nor had it revised its brownfields database. In September 2000, we contacted the Shreveport brownfields coordinator, who informed us of the overstatement. In October 2000, when we questioned EPA about the discrepancy, EPA told us for the first time that it had discovered the error in April 2000.

5. Our selection of the five assessment pilots was not intended to be a representative, random sample of pilots. Instead, we chose pilots to whom EPA had attributed some of the largest accomplishments in the program. This selection allowed us to review a substantial percentage of the program's reported results in a short period of time. For example, according to data EPA provided to us in June 2000, the pilots we selected represented 36 percent of the properties with cleanups completed, 30 percent of the properties with redevelopment underway, 80 percent of the redevelopment/construction dollars leveraged, and 35 percent of the jobs leveraged. We found substantial overstatement of cleanups completed in Shreveport and of redevelopment/construction dollars leveraged in Houston. We also found a misclassification of results in the data for Baltimore. Also, as we noted in our report, prior to September 1999, EPA did not have nationwide guidance that would help to ensure the consistent reporting of results. Based on further information provided by EPA officials about their efforts to correct errors in program results data, we have deleted from our final report a characterization of EPA's data as uncertain. EPA officials told us that they are reviewing data reported in the past by pilots and are in the process of resolving issues about the accuracy of the data.
6. Our report does indicate that one reason for the limited data EPA has on program results is that some of these results can take some time to occur. For example, we noted that several years may elapse after an award before certain results, such as the creation of jobs, are realized. In addition, our report notes that the reporting of results may be limited because some results, such as cleanup and redevelopment, might not occur for some years after an assessment award is made. The report also cites one of our past reviews showing that most federal agencies generally do not have the comprehensive data necessary to determine the extent to which brownfields programs' economic benefits will be achieved. EPA also said that we had not faulted the states for not collecting information on program results. Our report indicates that only three of the five states we selected were reporting data on the results of their brownfields loan and grant programs and that state data

on program results are limited. EPA said that its efforts to collect data on the results of its brownfields program should be recognized. We have revised our conclusions to recognize the efforts that EPA has made.

7. Our report defines “results” as intermediate or end outcomes, such as cleanups completed or redevelopment activity begun. EPA said that it has required recipients to submit quarterly reports on activities delineated in the scope of work for their awards. For example, EPA officials said that recipients have been required to report on how they spent their awards. However, EPA does not have a national requirement that recipients report program results as we have defined them in this report. In September 1999, EPA defined a set of accomplishment measures that regions could require of pilots in new or amended agreements after September 30, 1999. EPA also said that it disagreed with statements made in our report implying that EPA does not have a functioning performance measurement system in place and the tone that implies some “fault” on the part of the agency for pioneering efforts to collect information. The report does not imply that EPA does not have a functioning performance measuring system in place. It indicates that the data collected so far by the system for certain key parameters are limited. In addition, we disagree that the tone of our report faults EPA for attempting to collect data. In fact, we recommend further efforts at data collection.
8. We have revised our description of EPA's brownfields initiative in light of EPA's comment.
9. The data in our report cannot be used to compute costs per assessment because the report shows only the number of assessment grants and loans made by states not the number of assessments performed. State grants and loans may have been used for more than one assessment.
10. We do not regard our comparison of EPA and state brownfields programs as pitting the programs against each other.
11. As an agency of the U.S. Congress, GAO does not generally make recommendations to state governments. We discussed the recommendations with EPA officials and made changes where appropriate to address their concerns.

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