
Coming Clean for Economic Development:

A Resource Book on Environmental Cleanup and Economic Development Opportunities

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ISBN: 1-882061-59-4

Coming Clean for Economic Development was prepared with an award (#99-06-07382) from the Economic Development Administration within the U.S. Department of Commerce. The statements, findings, and recommendations are those of the authors and do not necessarily reflect the views of the Economic Development Administration or the U.S. Department of Commerce.

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The Institute organized the first national conference on brownfields cleanup and reuse in Chicago in June 1991. It also has published *New Life for Old Buildings: Confronting Environmental and Economic Issues to Industrial Reuse* (1991, 95 pages); released *Industrial Site Reuse, Contamination, and Urban Redevelopment* (1994, 49 pages), the first collection of case studies on communities struggling to redevelop contaminated industrial sites; participated in community brownfield coalitions in Chicago and Baltimore; and testified before congressional committees. The Institute also has arranged a series of forums, hosted by members of Congress, in Detroit, Cleveland, Pittsburgh, East Chicago, and Kalamazoo.

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Executive Summary

Virtually every city in the nation's older industrial regions, no matter its size, grapples with the challenge of unused manufacturing facilities and other industrial sites. These properties include the shuttered steel mills in western Pennsylvania and Chicago's southeast side; mining operations in Montana and Arizona; closed timber mills that dot many small towns in Washington and Oregon; and declining defense contractors, metal plating factories, machine shops, and chemical plants in communities from Michigan to Mississippi.

Local public officials, economic development practitioners, and plant owners who have sought to revitalize fallow industrial properties face a daunting challenge: contamination of the buildings, equipment, and surrounding land and water. Public concern about health effects from hazardous chemicals, stricter environmental laws, and changing private-sector development priorities have made it increasingly difficult for communities to restore and reuse former manufacturing sites.

The precise magnitude of site contamination is unknown, but is no doubt pervasive and significant, especially in areas with long manufacturing histories. Some experts have suggested that more than 500,000 sites nationwide show evidence of at least some contamination which could trigger federal enforcement and liability rules and ultimately inhibit owners from selling the site, securing financing, or proceeding with reuse.

In framing the brownfield issue, it is essential to distinguish between Superfund high priority sites — the worst of the bad — and those sites characterized by low and medium levels of environmental contamination, typically industrial facilities in operation before the 1980 enactment of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund), the main federal environmental law affecting the cleanup and reuse of these sites. To date, the Environmental Protection Agency (EPA) has identified almost 1,300 high-priority sites that are the true environmental nightmares that present serious health and safety risks and require considerable time and enormous resources to remediate. The balance of affected sites — characterized as "brownfields" — generally are easier to clean and offer greater opportunities for reuse.

The interplay between the economic and environmental arenas is dominating community development strategies in more and more jurisdictions across the country. Acquiring, cleaning, and redeveloping older, and often abandoned, industrial sites can be very expensive and time consuming. In many situations, private developers and financiers are not able, or willing, to act on their own to ensure that the full economic potential of site reuse will be achieved. Rightly or wrongly, the ambiguity of statutes governing liability and cleanup has increased the uncertainties and perceived problems associated with brownfield activities. Heightened concern over environmental problems has brought a new dimension to the risks that lenders face and the hurdles that developers and local agencies must overcome. Cleveland Mayor Mike White has called contamination the number one issue facing development practitioners.

Communities that allow brownfield sites to remain inactive lose the tax revenue and employment opportunities generated by thriving operations. Existing streets and roads, water lines, rail spurs, and other infrastructure systems go unused, while additional tax revenues are spent to extend the same services to developments springing up in the outlying "greenfields" beyond the urban boundary. *Coming Clean for Economic Development* shows that vigilant attention to development priorities can help reverse these patterns and invite growth and investment back into existing cities.

Developing New Tools

Brownfield cleanup and reuse can be a costly proposition. The complicated process and legal hurdles can be expensive in terms of expenses and fees, and costly in terms of time delays. Site evaluation processes, testing, possible legal liabilities, and other factors often deter private-sector efforts to bring old industrial sites back to productive use.

Clearly, the public sector can do much to help level the playing field between greenfield and brownfield sites. Some existing federal economic development programs, while not targeted specifically to brownfield needs, are well suited to support site characterization and reuse projects. In the environmental arena, existing strategies aimed at transportation planning, traffic congestion mitigation, air quality improvement, and preservation of open space can supplement EPA's Superfund and brownfields programs in facilitating the reuse of industrial sites. Many of these strategies can be linked creatively to help tilt the balance toward brownfields redevelopment. In addition, Congress is considering several proposals to increase federal resources for brownfield projects.

No single "best" public-sector approach fits since brownfield projects vary by type, developer, level and class of contamination, and financial position and desired return of the site owner or developer. Yet the variety of incentives — used separately or in combination — should be able to reduce the lender's risk, reduce the borrower's cost of financing, and ease the developer's or site user's financial situation.

State and local governments have an important role to play in brownfield cleanup and revitalization projects. In many respects, they are the innovators. Brownfield success stories, such as those recounted in this guidebook, typically are found in areas that have adopted their own site characterization and reuse tools, and creatively built on the foundation provided by federal programs and policies. An increasing number of state and local jurisdictions have crafted innovative mechanisms to help businesses and communities establish finance programs that ease the cost or terms of borrowing, fill funding gaps that the private sector will not bridge, or adapt environmental cleanup programs to the special needs of contaminated sites. The rapid adoption at the state level of voluntary brownfield cleanup programs is another indication of the heightened willingness of public agencies to experiment with new cleanup and financing protocols. Such innovation is helping drive federal attention to brownfields.

Resources

As much as brownfields is a national problem, finding the right solution resides in the local experiences of all of the stakeholders affected by these properties. Neighboring communities, area businesses and lenders, and local and regional officials are developing strategies and forming partnerships that help return brownfields to productive use.

Creatively crafted and carefully targeted incentives and assistance can help advance cleanup and reuse activities and achieve significant economic, social, and aesthetic benefits. These efforts do not have to be "giveaways." The notion of the entrepreneurial public sector, increasingly prevalent in many types of development programs, can be extended to brownfield initiatives. Public agencies and organizations that share in project risks also can share in their rewards by recovering some of their investment during subsequent site sale or development.

Brownfield revitalization increasingly is seen as an opportunity to alleviate sprawl, traffic congestion,

and air quality problems in metropolitan areas. At the same time, some communities are viewing brownfield reuse as a means to address much-needed job development and training for dislocated workers and minority populations. *Coming Clean for Economic Development* provides the backdrop against which these environmental and development concerns play out in specific community situations. The guidebook also describes state and federal efforts to remove the barriers to brownfields cleanup and reuse.

How to Use This Guide

Economic development practitioners increasingly confront environmental concerns and the added costs associated with site contamination. Financial assistance efforts — the traditional purview of economic development agencies — address only part of the problem. More complicated to address are the liabilities and uncertainties created by environmental laws and programs. Economic development practitioners, therefore, need to understand these laws and programs — how they work, what concerns they can address, and how they can be packaged creatively with familiar financing tools.

Coming Clean for Economic Development attempts to bring this knowledge to local officials struggling to increase economic activity in their communities. This guidebook, which offers detailed information on state and federal regulations and programs, should help economic development practitioners understand the problems, opportunities, and available tools needed to thoughtfully integrate environmental cleanup into the economic development process. Recognizing that significant variations exist from site to site, it provides a contextual framework, rather than a cookie-cutter approach. The case studies of brownfield reuse success stories are meant to be illustrative, not definitive examples.

Coming Clean for Economic Development is laid out in five parts.

Framing the Issue. The first chapter analyzes the most common barriers to brownfield reuse, emphasizing national banking regulations and policies that inhibit financial institutions from taking more interest in brownfield projects.

Environmental Considerations. Chapter 2 reviews the environmental regulations and programs governing brownfield cleanup and reuse. It also examines several related issues, including environmental justice, job training, transportation planning, and open space preservation.

Financing Tools. Chapter 3 focuses on the many tried-and-true financing tools that can be given a brownfields "spin," or adapted to deal with the cleanup and reuse of contaminated industrial sites. In addition to federal tax incentives and programs administered by the Department of Housing and Urban Development, this section examines an array of state and local tools. The chapter also illuminates the environmental issues associated with reusing contaminated military facilities.

Environmental Program Tools. Chapter 4 describes the increasing number of innovative "voluntary cleanup programs" launched by state environmental agencies in order to bring consistency and certainty — in terms of time, effort, and cost — to the assessment and cleanup of contaminated sites.

Success Stories. In spite of numerous barriers, more and more communities are bringing new life to old buildings. Chapter 5 features eight in-depth case studies of projects that have worked. Each one is laid out in several sections: background and nature of the brownfield problem; how the challenge was met; the regulatory framework guiding the solution; how project financing was identified and structured; impacts and benefits stemming from reuse; and lessons learned.

In addition, *Coming Clean for Economic Development* provides numerous project and agency contacts for those wishing to follow up on specific ideas or examples. The guide also features a brief summary of the many federal legislative proposals introduced in 1995 to address brownfield issues.

Chapter 1:

Framework of Environmental and Economic Development Concerns

The interplay between the economic and environmental arenas has dominated community development strategies in countless jurisdictions across the country. Acquiring, cleaning, and redeveloping older, and often abandoned, industrial sites can be very expensive and time consuming. In many situations, private developers and financiers are not able, or willing, to act on their own to ensure that the full economic potential of site reuse will be achieved. Rightly or wrongly, the ambiguity of statutes governing liability and cleanup has increased the uncertainties and perceived problems associated with brownfield activities. Heightened concern over environmental problems has brought a new dimension to the risks that lenders face and the hurdles that developers and local agencies must overcome. Cleveland Mayor Mike White has called contamination the number one issue facing development practitioners.

This chapter provides the backdrop against which these environmental and development concerns play out in specific community situations. Part 1 lays out the barriers to the cleanup and redevelopment of brownfields. It initially focuses on the economic context, describing why brownfield financing is problematic. To assist economic development practitioners unfamiliar with federal environmental laws, it pays particular attention to the two major statutes governing the cleanup of contaminated sites: the Comprehensive Environmental Response, Compensation, and Liability Act (commonly known as Superfund) and the Resource Conservation and Recovery Act. Part 2 discusses how lenders respond to the real and perceived fears of liability, and it reviews how these responses impact the local economic development process. Part 3 examines banking policies and regulations that affect brownfield cleanup and reuse.

Part 1: Barriers to Brownfields Redevelopment

Virtually every city in the nation's older industrial regions, no matter its size, grapples with the challenge of unused manufacturing facilities. These properties include the shuttered steel mills in western Pennsylvania and Chicago's southeast side; mining operations in Montana and Arizona; closed timber mills that dot many small towns in Washington and Oregon; and declining defense contractors, metal plating factories, machine shops, and chemical plants in communities from Michigan to Mississippi.

Local public officials, economic development practitioners, and plant owners who have sought to revitalize fallow industrial properties during the last few years face a daunting new challenge: contamination of the buildings, equipment, and surrounding land. Public concern about health effects from toxic pollution and stricter environmental laws have made it exceedingly difficult for communities to restore and reuse former manufacturing sites.

The precise magnitude of site contamination is unknown, but is no doubt pervasive and significant. Some experts have suggested that more than 500,000 sites nationwide show evidence of at least some contamination which could trigger Superfund rules and ultimately inhibit owners from selling the site,

securing financing, or proceeding with reuse. In framing the brownfield issue, however, it is essential to distinguish between Superfund high priority sites — the worst of the bad with little prospect for economically viable reuse — and those sites characterized by low and medium levels of environmental contamination, typically industrial facilities in operation before CERCLA's 1980 enactment. To date, EPA has identified almost 1,300 high-priority sites that are the true environmental nightmares bearing significant health and safety risks and requiring considerable time and enormous resources to restore. The balance of affected sites — characterized as brownfields — generally are easier to clean and offer greater opportunities for reuse.

The convergence of economic development and environment issues comes at a critical time for local officials struggling to craft community revitalization strategies targeted to old industrial areas. Many brownfields are caught in a vicious cycle of decline, which only exacerbates the problems local officials face.

- A property owner, unable to sell a contaminated property, simply abandons it, undermining the local tax base.
- Vacant facilities deteriorate and invite abuse, including the unsupervised stripping of parts or material, vandalism or arson, and "midnight" dumping.
- Untended pollution may worsen and spread, further diminishing the property value, adding to the site's cleanup cost, and threatening the economic viability of adjoining properties.
- Brownfield sites often become unwanted legal, regulatory, and financial burdens on the community and its taxpayers.

Communities that allow brownfield sites to remain inactive lose the tax revenue and employment opportunities generated by thriving operations — for some cities, this can total hundreds of jobs, millions of tax dollars, and hundreds of thousands of dollars in wages that might circulate through the area, bringing still more economic benefits. Existing streets and roads, water lines, rail spurs, and other infrastructure systems go unused; in jurisdictions with numerous brownfield sites, this means that billions of dollars in prior public and private investment are essentially wasted. Given land-use patterns prevalent earlier in this century, many brownfield sites are well-located, often along waterfronts or adjacent to downtown centers; their festering presence can drag down efforts to revitalize nearby sites, stalling a community's revitalization efforts and undermining its tax base.

Yet rather than deal with old industrial sites, many developers prefer to build on previously undeveloped land outside the city. As one suburban-based developer put it, "The numbers just make sense that way." In addition to the environmental and social impacts of such sprawl to outlying "greenfields," this change has serious economic consequences for the cities left behind. For example, more roads are needed, and increasingly scarce federal and state infrastructure funding is funneled into suburban and exurban areas. Jobs moved away from the central city are less accessible to economically-disadvantaged persons, many of whom need public transportation to get to and from work.

No doubt cleanup adds to the costs of redevelopment projects, often significantly. Depending on the extent and type of contamination, these costs can reach into tens of thousands, sometimes millions of dollars. In most areas — but particularly in central cities — financing to carry out both cleanup and redevelopment activities is not available at affordable rates.

Contamination also triggers a web of technical and legal tangles. Cleanup requires time, delaying project completion by months and even years. For developers any delay is costly. These are sunk costs that eat into a project's profitability.

Valuable sites and structures, well-situated near other vibrant economic activity, where the expected

financial returns exceed the redevelopment costs — including cleanup — will be reused. Economically marginal facilities, on the other hand, will lie dormant without some additional incentive or assistance. For example, the developer of an inner-city Cleveland parcel (who converted an industrial warehouse site into a small neighborhood shopping center) spent nearly \$225,000 per acre for site testing, remediation, and preparation; he estimated that similar activities for a comparable project at a suburban greenfield site would have cost only \$40,000 per acre. In this case, however, strong support from the city encouraged him to proceed.

When dealing with brownfield situations, it is not uncommon for the costs of site testing, remediation, and redevelopment to exceed the property's value — making reuse virtually impossible to justify without some type of compensating incentives. Consider several examples in St. Louis, outlined by Mayor Freeman Bosley in recent congressional testimony.

Retail site. St. Louis, like most older cities, has deteriorated commercial districts that impose a blighting effect on surrounding residential neighborhoods. The owners of these centers cannot command sufficient rent to properly maintain them. In one targeted area, the city paid \$850,000 to assemble, clear, and clean a corner site deemed critical to the shopping district's viability. When these procedures were accomplished, a private company invested \$1.5 million in what is now a thriving commercial business that employs 20 people, generates \$2 million annually in sales, and helps to attract patrons to other retail and eating establishments in the area. However, it cost St. Louis \$26.25 per square foot to reclaim this site — which has a real value of only \$2.00 per square foot.

Industrial facility. The industrial center of St. Louis, like those of many older jurisdictions, is composed of city blocks occupying two to three acres. Since industrialists now tend to build out rather than up, cities need to assemble and prepare ready-to-build sites ranging from two to ten acres in size if they are going to compete for plants with greenfield locales. As Mayor Bosley emphasized, "No business is going to spend the time and money to (acquire and clean sites) even if they prefer the hub location of the city."

St. Louis spent \$7.6 million to assemble a 50-acre industrial park; this translates into \$6.00 per square foot for ground valued at \$1.50 per square foot. The park has attracted considerable interest, but few ultimate users because of remaining environmental remediation needs.

Office building. St. Louis has many historically significant vacant office buildings; the local redevelopment authority has taken title to many. One, a 22-story, 300,000 square-foot art-deco structure, is in the city's cultural district adjoining St. Louis University. According to current estimates, it would cost \$1.5 million to remove asbestos from the building, a step that's necessary to reuse it. The university would like to renovate the building, but cannot justify the cleanup costs. If investment is not attracted, the city will have to spend \$1.5 million on basic remediation and another \$1 million for demolition. The resulting cleared site would have a market value of \$1.50 per square foot, but it would have cost \$72.30 per square foot to reach this status.

Similar examples are found in cities and towns across the country. Even lease situations have been complicated by concerns over contamination. Landlords increasingly are afraid they will be responsible for costly cleanup resulting from hazardous materials that tenants use in production processes, and most building owners are putting tighter reins on tenant activities and requiring them to undergo much greater financial scrutiny. A Chicago real estate attorney noted that landlords are "adding all sorts of creative language to their leases." Many now require hefty security deposits, permission to inspect operations during tenancy, and environmental audits — in short, landlords are trying to shift as much of the environmental liability as possible to the tenant. Many of these lease stipulations deter new business start-ups, prove too burdensome for struggling small companies, and drive still other operations out of the cities and into greenfield sites.

Tables 1 and 2 compare the costs of a brownfield redevelopment project versus new greenfield construction. They were provided by J. Duncan Shorey, a real estate consultant active on brownfield issues in Cleveland. Table 1 is a hypothetical example, a composite based on several projects that Shorey advised. Table 2 on the next page is an actual project pro forma comparison, with references to specific companies and site locations removed.

Table 1
Hypothetical Project Comparison:
Brownfield vs. Greenfield

Assumptions for All Projects: 20 acres
Building Space: 261,360 sq. ft. (10% office)
Construction Costs: \$25/sq. ft. for shell; \$20/sq. ft. for office

Expenses	Brownfield Sites		Greenfield Sites
	Best Case	Worst Case	
Site Acquisition	\$500,000	\$500,000	\$1,200,000
Legal and Consulting (including site assessment)	100,000	350,000	35,000
Remediation	500,000	5,000,000	0
Project Construction	7,056,720	7,056,720	7,056,720
Other "Core Area" Costs	100,000	200,000	0
Total Costs	\$8,256,720	\$13,106,720	\$8,291,720
Difference: Brownfield vs. Greenfield Total Costs	-\$35,000	+\$4,815,000	n/a

Confronting these economic challenges requires a deliberate, multi-dimensional approach. A consistent lesson of the more detailed project profiles in Chapter 5 is that parties who often do not work together constructively — economic development practitioners, environmental advocates, real estate developers, financiers, and community leaders — must cooperate to bring about productive reuse of brownfields. The benefits can be considerable. In Cleveland, for instance, just a few sites restored as part of the city's brownfield pilot program have yielded more than 100 new jobs and \$645,000 in annual property tax revenues in a year's time.

To help economic development practitioners understand the integration of environmental and economic concerns, which can be central to the quality of life in urban areas and small towns, this chapter reviews relevant environmental laws and their impact on lending and development processes.

Table 2
Development Project Comparison:
Brownfield vs. Greenfield

Description	Brownfield	Greenfield
Site	20 acres	20 acres
Purchase	25,000 per acre	60,000 per acre

	\$500,000	\$1,200,000
Legal	\$50,000 +	\$20,000 - \$30,000
Consulting	\$50,000 - \$300,000	\$15,000
Remediation	\$100,000 - \$5,000,000	- 0 -
Construction	\$25 per foot - shell \$20 per foot - office	\$25 per foot - shell \$20 per foot - office
Density	30%	30%
Square Feet	261,360	261,360
Construction Cost (assumes 10% office)	\$7,056,720	\$7,056,720
Land Cost	\$500,000	\$1,200,000
Total Hard Costs	\$7,556,720	\$8,256,720
Soft Costs*	\$3,677,359	\$1,362,359
Total Project	\$11,234,079	\$9,619,079
Income Analysis		
Office Rental	\$7.50 net	\$9.00 net
Warehouse Rental	\$3.75 net	\$4.50 net
Office Income	\$196,020	\$235,224
Warehouse Income	\$882,090	\$1,176,120
Total Income	\$1,078,110	\$1,411,344
Less Vacancy Factor	-\$215,662 (20%)	-\$141,134 (10%)
Net Income	\$862,488	\$1,270,210
Investment Analysis		
Equity %	30%	20%
Equity	\$3,370,224	\$2,885,724
Mortgage	\$7,863,855	\$6,733,355
Mortgage Terms	20 year amort. 9½%	20 year amort. 9%
Debt Service	\$879,617	\$726,981

Cash Flow	<\$17,129>	\$543,229
R.O.I.	0%	18.8%

*Assumes Remediation: \$2,000,000

Consulting: \$300,000

Legal: \$50,000

SOURCE: Kerry Chelm, President, Chelm Management Co., Cleveland, Ohio, July 1995.

Superfund

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) is the most significant federal statute guiding public officials and private parties as they cope with site contamination. Unlike most environmental laws from the 1970s that regulate pollution coming from operating industries, Superfund deals with past dumpings of hazardous materials and the toxic legacy of sites that pose grave threats to public health and the environment. CERCLA is perhaps the most influential environmental law affecting whether and how contaminated sites are cleaned and redeveloped. The statute's liability, enforcement actions, and cleanup provisions have had, and will to continue to have, profound effects on communities and regulated industries. These aspects of the law should be of particular interest to local economic development practitioners.

Liability

Unlike earlier environmental laws, CERCLA uses liability — rather than public-sector regulation — to influence the handling of pollutants. Under Superfund, present and past owners or operators of a property are responsible for the costs of cleaning "any release or threat of release of hazardous substances." This provision can have a chilling effect on transactions involving brownfields, since the purchaser of such a site could be held responsible for contamination discovered. Prospective purchasers, therefore, often require extensive assessments and, if necessary, cleanup of any contamination at the property. Even then, many developers or property owners worry that state or federal officials may pursue them for additional cleanup costs.

The concept of liability — applied in CERCLA under its common law meaning of "strict" liability (i.e., not requiring any demonstration of wrong-doing on the part of the polluter) — was seen by lawmakers to offer several advantages to the government as it sought ways to control and reduce discharges of hazardous substances into the environment. First, the threat of liability was seen as a deterrent to mishandling such industrial materials. Indeed, CERCLA liability and the law's 1986 amendments, which require disclosure into a Toxic Release Inventory of certain chemicals released from operating facilities, have encouraged industry to handle hazardous materials more carefully, to reduce waste generation overall, and to pursue pollution prevention technologies at their facilities.

Second, Superfund's liability scheme effectively drafted bankers and insurers into the regulatory framework affecting industrial handling of hazardous waste materials. The long-term investments of these new stakeholders are protected when companies operate according to environmental laws and avoid enforcement and liability expenses.

Third, liability under CERCLA is applied "jointly" and "severally" among the parties responsible for a cleanup. This means that the government can pursue reimbursement or cleanup costs from one or all parties even remotely associated with the pollution. Horror stories abound of small "mom-and-pop"

companies being sought for reimbursement of multi-million dollar cleanups because they may have contributed a few gallons of toxic chemicals to a site. In practice, however, companies in the best financial shape, those with "deep pockets," are the most sought after for payment and remediation of a hazardous waste site. Indeed, one mayor of a small town in Indiana recently referred to Superfund as a "smart bomb that lands on the deepest pocket." It is the "deep pocket" cases that lead to the most protracted litigation, effectively driving up the costs of cleanup.

Critics of CERCLA claim that liability is an inappropriate and unfair way to reduce or remediate discharges of hazardous materials to the environment, especially those that occurred prior to the bill's passage in 1980. Industry, they argue, may have released hazardous substances in a manner inconsistent with environmental stewardship, but such practices were not illegal at the time. On this basis, the law's critics are pushing for legislative reforms that would repeal retroactive liability before 1980 or, if the insurance companies prevail, before 1987, when they reformed their policies in response to the new obligations faced by their policyholders. So far, lawmakers, wary of burdening the public with cleanup expenses, have been unable to find the money needed to repeal retroactive liability. Meanwhile, state environmental agencies and the federal EPA have been working to establish appropriate limits on CERCLA liability, especially for lenders, fiduciary interests, innocent landowners, municipal governments, and prospective purchasers not associated with any pollution at a brownfield site.

Environmental law experts note that imposing strict, if not retroactive, liability has its roots in other environmental laws in place well before 1980, notably those laws to control oil spills and releases under the 1972 Clean Water Act (as well as the Clean Water Act Amendments of 1977 and 1978) and the 1976 Resource Conservation and Recovery Act, which amends the 1970 Solid Waste Disposal Act. The 1984 amendments to RCRA, which have had serious impacts on the costs and time lines associated with the cleanup of contaminated sites, are discussed in more detail later.

One exception to environmental liability, added to CERCLA in a 1986 amendment, is known as the "innocent landowners defense." It frees from liability, so long as certain conditions are met, those individuals or organizations that became property owners "and did not know and had no reason to know" of any contamination at the site. Congress spelled out what it meant by the phrase "had no reason to know," making it clear that the interpretation could vary in different situations. The 1986 amendment stated that the new owner must have undertaken, at the time of acquisition, "all appropriate inquiry" that is "consistent with good commercial and customary practice" into the previous ownership and uses of the property.

EPA and the courts have offered no clear guidance as to how much inquiry is enough, and what level is considered appropriate. Increasingly sophisticated pollution detection technologies further complicate this provision's interpretation. In addition, the lack of benchmarks has been both intimidating and frustrating to both site purchasers and project lenders. One witness, appearing before the House Small Banking Committee, likened the search for an innocent landowner to Diogenes in the daylight with his lantern. If contamination is discovered, then the innocent landowner defense does not apply; if it is not found, then the owner did not make all appropriate inquiry.

A second exception is a statutory exclusion that covers lending institutions having only limited involvement in the operation of a property, either as creditors or as owners following foreclosure. This is frequently referred to as the "secured creditor exception" (SCE) and is designed to accommodate financiers' conventional underwriting and lending practices. While lender liability is not the only issue involved in the complex relationship between environmental concerns and the economic development process, it is clearly a key one. During the last four years, lender liability has become a lightning rod, attracting diverse proposals for change and sparking considerable debate.

The critical issue for lenders arises from the CERCLA provision addressing security interests, namely,

that a lender is not ensnared in liability so long as the lender holds only a security interest in the property and does not "participate in the management" of it. In other words, an institution that lends money is not liable under CERCLA for contamination at the borrower's facilities simply because it holds an ownership interest to secure the loan — as long as it does not participate in managing that facility.

But the statutory language defining the secured creditor exception is vague, and subsequent judicial interpretations only have clouded its applicability. In particular, the stipulation that a lender not "participate in the management" of a facility has spawned considerable legal anguish during the last few years. CERCLA does not define this phrase, and the judicial interpretation of "participate" has formed the core of the current lender liability debate. Successive court decisions have indicated that the lender must prove that it is entitled to claim the secured creditor exception. To date, judicial consideration has centered on two issues:

- whether mere ability to participate in managing a facility voids the SCE, even if the lender did not actually participate (i.e., distinguishing between a lender's influence and actual action).
- whether certain limited types of participation, such as offering financial advice to the borrower, leave SCE eligibility intact.

In the first situation, some courts have held that the lender does not forfeit a SCE simply because it has the power to participate in managing a borrower's facility. In its 1990 ruling on *Bergsoe Metal Corp. v. East Asiatic Co., Ltd.*, the court noted that it was important what the defendant bond-issuing authority actually did by way of managing the project, not simply what rights or unexercised authority it had to influence the operation.

Another 1990 judicial decision, however, created considerable turmoil in the banking industry, and continues to influence the brownfield reuse issue. In *United States v. Fleet Factors Corp.*, the court broke with existing precedent and held that a secured creditor could be liable under CERCLA if its involvement with a facility's management is "sufficiently broad to support the inference that it could affect hazardous waste disposal decisions if it so chose." The judge also stated that "it is not necessary for the secured creditor to actually involve itself in the day-to-day operations of the facility in order to be liable."

The American Bankers Association (ABA) has testified before Congress that the *Fleet Factors* ruling created a broad standard of lender liability that "is sending shock waves through the lending community." Lenders have taken issue with the fact that, despite CERCLA's explicit exclusion for lenders who hold a security interest in property, the court ruling infers that lenders serve as owners of property because of the nature of their financial relationship with their borrowers. Since lenders can be held liable for cleanup efforts, before making a loan on a contaminated property they must consider:

- whether the financial institution will become an "owner" if it later forecloses on the property; and
- whether the financial institution will become an "operator" if it later takes actions relating to hazardous substances on the property.

In predicting the impact of *Fleet Factors* on economic development finance, it is important to place the court's ruling in context. In this case, EPA alleged that Fleet Factors Corp., in the course of winding down operations of a defunct cloth printing facility and selling off equipment (used to secure its loan and on which it had foreclosed), had complete control of the property. During this period of control, Fleet handled barrels of hazardous waste and removed machinery in a way that released asbestos. In pressing suit, the federal government sought to recover \$400,000 in costs paid by the Superfund to clean up the site during the time that Fleet held title to the property.

In explaining its ruling, the court cited the need to interpret vague statutory provisions broadly enough to achieve CERCLA's cleanup goals. Anticipating the financial industry's reaction, the court also indicated that its narrow interpretation of SCE eligibility still left a lender free to monitor any aspect of the borrower's business, or even become involved in "occasional and discrete" financial decisions pertinent to its fiduciary responsibility of protecting its security interest. In its opinion, the court emphasized that its interpretation of liability should not discourage lending to such enterprises; rather, it should encourage financial institutions to examine more vigorously the environmental practices of prospective borrowers. The court also suggested that this ruling would encourage bankers to consider CERCLA liability risks upfront, as part of the terms of the loan agreement.

The court's explanation notwithstanding, the *Fleet Factors* ruling declares that a secured creditor may be liable "if it participated in the financial management of a facility to a degree indicating a capacity to influence" disposal activities. Some lenders, as a result, decide that the best way to avoid liability is not to participate in any of their borrower's decisions, financial or operational. Such a course of action, though, deprives small businesses — which often need considerable technical assistance — of important financial advice. For some companies, this lack of involvement might mean that otherwise solvable financial problems lead to business failure.

Lender liability concerns cut across financial, economic development, and environmental interests. Banking organizations, as well as individual lenders, maintain that it is in the public interest to encourage lenders — rather than discourage them — to help their customers address the problems of pollution and clean up site contamination. This, they suggest, is the reason that the SCE must be interpreted in a way that protects lenders from liability, especially in loan workout situations.

From the financier's perspective, possible liability for multi-million-dollar damage awards has increased greatly the risk of doing business, and reduced the availability of capital, especially for small business clients. Lenders see themselves targeted as "deep pockets" to be tapped for cleanup costs, which may exceed the property's total value. Even in situations in which the lender is not held directly responsible, such liability creates risks by reducing the borrower's ability to repay the bank and by minimizing the value of the collateral.

Some lenders worry that advances in detection technology could find pollution at facilities they already have financed. According to a leading New Jersey environmental engineer, financial institutions want to know that the site or facility being financed is "clean, according to accepted scientific standards, now and for the life of the loan." In other words, they seek some assurance that no surprises will come bubbling up at a later time.

Even though only a handful of bankers have borne the cost of liability for such contamination, fears of liability have been exacerbated by the *Fleet Factors* decision. At best, many borrowers face greatly increased loan transaction fees and other costs as the lending community grapples with CERCLA's provisions. At worst, companies in sectors viewed as environmentally risky — manufacturing operations, as well as service businesses such as gas stations and dry cleaners — will not be able to secure financing when using their property as collateral.

Enforcement

CERCLA's enforcement provisions allow the federal government to take steps to respond quickly to releases of hazardous materials. "Release" is defined under the law as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment." Under the law, the federal government is authorized to:

- spend money from the Superfund Trust Fund to clean up National Priorities List sites;

- order responsible parties to clean the sites; and
- seek reimbursement from responsible parties for cleanup and related costs in the case of a federally-funded cleanup.

Cleanup Standards

"How clean is clean?" has become a key question for lawmakers, developers, public officials, and local residents, as communities undergo the time-consuming and expensive process of assessing the advantages of cleaning and reusing contaminated property. Successful redevelopment depends on their ability both to impose cost-effective standards and to protect public health and the environment. This balance links the science of cleanup standards with the policy of land use decisions, often putting local officials in the middle of contentious battles regarding the future of brownfield sites.

The Superfund program historically has relied upon a "risk range" in setting cleanup standards for the 100 most common chemicals at contaminated sites. The U.S. Environmental Protection Agency allows cancer-causing substances to remain on site only at concentrations resulting in the risk of excess cancer cases between 10⁻⁴ (one in 10,000 people) and 10⁻⁶ (one in one million people). This range accounts for the differences in site-specific risk assessments, which weigh the danger of the chemicals against the likelihood and duration of human exposure. State governments also have applied the concept of risk range to different land use classifications. Most states, for example, require that brownfields restored to residential use meet the cancer risk of 10⁻⁶. In such instances, state environmental agencies generally exercise little oversight of the cleanup, since the property developer essentially has agreed to remove all of the hazardous substances of concern.

Brownfields redeveloped for industrial or commercial use, on the other hand, increasingly are allowed to meet the cancer risk range of 10⁻⁴, which does not involve complete removal and restoration. The rationale is that funds used to remediate such sites completely would be better spent on residential properties, provided that resulting conditions at the industrial sites are safe for workers and others coming into contact with them. Although CERCLA calls for permanent treatment of hazardous waste, this preference is giving way to the economic and political expediences of seeing these properties returned to some level of use. Therefore, engineering controls — such as caps, fences, or other physical means to contain pollution and prevent human contact with it — represent an increasing trend in the cleanup of both brownfield and NPL sites.

Institutional controls — such as permanent land use restrictions or constant monitoring for pollutant levels — represent another mechanism property owners can utilize to justify less-than-perfect cleanups. Environmental and community groups, however, tend to view these approaches as short-sighted, arguing that local governments lack the ability to track and enforce such restrictions, and that allowing lesser cleanups essentially locks in land use decisions indefinitely.

These issues are not easily resolved. Congressional Superfund reform proposals offer five balancing factors intended to help determine appropriate cleanup standards: (1) effectiveness of the remedy, including implementability, technical practicability, and the ability to reduce risks; (2) reliability of the remedy over both the short and long terms; (3) the remedy's risks to the affected community, remediation workers, and the environment; (4) community acceptance of the remedy; and (5) reasonableness of the cost, compared to other available remedies. Careful deliberation over future land use in their communities can position residents as players when cleanup standards are being proposed and developed for brownfields.

The States' Experience with Superfund

While EPA manages the nearly 1,300 sites on the National Priorities List (NPL), the states have identified about 70,000 hazardous waste sites that fall below the federal threshold. Approximately 22,000 of those sites have been targeted for cleanup, although none are eligible for federal Superfund cleanup dollars. This enormous number of sites, coupled with dwindling state resources, is in part driving the rapid adoption of state voluntary cleanup programs, with 17 of the 21 existing programs having been adopted since 1991.

The Environmental Law Institute (ELI) in 1993 examined the experiences of state-run superfund programs and discovered lessons that are worth mentioning in the context of brownfields cleanup and reuse. Of the state superfund program components — including goal setting methods, site discovery, site management, and methods to reduce litigation — the process of site discovery has most relevance to local government efforts to identify and prioritize sites for remediation and redevelopment.

One site discovery approach, referred to by ELI as "passive or property transfer programs," informs state and local officials of hazardous waste releases and contamination when property changes hands through sales, lease changes, or other transactions. New Jersey's Industrial Site Recovery Act and Illinois's Responsible Property Transfer Act are examples of such programs that provide a role for private property owners to help speed up discovery and cleanup at sites. Connecticut amended its Property Transfer Act in 1987 to increase the rate at which brownfield sites are identified and to include all dry cleaners, gas stations, furniture strippers, auto body repair shops, and painting shops operating after May 1, 1967, regardless of the amount of hazardous waste they generate.

Another approach, known as "targeted active site discovery," prioritizes cleanup in valuable or sensitive natural resources, such as the Indiana Sand Dunes or the Edwards Aquifer underlying Austin, Texas. In the case of brownfields site discovery, states and localities have modified this concept to base remediation activities upon a number of criteria in addition to environmental factors:

- site is located in distressed neighborhood, or empowerment or enterprise zone;
- site is located in area of historical significance;
- property features access to valuable infrastructure, especially transportation; or
- site is in an area or neighborhood already popular with developers.

As another means of targeting, local governments increasingly are using multi-focused data bases that can project employment growth or loss, population gains or losses, other demographic data, and environmental regulations.

The Resource Conservation and Recovery Act (RCRA) of 1976

The Resource Conservation and Recovery Act of 1976 (RCRA) is best known as the federal statute that governs the management of hazardous materials from "cradle to grave." Amending the 1970 Solid Waste Disposal Act, RCRA imposes a broad-reaching and stringent set of regulations on hazardous waste from its generation onward through its transportation, storage, and ultimate disposal. Where Superfund governs the cleanup and removal of hazardous wastes at abandoned dumpsites, RCRA focuses on hazardous and solid waste management to ensure that operating facilities do not become Superfund sites. Both laws have evolved with certain commonalities, often causing confusion among the regulated community and public officials regarding which law governs hazardous materials at a

specific site. The 1984 Hazardous and Solid Waste Amendments to RCRA, particularly those provisions on corrective action and underground storage tank removal, added further confusion. Some 20 percent of sites on the National Priorities List are landfills, and RCRA provisions governing the operation of municipal solid waste landfills sometimes have clashed with Superfund regulations. Critics of the RCRA program charge that the law's permit requirements regarding hazardous waste removal are unduly burdensome, and that they should be waived in favor of allowing more flexible Superfund regulations.

As background, RCRA places requirements on all parties affiliated with hazardous waste movement — but especially transport, and storage and disposal facilities (known as TSDFs) — for strict record keeping and reporting standards for the use of proper containers, and proper labeling of those containers used for storage and transport. Known as the "manifest system," these requirements are intended to discourage illegal dumping and disposal at outdated facilities. Accordingly, §3004 of RCRA imposes on TSDFs strict facility operating criteria, standards for location, design and construction, contingency planning, financial responsibility in the case of an accident or need for corrective action, and permit requirements.

Finally, RCRA requires that these facilities operate sophisticated groundwater monitoring systems that can detect migration of wastes into the uppermost aquifer, sample for constituents of concern, and conduct corrective action to stop groundwater contamination in the event it is detected. As in Superfund, RCRA's groundwater protection standard specifies maximum contaminant levels for various pollutants. The goal of these regulations, embodied by Subtitle C of the statute, is to prevent uncontrolled releases of hazardous materials to the environment, especially groundwater, as well as to require and create incentives to reduce waste generation overall.

Through a series of EPA rulemakings required under RCRA, the law now governs the management of over 200 hazardous substances, including heavy metals, pesticides, organic chemicals, and other materials exhibiting the hazardous "characteristics" of corrosivity, toxicity, ignitability, or reactivity. The majority of the millions tons of hazardous waste generated annually in the United States exhibit the toxicity characteristic, or contain constituents otherwise "listed" by EPA.

Like CERCLA, RCRA is credited with spurring some degree of innovation and pollution prevention activities at industries that want to avoid the cumbersome and costly consequences of mishandling hazardous materials. Other points of commonality exist between the two laws: both establish remedial goals and acceptable risk levels, require site investigations, set cleanup standards, and select remedies.

As a result of congressional frustration over EPA's failure to make significant progress in implementing RCRA, the Hazardous and Solid Waste Amendments (HSWA) of 1984 brought about major changes to the law, the consequences of which many claim compare to Superfund's chilling effect on the cleanup and redevelopment of contaminated sites. HSWA imposed three provisions that critics charge are delaying cleanup, needlessly driving up costs, and presenting jurisdictional overlap with CERCLA requirements.

Corrective Action

The corrective action provision of RCRA signifies a departure from the law's original intent — to control new releases of hazardous constituents leaving industrial facilities and to ensure their proper disposal. The main goal of corrective action is to prevent or stop hazardous materials from deteriorating groundwater, defined either as the uppermost aquifer underlying the facility in question, or as the aquifer adjacent to a facility to which the waste may have migrated. EPA does not specify how corrective action is to be implemented; it states only the intended goal of groundwater protection. While EPA had required corrective action and groundwater monitoring under RCRA at regulated waste

management units (e.g., surface impoundments, waste piles, land treatment units, or landfills receiving hazardous waste), the 1984 amendments imposed corrective action at all RCRA-permitted treatment, storage, or disposal facilities (TSDFs) for any hazardous materials at the site, regardless of when they were disposed of or even if they ever were classified as RCRA wastes.

Some estimates show that as many as 6,100 RCRA-regulated facilities probably will be subject to some corrective action, and perhaps at a cost far above that of Superfund's 1,300 NPL sites. According to EPA, initial investigations are underway at all these sites; "interim" measures are being carried out at more than 300 sites; another 1,000 sites are in the final investigation stage; and final remedies are underway at approximately 100 facilities. Some critics complain that the sites subject to corrective action regulations are becoming as complicated to clean as those under the Superfund program. They charge that EPA's rules are too costly, too inflexible, and not subject to enough public participation.

In response to this criticism, and in the context of reforming the Superfund program, EPA is working to revise the RCRA corrective action program. An Advanced Notice of Public Rulemaking is due from the agency in fall 1995, and revised regulations are expected within two years. These new rules would address:

- consistency in cleanup approaches and with CERCLA requirements;
- protective, yet common-sense cleanup expectations;
- shifting more responsibility for conducting corrective action requirements to the regulated community;
- streamlining permit requirements and reducing costs; and
- improving public involvement.

Land Disposal Restrictions

RCRA's Land Disposal Restrictions (LDRs), also referred to as the "land ban" rules, require EPA to establish treatment standards for hazardous waste (disposed on land, as well as in underground injection wells) in order to minimize the threat to human health and the environment. Between 1986 and 1990, EPA developed land disposal standards for a variety of wastes, including solvents, polychlorinated biphenyls (PCBs), liquid wastes containing cyanide or heavy metals, wastes with low pH, and wastes containing high concentrations of halogenated organic compounds.

Critics charge that the LDRs impede speedy and cost-effective redevelopment of brownfields and Superfund sites because they effectively prevent remediation wastes (e.g., contaminated sludge, soil, and hardware) from being "staged" on site for treatment. Given the time and expense associated with applying for a RCRA permit, these critics argue, many industries opt to let the waste remain in place, especially if it presents no immediate threat that could trigger enforcement action. In addition to seeking waivers under these circumstances, critics propose additional exclusions for pretreatment requirements; facility-wide corrective action requirements; and the minimum technology requirements stipulated for landfills, which require double liners and groundwater leachate collection and monitoring systems. EPA is developing rules to make RCRA's corrective action, land disposal restrictions, and minimum technology requirements comport more with the principles set forth in the administrative reforms developed under Superfund. (See Chapter 3.)

Underground Storage Tanks

The 1984 amendments added a new section to RCRA, Subtitle I, to address the newly discovered problem of leaking underground storage tanks (UST). Congress then estimated that as many as two million tanks (EPA later reduced the number to 1.4 million) — containing petroleum products,

hazardous wastes, or hazardous industrial chemicals — posed the threat of leaking or bursting into surrounding soils and groundwater. Excavation at old industrial sites often uncovers underground storage tanks that may pose special regulatory problems.

At the time of the law's passage, 84 percent of the underground storage tanks were constructed of unprotected steel subject to corrosion and rust. Since underground storage tanks have been used predominantly to store petroleum products (47 percent) and retail motor fuel (49 percent), the impact of the law has been felt most acutely by gas station owners. In 1984, the costs either to install new tanks (between \$60,000 and \$80,000) or to pay for the insurance required by the new law (between \$1 million to \$6 million, depending upon the number of tanks) posed formidable financial obstacles, prompting many independent gas stations to go out of business.

The prevalence of underground storage tanks at former service station sites, therefore, poses special considerations to brownfields redevelopment efforts. Local officials must determine the extent of the contamination, the availability of state UST trust funds to remediate petroleum-related contamination, or the feasibility of using hazardous waste site remediation funds to clean up petroleum waste. EPA may allow Superfund site assessment and remediation funds to be used to determine the extent of contamination caused by an UST, as long as there is reason to suspect that CERCLA hazardous substances might be found in or around the tank.

Subtitle I requires underground storage tank owners to notify the appropriate state or local officials of the location, age, size, type, and use of its underground tanks (defined as any tank at least 10 percent below ground). Even owners of tanks not currently in use, but who had been operating them at some time after January 1, 1974, are required to report to the EPA, providing some paper trail of environmental conditions at now-abandoned sites. The goal of Subtitle I is to replace all leaking tanks by 1997, a move EPA feels is vital to protect the groundwater that provides drinking water for almost 100 million Americans. Using information provided by tank owners, EPA has developed regulations designed to detect, prevent, and clean up leaks from USTs. These regulations include leak detection system operating, monitoring, and reporting requirements; requirements for reporting tank releases and corrective actions undertaken to address them; a requirement to perform corrective action; closure and financial responsibility requirements; and design and construction standards for new USTs.

Part 2: Lenders and Their Perspective on Liability

Risk-averse by nature, lenders are changing the way they deal with projects that even remotely involve hazardous wastes. This, in turn, affects the reuse potential of specific sites, as well as the broader economic development climate in many areas. As explained in the following paragraphs, financial institutions grappling with concerns over environmental liability and contaminated project sites are:

- sharply curtailing their level of lending;
- cutting off financing for certain types of businesses, such as small enterprises or ones that routinely handle toxic substances (such as dry cleaners or auto-body shops);
- increasing transaction costs by requiring a thorough environmental assessment and necessary cleanup as conditions of loan approval; and
- imposing restrictions on or limiting their interaction with borrowers to reduce their exposure to liability.

Reduced Lending to Projects Perceived As Environmental Risks. From the lender's perspective, possible liability for significant damages has increased the risk of doing business. In a recent American

Bankers Association (ABA) poll, 43 percent of small financial institutions with less than \$250 million in assets indicated that they already had stopped making loans to companies associated with environmental contamination, and another 11 percent intended to curtail such lending.

In many areas, lenders have gone beyond cautious consideration of industrial reuse projects and moved to close the financial spigot. There is a growing unwillingness to provide any financing to some types of business unless the precise scope of a lender's liability is clarified, if not reduced. Throughout the country, but particularly in the old "rust belt" cities, bankers convey horror stories about industrial reuse projects gone awry for environmental reasons. In 1981, for example, a developer paid \$3.5 million for a ten-story abandoned Alcoa factory in Edgewater, New Jersey. He planned to convert the facility, which was located across from Manhattan, into luxury apartments. But in 1985, an inspection revealed massive PCB contamination throughout the building and the project faltered.

Brownlining: Shunning Certain Project Types. Lenders and developers may simply avoid doing business altogether with certain types of companies or properties that carry environmental risks. Some development experts describe this lender reticence as "environmental redlining." Many bankers, in fact, have started to tally categories of undesirable borrowers, including tool and die shops, bottling and canning plants, high-technology metal fabricators, semiconductor facilities, and utilities. Ironically, local governments and economic development organizations have targeted many of these same industries for special attention and incentives, since they are seen as key to community economic growth and diversification.

The size and financial resources of the current owner now influence a site's marketability and reuse potential. Prospective purchasers, for example, may buy old industrial property only from large, thriving corporations that can afford necessary site remediation. Thus, if EPA then sues for cleanup, the new owner has a chance to pursue successfully the seller to recover remediation costs (or EPA may go after the seller itself). Likewise, lenders wanting to avoid defaults associated with expensive cleanups, may limit their loan activity to large companies with considerable assets. Small enterprises — especially start-ups or expansion projects — usually use their land and buildings, being their chief assets, as loan collateral. Since the loan may not be made if the land or buildings are of questionable value, this scenario could stifle many budding enterprises.

The high failure rate among small businesses makes this type of lending especially risky, and puts even greater pressure on the collateral aspect of the loan agreement. Furthermore, there often is a need for the lender to work with and counsel the borrower, who — as an entrepreneur and not an accountant — has little expertise in the financial management area. Problems arise, particularly in the early stages of a new enterprise. Some bankers have significantly scaled back such relationships with their borrowers since the *Fleet Factors* decision clouded this practice with its liability implications.

The liability concern exacerbates other problems that many small business owners face in trying to secure credit. Without access to capital, these companies do not have the ability to maintain their competitiveness, expand to take advantage of new market opportunities, update their equipment and facilities, maintain necessary inventories, or have the capital needed to create new jobs. Moreover, they find it difficult to fund site clean up.

Increasing Transaction Costs. As previously noted, CERCLA gives prospective owners an incentive to evaluate sites before purchasing them — to determine their freedom from liability for past problems. Influenced by the *Fleet Factors* decision, lenders increasingly require extensive environmental testing and cleanup — not only to protect themselves from liability, but also to ensure the value of the collateral. Some states have adopted their own environmental assessment requirements. But these assessments are time-consuming and expensive, significantly boosting project transaction costs. Some test bores, for example, run \$15,000 or more. An assessment of a long-time industrial site detailed

enough to satisfy a prospective lender can cost \$50,000 or more. In many cases, the tab for an environmental investigation and the delays involved in carrying out evaluations alter the balance sheet of the proposed deal, undermining its financial viability.

To this end, concerns over contamination have unleashed a flood of related paperwork. An official of a leading Chicago bank noted that the issue of environmental risk emerged about five years ago; now, loan officers must work through entire sections of loan documents devoted to nothing but environmental considerations. This paperwork increases the time and cost of assembling and processing the loan package — by as much as three-fold, according to some officials. Small businesses are particularly hard hit by these up-front investigative fees, which make small loans prohibitively expensive to obtain.

Testifying in April 1991 before the Senate Committee on Environment and Public Works, an ABA spokesperson discussed a still timely example of how liability may add to the cost of small business borrowing. The association described a typical borrower in a business viewed as risky — a dry cleaner. If the owner wanted to borrow \$50,000 to improve or expand his facility, a typical amount for such a loan, the collateral almost certainly would be the existing dry cleaning establishment. The bank would require a basic environmental assessment, probably costing between \$500 and \$2,500. This constitutes a significant expense — 1 to 5 percent — for a loan of that size. Even if the assessment turned up no problems, the bank may remain nervous, since such assessments are not foolproof and offer no ironclad guarantees to the lender. If contamination surfaced later, the lender could find itself holding worthless collateral; if the bank foreclosed, it could face cleanup costs that exceeded the value of the collateral. As the ABA suggested, more and more lenders are unwilling to risk significant cleanup costs on small business loans on which they might make a profit of about \$1,000 a year. In other cases, the bank will require a more detailed second assessment, that could cost significantly more than the initial examination. For many small companies, the cost is prohibitive, and the project is stalled.

If cleanup is needed, the transaction is further disrupted. Even a low-cost cleanup can take months to complete; complex efforts may take years. Old industrial sites can present special cleanup challenges since few records may be available on past uses. Moreover, contamination has had time to spread or is deeply buried. Numerous developers have recounted how such unwelcome surprises wreaked havoc with the financial projections of a project already underway.

In addressing contamination at a specific site, the developer must deal with local, state, and federal environmental agencies to ensure the adequacy of cleanup strategies. These agencies may disagree or may have different procedures and paperwork, unnecessarily complicating and delaying cleanup and redevelopment. Then, any contamination removed from the site must be taken to an appropriate treatment or disposal facility, often located hundreds of miles away. Some cities and states, in fact, are having difficulties locating a dump site that will accept the heavily contaminated debris from industrial reuse projects. Moreover, the party liable for the waste — be it developer, banker, or the local government that may have assumed title to a site — is still liable for the waste even after it has been taken to the dump.

Such procedures are fraught with delays and hassles. They are costly and may force otherwise viable projects to be abandoned. However, as some of this report's case studies suggest, a few developers have met with success by working closely with appropriate environmental agencies or by soliciting the help of the governor's office to expedite the cleanup process.

While environmental assessments undoubtedly increase the transaction costs for industrial facility projects — and can undermine the economic viability of some reuse efforts — such steps are precisely the desired result of the CERCLA liability provisions. By forcing responsibility for cleanup on owners and lenders, these provisions are achieving the goal of fostering privately-funded cleanups, thereby

conserving public funds.

Restricting and Complicating Involvement with Borrowers. Real estate lenders manage their portfolios in a variety of ways. Some mainly originate and hold loans; others originate loans and then place them with investors in the secondary market. Some mortgage bankers do not even close loans in their own name, but instead match real estate projects to investors. Others act on behalf of insurance companies, pension funds, and other institutional buyers. Some lenders also take participatory interests in real estate, especially commercial projects, and are considered both an owner and a lender.

The possibility of site contamination — and potential CERCLA liability — is changing the way in which large real estate lenders do business. For example, real estate financiers are increasingly demanding indemnification from sellers for any pre-existing contamination. These agreements have been useful in allocating responsibilities and cleanup costs, and helpful in closing deals. According to legal experts, these agreements generally address issues such as:

- cleanup expenses and costs of fines, third party claims, and loss of profits;
- determining what costs are reasonable;
- defining how clean is "clean" for purposes of allocating costs;
- consequences to a party that fails to adhere to the agreement;
- length of time the indemnity will last, and what happens in the event of the sale or merger of one the participants;
- who has the burden of proof when determining at what point in time the contamination took place; and
- limits on potential liability and cleanup costs.

However, such agreements usually take a long time to negotiate and involve a number of technicians and lawyers, and are thus expensive to conclude. Because of this, indemnification agreements generally are not viable for small business operators. In addition, even the best-crafted agreements are ultimately worth little if a key participating company goes bankrupt. Moreover, no such agreements will ever be reached on many old industrial sites where the title is held by the corporate remnants of defunct manufacturing companies.

Alternatively, lenders may limit their oversight of borrowers to avoid the prospect of environmental liability. Unfortunately, this restraint occurs at a time when prudence would indicate the need for greater scrutiny from a credit-quality perspective. The high-stakes risk of CERCLA liability, combined with a lack of regulatory guidance and inconsistent judicial rulings, leaves lenders to search for the Holy Grail of certainty. Because the only effective protection is not to lend at all, financial institutions grow increasingly conservative in their practices. This, in turn, affects the economic development process, and has led some two dozen states to make their own attempts to sort out and routinize the cleanup process via state voluntary cleanup programs.

Part 3: Banking Policies and Regulations Affecting Brownfield Cleanup and Reuse

Liability concerns, rightly or wrongly, have an important impact on the economic development process. When undertaking a project, developers, investors, and companies want to quantify their risk as quickly as possible. The fear of surprises has led to changes in financing practices. Given the uncertainty stemming from several recent judicial rulings, lenders and investors have grown wary of brownfield site reuse projects that may place them in a position of owning or operating a site. Many fear that even

their activities in monitoring or salvaging their investments will put them in the "chain of title" and make them liable for cleanup costs.

The common perception that vacant or abandoned industrial sites are contaminated, extraordinarily expensive to develop, and laden with potential liability is a significant barrier to brownfield financing and reuse. The stigma of brownfields causes inexperienced or skittish lenders and developers to be conservative in their evaluation of a reuse proposal. Often, they do not have the technical expertise to address their uncertainty about environmental issues. And, unconvinced that they can guard against liability or sufficiently assess possible site cleanup and preparation costs, many lenders and investors avoid brownfield projects altogether.

The fear of liability not only impedes the approval of redevelopment loans, but also discourages lenders and investors from offering creative financial assistance that would prevent current industrial operations from becoming abandoned brownfield sites. Liability concerns also inhibit lenders from offering the types of technical assistance, financial advice, and creative loan restructuring alternatives that could help save a troubled firm. Economic development practitioners and private companies themselves need to recognize that lenders often view the following situations — which could work to everyone's benefit in terms of advancing brownfields reuse — as posing an unacceptable risk of liability.

Loan work-outs. A "work-out" is a situation in which the lender seeks to actively help a borrower grapple with a financial or management crisis, to keep the company from defaulting on its loan. In the case of brownfield projects, judicial rulings linking a lender's management activities to liability have inhibited the use of work-outs. Increasingly, lenders refuse to use a work-out altogether, resorting instead to an "early exit" — pulling the plug on the project to cut their losses. But more importantly from an economic development standpoint, the inability to engage in a work-out discourages lenders from making many loans in the first place. In their view, if they cannot implement a work-out scenario, some other exit strategy must be defined. In the case of a brownfield property, the potential for liability thwarts possible exit alternatives and often eliminates consideration of the site.

Foreclosure. Given concerns over liability, many lenders no longer view foreclosure as an option they can pursue. In addition to general concerns about assumption of ownership, lenders fear there might be an immediate need for a cleanup at the site, which they as the new owner would be required to carry out. As a result, a prospective business borrower faces tremendous pressure to identify acceptable alternative collateral to satisfy the lender's requirements — a requirement that owners or prospective reusers of most brownfield sites simply cannot achieve.

Button-up. Even if a lending institution chooses not to foreclose, it faces potential costs in a "button-up" situation. In such cases, a defaulting borrower may leave the bank with the considerable expenses necessary to close down an operating facility (i.e., to remove chemicals from storage tanks and process piping, to hire security for the facility, and similar activities). Clearly, the prospect of significant button-up costs deters lending on industrial projects or brownfield reuse activities. These expenses can be avoided if a lender successfully intervenes and structures a work-out that avoids a financial crisis for the company.

Collateral. Lenders typically are much more comfortable if a prospective industrial borrower can pledge non-real property as collateral — inventory or equipment, for example. In some cases, though, courts have interpreted the act of collecting on collateral — choosing inventory or equipment to acquire and liquidate — as involvement in management and operations. Such an interpretation raises the specter of liability, further shrinking the likelihood that sufficient collateral can be identified.

Trusts. Trusts can be sources of equity for brownfield redevelopment, but trustees, like any investor, can find themselves liable as owners. Therefore, a situation in which a lender or investor acts through a

trust also is discouraged by the liability risk of managerial involvement.

The potential adverse effect of environmental contamination on a site or facility's collateral value and the potential for liability under CERCLA and other laws — no matter how remote — have become important factors for lenders as they assess real estate transactions and decide whether or not to make loans for project activities. Lenders also may feel constrained in doing brownfields lending because of concerns over how their regulators may view loans they made with potentially costly environmental situations. In fact, regulating agencies are concerned about the potential adverse impact of environmental contamination on the overall loan portfolio of the lending institutions they oversee. The Federal Deposit Insurance Corporation (FDIC), the Office of the Comptroller of the Currency (OCC), the Federal Reserve Bank system, and the Office of Thrift Supervision (OTS) all have issued guidelines for environmental risk and urged lenders to develop their own policies and procedures, within these guidelines, to address environmental concerns. In each case, the regulators suggest that environmental risks be evaluated as part of the cost of carrying out the banking business.

Economic development practitioners must therefore understand the guidance and direction that bank regulators have provided to the lenders they regulate. These policies affect lenders' actions as they consider the effects on their own financial situation of possible collateral devaluation or the inherited environmental responsibilities of nonperforming loans. Prospective borrowers will feel the impacts of these regulatory concerns when they pay higher transaction costs or endure exhaustive site assessments and testing. The following section assesses these regulatory agency guidelines.

Federal Deposit Insurance Corporation

On February 25, 1993, the FDIC outlined various procedures for banks to follow in establishing an environmental risk program to identify and evaluate potential concerns. The agency left no doubt as to its view of the importance of putting a responsible program in place, emphasizing that: *Examiners will review an institution's environmental risk program as part of the examination of its lending and investment activities. . . . Failure to establish or comply with an appropriate environmental program will be criticized and corrective action required.*

FDIC officials noted that the environmental risk program should be tailored to the practices of the financial institution. In other words, lenders with a higher concentration of loans to environmentally high-risk industries or brownfield locations with known contamination likely will require a more sophisticated and elaborate program than those whose lending practices focus more on commercial or residential projects in greenfield locations. Lenders need to address the following eight issues when crafting their risk program.

Staff training. FDIC-covered lenders must offer sufficient staff training to make sure that the environmental risk program is successfully implemented. Loan underwriters and other appropriate personnel must be provided with the training they need to make sure they can determine and evaluate potential environmental concerns that might affect the redemption of the loan and the lending institution itself. When environmental circumstances become too complex for the staff to adequately evaluate, they must consult with the outside experts they need to make reasonable decisions.

Policies. The institution's loan policies, manuals, and written guidance to staff should address environmental issues affecting specific lending activities. For example, the loan manual that staff follow might identify the types of environmental risks commonly associated with certain types of industries or former manufacturing sites typically found in the lender's normal service territory. Loan policies also could provide guidelines for underwriters to follow when conducting their analysis of potential environmental liability. The FDIC also suggests that similar procedures might be developed

for credit monitoring, loan workout situations, and foreclosures.

Environmental risk analysis. Lenders must establish a procedure under which they carry out an initial environmental risk analysis during the loan application process. In the FDIC's view, this will help the institution minimize potential liability and avoid making loans that go sour due to contamination-related problems. Loan officers can gather much of the information needed for this analysis when discussing the business and prospective activities with the loan applicant; they also might visit the site to see if obvious contamination problems exist. In addition, loan applications can be modified to request pertinent environmental information, such as the present or past uses of the property and the company's prior cleanup activities or pollution prevention efforts.

Structured environmental risk assessment. The FDIC urges lenders to carry out a detailed investigation whenever the loan application, discussions with the borrower, or a site visit indicate a possible environmental problem. This so-called "structured assessment" might include:

- determining the identity of past owners and their uses of the property;
- inspecting the sites more closely, including contiguous parcels (which might contain contaminants that could spread);
- reviewing company records for past use or disposal of hazardous materials;
- contacting federal and state agencies to determine whether the borrower has been cited for violations of environmental laws or regulations; and
- reviewing state and federal lists (such as the CERCLIS list) that tally sites having significant environmental contamination.

Loan documentation. According to the FDIC, loan documents should include language to safeguard the lender against potential environmental losses and liabilities. Depending on the nature of the borrower and the loan, financial institutions can demand the borrower comply with all environmental laws, disclose information about the "environmental status" of the site, facility, or equipment being used as collateral, and give the lender the right to gather more information through inspections about the potential for contamination. The loan documents also could include provisions that give the lender the right to call the loan, not extend funds under a line of credit, or foreclose if the collateral is discovered to be contaminated. In light of this guidance, a growing number of lenders insist that they be indemnified by the borrower and any guarantors against liability associated with the collateral.

Monitoring. FDIC also states that borrowers should be monitored during the life of the loan, that ongoing environmental risk assessments are important to make sure the property used as collateral remains uncontaminated and retains its value. The lender, moreover, should be aware of changes in business activities carried out at the site that might increase the risk of environmental liability. The FDIC also suggests that if a situation arises where the potential for environmental contamination could undermine the property's value, the lender should consider exercising its rights under the loan agreement to require the borrower to resolve the problem and take whatever actions are necessary to protect the property's value.

Involvement in the borrower's operations. The lender must scrutinize its own actions as it monitors loans for potential environmental problems, and it must direct borrowers to take actions to resolve such concerns. The FDIC points out, however, that such actions a lender carries out or contemplates could constitute "participating in the management" of the business being financed, and thus trigger CERCLA liability.

Foreclosure. Exposure to liability can increase significantly if a lender takes title to the site or facility being held as collateral. The FDIC urges institutions to evaluate carefully the potential environmental costs and the liability potential associated with the property when deciding whether or not to take title

by foreclosure or other means.

Federal Reserve Banks

The Federal Reserve's Division of Banking Supervision and Regulation issued a memorandum in late 1991 laying out its views on environmental liability. That document, which still serves as agency policy today, recommends policies and procedures for banks to follow, and suggests that they should:

- prepare environmental policy statements and provide training to ensure that staff are familiar with their provisions;
- establish guidelines and procedures for dealing with new borrowers who want to use real property as collateral;
- carry out appropriate analyses of potential environmental liabilities;
- review existing loans to determine those with potential environmental problems;
- develop a tracking system to document due diligence and efforts made at the time loans are made or property is acquired; and
- include warranties, representations, and indemnifications in loan agreements, as protection from losses due to environmental contamination.

The Federal Reserve emphasized that "safety and soundness" are its key concerns. Accordingly, its policy guidance notes that lenders must strive to limit their environmental liabilities by adopting protective policies — including vigorous analysis of their existing portfolios, based on the types of properties involved and their uses. As the Fed memo notes, banks must take the initiative to protect themselves because CERCLA provides little guidance in interpreting its secured creditor exemption, which would shield lenders from liability. In practice, this new scrutiny is often the reason that long-time industrial borrowers are suddenly denied credit when they seek the same type of working capital loan they have secured many times before.

Within the Federal Reserve system, guidance provided to bank examiners has two objectives: to determine if a bank's environmental risk safeguards and controls are adequate; and to identify any potential environmental problems with either a bank's loan portfolio or its non-lending activities. The Fed memo suggests that banks should minimize the potential environmental problems from non-lending activities, including trusts and mergers and acquisitions. Examiners are instructed to determine whether or not the bank has complied with Federal Reserve policies concerning environmental risk.

Examiners typically look for evidence that basic Phase I environmental audits have been carried out at all financed sites with a "higher than normal" risk — no matter what the loan size. As the Fed explains, the size of the loan "may bear very little resemblance to the size of potential environmental liabilities associated" with the property. Examiners also expect lenders to identify high-potential hazards in their loan portfolios, such as gas stations, plating facilities, feedlots, or trucking firms that may haul waste products.

Economic development practitioners and companies also need to be aware of the Federal Reserve's perspective on warranties and indemnifications. The Fed encourages banks to include them in their loan agreements, but notes that "at best, such provisions provide limited protection for lenders." Warranties and indemnifications are not binding against the government or third parties, and are only as good as the financial strength of the borrower. Banks, according to the Federal Reserve, should never view such covenants as a substitute for environmental reviews and assessments. Thus, prospective borrowers will not be able to avoid possibly expensive site testing with promises of future indemnification.

Finally, the Federal Reserve memo, with more detail than the FDIC guidelines, discusses lender

activities that could be construed as participation in the management of a borrower's business. It recommends that bank staff avoid serving on a borrower's board of directors, participating in board decisions, or determining changes in company management. Given this, the Fed warns that banks should be careful to consider what it plans to do in the course of loan workouts or debt restructurings.

Office of Thrift Supervision (OTS)

The OTS policy bulletin on environmental risk and liability, issued in early 1989, was prescient for its time. It lays out in considerable detail the policy guidance that OTS still follows, including "basic categories of risk" to lenders that could emerge from transactions involving environmentally contaminated property. As lenders have recognized these categories in their own underwriting procedures, they have had a major impact on the availability of development finance for brownfield projects. These categories include:

- reduced value of collateral;
- inability of borrowers to repay loans if they also must cover site cleanup costs;
- preemption of a mortgage loan security by a cleanup lien imposed under so-called "super lien" laws in some states;
- potential for the bank to become liable for the cost of site cleanup in the event of a foreclosure, or to not foreclose in the face of significant cleanup costs; and
- possibility that the borrower would not maintain the facility financed in an environmentally sound manner.

Finally, OTS guidance stipulates that the loan officer should make sure that a Phase I environmental assessment is performed at the site, that the financial institution is the primary client for the report, and that the Phase I assessment is carried out by an auditor included on an approved roster maintained by the lender.

Office of the Comptroller of the Currency (OCC)

The OCC's two-page Banking Bulletin 92-38, issued in July 1992, essentially advises banks to follow the protective procedures laid out in EPA's June 1991 lender liability rule, which subsequently was invalidated by the courts for procedural reasons. EPA developed the rule to clarify the scope of existing liability exceptions and to make it easier for lenders to demonstrate that they are simply holding property as loan security and therefore are exempt from cleanup costs. The guidelines laid out a range of activities — including foreclosure — that lenders could undertake, without fear of liability, in order to manage and protect facilities that serve as collateral. EPA also attempted to clarify the circumstances in which a financial institution would be considered to be "participating in management" of contaminated property, a contentious issue clouded by court rulings. EPA proposed that lenders be able to offer financial and technical assistance or counseling to borrowers, and to insist that financed properties be maintained in an environmentally sound manner. Lenders, according to EPA, also could undertake refinancing or loan workout activities.

The OCC bulletin notes: "To avoid environmental liability [banks] should assure themselves that their policies, practices, and procedures are consistent with the definitions contained in the final rule."

Community Reinvestment Act

The Community Reinvestment Act (CRA), enacted in 1977, requires that banks make an effort to invest in and provide for the credit needs of their local communities. Addressing issues of geographic

and racial discrimination in lending policies, CRA was intended to aid credit-starved neighborhoods, often located in economically declining urban areas or remote rural areas. It offers communities the opportunity to use CRA as an economic development tool by allowing them to monitor local bank performance in providing the credit necessary to maintain existing businesses and residential neighborhoods, and to attract new commercial enterprises. Some community development advocates estimate that CRA prompts more than \$4 billion in lending each year.

CRA is overseen by the four agencies that monitor financial institutions, with the Office of the Comptroller serving as lead regulator. These agencies track lenders' activities to ascertain the credit needs of their service areas, as well as their participation and investment in local development or revitalization projects or programs. Regulators also may evaluate lenders' participation in government-insured, guaranteed, or subsidized loan programs for small businesses or housing.

Some community groups and development organizations have used CRA as leverage to obtain investment capital for local development projects. They also have used it to open serious negotiations with banks on specific projects that require private loans.

In the last few years, many local economic development advocates have suggested that brownfield projects increasingly are the target of environmental discrimination in lending policies and decisions — a "redlining of the brownfields." On May 4, 1995, the Comptroller of the Currency issued revised CRA guidelines that, for the first time, included a brownfields-related provision. The guidelines suggest that financial institutions can meet their CRA obligations through loans for the cleanup and revitalization of brownfields. In a brief footnote, the rules cite as an example "loans to finance environmental cleanup or redevelopment of an industrial site as part of an effort to revitalize the low- or moderate-income community in which the property is located." To qualify for CRA credit, bank-assisted projects must lead to redevelopment activities, as well as simply remove contamination. The CRA footnote also encourages banks to participate in EPA's brownfields initiative, designed to spur reuse of often abandoned, usually contaminated industrial sites.

This new impetus for lender participation in brownfields could be tempered, though, depending on the final form that CRA reauthorization takes. Legislation introduced in March 1995 would exempt most banks from CRA coverage. The Senate version, S. 650, introduced by Senators Richard Shelby (R-AL) and Connie Mack (R-FL), exempts banks with less than \$250 million in assets; the House bill, H.R. 1362, introduced by Rep. Doug Bereuter (R-NE), sets the floor at \$100 million. These volume provisions would relieve nearly 90 percent of all lenders from CRA obligations. In addition, both bills would prohibit regulators from collecting data on (among other things) geographic distribution of small business loans, and they would allow lenders to "self-certify" their compliance with CRA criteria.

Softening the Impacts of Financing Guidelines

From a practical standpoint, encouraging the finance of brownfield projects means helping lenders and investors better quantify financial risk. Improving information available to possible lenders and investors and providing guidelines for using legal and environmental information should help reduce uncertainty and encourage lending and redevelopment. This could soften the impact of the current rules, and encourage flexibility without disregarding necessary underwriting criteria. One way of reducing uncertainty is to devise and disseminate what financiers in Chicago have termed a "standardized brownfield development package and lending criteria."

A common format for evaluating brownfield loan packages would mean that lenders of all sizes and technical capability will be better able to recognize legitimate risks and to quantify costs, allowing the expedited development of more sites. Recognizing that rules and practices change, a standardized package is envisioned as general guidance for dealing with brownfield properties. Its goal is to pinpoint

essentially groundless or irrelevant brownfield concerns that could needlessly scuttle projects. Obviously, lenders should not view these guidelines as routine or required for all properties, nor as a substitute for an appropriate environmental assessment. To help meet its objective, this type of loan package would include the following information.

Basic environmental information. In order to increase the lender's certainty with respect to site cleanup costs, the prospective borrower would provide detailed information on: scope of the potential cleanup; nature and extent of contamination; how a state voluntary cleanup program would be used; proposed cleanup plan for the site; and how the cleanup plan relates to the site's future use.

Representations, warranties, and covenants. Lenders would adapt standard loan documents for borrowers to demonstrate how those borrowers had performed appropriate environmental assessments, consulted all required parties, obtained all necessary approvals, and how they would take responsibility for unexpected costs. In addition, borrowers would certify via these documents that they would operate the property in compliance with environmental laws, and in ways that minimize the risk of new contamination. The standard package could provide loan underwriters with detailed explanations of these issues, as well as a basic factual checklist for initial review of the application.

Letters of certification. For states with voluntary cleanup programs, the standardized package should include information about that initiative, as well as an explanation of what successful program completion means in terms of releasing current and future site owners from liability.

Lender guidelines for underwriting environmental information. Lender guidelines, a key part of any standardized package, would show lenders how to quantify the information gathered. These guidelines might take the form of a worksheet that translates the loan application into some measure of underwriting for a project on a specific brownfield site. Already, lenders use standard policies, procedures, and benchmarks for underwriting a variety of risks associated with proposed loans. This concept could be extended, and brownfield guidelines could help financial institutions determine whether a site reuse project has been adequately evaluated, and whether its potential risks conform with the banker's approach to lending.

A standardized package of policies and guidelines also could help investors and lending institutions to better quantify financial risk. They could form the basis for developing model documents to help guide the practice of underwriting brownfield sites, as well as to educate lenders and developers about the nuances and realities of the risks involved in brownfield finance. For instance, they could provide information on the best-suited or most applicable warranties and representations, or explain the value of state voluntary cleanup programs.

Such measures hold significant potential for channeling private investment to brownfield sites, but they must be carefully crafted and clearly and honestly presented to the banking industry and other sectors of the community. Several prominent lenders active in brownfield activities have raised concerns about small lenders using a checklist to assure that they have met "all" environmental and liability concerns; since many such lenders have little familiarity with the complexity of environmental issues and procedures, they suggest that such a checklist may expose them to unfamiliar risks, especially in terms of determining true collateral value. Randy Muller, Vice-President for Environmental Services with Bank of America, captured the debate over a standard package well when he recently wrote: "Technically competent individuals will welcome simplification as a means to expedite what is currently perceived as a lengthy process. However, simplification in the hands of the uninformed may cause chaos."

Without question, such a standardized package should not be adopted until the key lender regulatory agencies review and provide some indication of their approval. Once this takes place, the package could have widespread usefulness and help expand the level of investment in brownfield sites.

Economic development practitioners and technical assistance providers (such as SBDCs or EDA-supported planning districts) could use this information to further local business retention or expansion strategies. Insurance investors, community development corporations, pension funds, and other sources of capital for real estate development also could use the information obtained through the package to help determine the real risks of brownfield projects.

In short, banking policies and procedures have a tremendous impact on brownfield redevelopment. If public officials, development agency staff, and private companies are to encourage greater levels of brownfield lending and investment, they must recognize how lenders operate in this arena, what environmental situations raise red flags with them, and the views of the regulatory agencies. Lenders have a role to play as well. To deal with real fears, as well as to identify and cast aside perceived ones, they must develop and implement programs consistent with sound lending practices, good investment opportunities, and prudent environmental risk management — and to find ways that address each element without compromising the others.

Chapter 2

Tools: Environmental Regulations and Programs Governing Brownfields Cleanup and Reuse

While environmental and economic development regulations at the federal, state, and local levels can impede the cleanup and reuse of brownfields, local governments also are beginning to recognize how public-sector initiatives can help level the playing field between brownfield and greenfield development. Brownfield revitalization increasingly is seen as an opportunity to alleviate sprawl, traffic congestion, and air quality problems in metropolitan areas. At the same time, communities are viewing brownfield reuse as an opportunity to address much-needed job development and training for dislocated workers and minority populations.

Citizens, lawmakers, and federal agencies themselves are urging the reform of laws and regulations that are perceived to discourage cleanup and reuse. The Environmental Protection Agency (EPA), eager to prove the theory that a clean environment and a growing economy go hand in hand, has proposed amendments to Superfund and the Resource Conservation and Recovery Act (RCRA), and is supporting brownfield pilot projects that are allowing local governments to experiment with funding, cleanup, and public involvement scenarios. EPA's Common Sense Initiative, aimed at devising "cleaner, cheaper, and smarter" ways to regulate business practices, has given rise to brownfields initiatives within the iron, steel, and metal-finishing industries, that are exploring ways to prevent new brownfields and build new companies on existing contaminated sites.

In response to community interest in securing for local residents some of the jobs associated with brownfields remediation and redevelopment, the EPA and the Department of Labor are extending job training courses to interested community colleges. Moreover, the Department of Transportation and the Federal Highway Administration will continue to play a critical role in transportation projects that contribute to urban redevelopment, air quality improvement, and sprawl control. Combined with local initiatives to protect open space, transportation planning can tilt redevelopment back towards the brownfields.

This chapter highlights several key federal and local programs that, strategically used, could assist local economic development practitioners interested in the cleanup and reuse of brownfields.

Environmental Regulations and Programs

The EPA, whose mission is to protect human health and the environment, is being pushed by Congress, voters, and businesses to consider how its actions affect the economic well-being of regulated

communities and taxpayers. Yet the agency confronts a conflict as it faces, on the one hand, increasingly complex and costly environmental problems, and, on the other hand, a public backlash against intrusive federal regulations and a declining agency budget.

Marking its foray into economic development, the brownfields issue has prompted EPA to try to remove onerous barriers to the redevelopment of properties in distressed urban and small-town neighborhoods. No longer the bearer of bad tidings for these communities, EPA is leading an inter-agency effort to facilitate revitalization through environmental cleanup. The agency's brownfields efforts have received bipartisan praise and endorsements from the Mortgage Bankers Association of America, the United States Conference of Mayors, the National Wildlife Federation, the United Church of Christ, the American Public Works Association, and the National Community Reinvestment Coalition.

EPA's Brownfields Economic Redevelopment Initiative (BERI) targets assistance to cities that have identified contaminated sites offering the greatest opportunity for remediation and economic activity. EPA initially sought to award grants to approximately ten pilot cities, chosen through a competitive application process, that would demonstrate model opportunities to leverage financing; organize public- and private-sector support for specific cleanup projects; and demonstrate the economic and environmental benefits of cleanup. Cities were encouraged to suggest innovative uses for the grant monies, although all were prohibited from using BERI funds for actual site cleanup. Cleveland, Ohio, Bridgeport, Connecticut, and Richmond, Virginia, received grants in 1993 and 1994 of approximately \$200,000.

Administrator Carol Browner dramatically increased the agency's efforts in her January 1995 Brownfields Action Agenda, which includes four broad steps: brownfield pilot projects; clarification of liability issues; partnerships and outreach; and job development and training. Many of these actions will provide tools to local officials working to attract redevelopment.

Brownfield Pilots

Browner in January 1995 expanded the number of pilot demonstration projects from ten to 50. The agency subsequently received more than 100 applications from cities, rural towns, and suburbs. In July 1995, EPA announced additional awards of up to \$200,000 to Baltimore, Maryland; Birmingham, Alabama; Cape Charles - Northampton County, Virginia; Detroit, Michigan; Indianapolis, Indiana; Knoxville, Tennessee; Laredo, Texas; Louisville, Kentucky; New Orleans, Louisiana; Rochester, New York; Sacramento, California; St. Louis, Missouri; and Trenton, New Jersey. In addition to these awards to single jurisdictions, grants were given to the West Central Municipal Conference, consisting of 38 small towns and suburbs directly west of Chicago, and to seven mill towns in western Oregon. Figure 1 on the next page shows the location of the 18 current EPA brownfields pilot projects.

Figure 1. U.S. EPA Brownfields Pilots

National Pilots	
Baltimore, MD	Navajo Nation

Birmingham, AL	Newark, NJ
Bridgeport, CT	New Orleans, LA
Burlington, VT	New York, NY
Cape Charles-Northampton County, VA	Oregon Mill Sites, OR
Charlotte, NC	Phoenixville, PA
Chicopee, MA	Portland, OR
Chippewa County/Kinross Township, MI	Rhode Island
Cleveland, OH	Richmond, CA
Detroit, MI	Richmond, VA
Emeryville, CA	Rochester, NY
Houston, TX	Rome, NY
Indianapolis, IN	Sacramento, CA
Kansas, City, KS & MO	St. Louis, MO
Knoxville, TN	Stockton, CA
Laredo, TX	Tacoma, WA
Lawrence, MA	Trenton, NJ
Lima, OH	West Central Municipal Conference, IL
Louisville, KY	Worcester, MA
Lowell, MA	--
Regional Pilots	
Atlanta, GA	Minnesota
Boston, MA	Northwest Indiana Cities
Buffalo, NY	Philadelphia, PA
Camden, NJ	Pittsburgh, PA
Clearwater, FL	Prichard, AL
Dallas, TX	Provo, UT
Duwamish Coalition, WA	Sand Creek Corridor, CO

East St. Louis, IL	San Francisco, CA
Illinois	Shreveport, LA
Indiana	West Jordan, UT
Miami, FL	--

Profiled below are EPA's first three pilot projects, which are expected to yield ideas and lessons about ways to return abandoned urban sites to productive use. Each of the three communities has articulated a reuse strategy that links community groups, investors, developers, regulators, and others interested in reclaiming contaminated sites and in using those sites to stimulate new jobs and economic activity.

Cleveland

Cuyahoga County, which contains the City of Cleveland and 58 suburbs, was the first pilot city chosen under EPA's brownfields economic redevelopment initiative, receiving a \$198,000 grant in November 1993. The Cuyahoga County Planning Commission, official recipient of the grant, is no newcomer to the problem of brownfields. The Commission long has monitored the effects of urban sprawl on the seven-county area through its ongoing spatial analysis, entitled "Dynamics of the Cleveland Region." This analysis shows that the city and most Cuyahoga County suburbs lost population and tax base during the 1980s as manufacturing facilities closed and jobs moved out of the city. These losses were compounded by the steady investment in infrastructure and new neighborhoods throughout the region's outlying "greenfields."

The Commission hosted a summit and educational symposium in 1992 to further highlight the Cleveland metropolitan area's challenges, chief among them being the rapid decay of about 10,000 acres of developable real estate. A 42-member Working Group subsequently proposed to set risk assessment and cleanup standards targeted to brownfields, improve local government's capacity to act as an advocate for both public health and economic development related to brownfields, limit the liability for new owners of these properties, and establish a local revolving loan fund for site assessment and cleanup activities in targeted areas of the city.

With the two-year EPA grant, the County Planning Commission has sought to instigate cleanup activity at three sites, in order to establish models that local governments could follow to tackle the financial and regulatory barriers confronting brownfields reuse. The Midtown Corridor site contains a historically relevant building that the city acquired in 1983. Asbestos removal and cleanup alone are expected to cost \$80,000. Future plans involve razing all the other buildings on the block to make way for parking, in order to attract shopping to the area. The City of Cleveland is working with the local economic development organization to identify potential new owners of the site, but difficulties in securing adequate financing have delayed work at the property. The second site features a building that is itself clean, but which overlies contaminated soil and groundwater. The Commission contracted with a local groundwater remediation firm to test three different technologies for cleaning the site. One part of the Hauserman site, as it is called, already has been occupied by a new user, who has begun soil vapor extraction and groundwater remediation.

Cuyahoga County launched its pilot project in the midst of huge changes to the state's voluntary cleanup program. The Ohio Real Estate Reuse Act, enacted in 1994, was heralded by many in the development community as a significant step toward eliminating barriers to reuse by reducing liability for new owners. The law offers to parties that voluntarily clean up contaminated property a Covenant-Not-to-Sue from the state (although technically this covenant cannot prevent the federal government

from bringing legal action). The law, similar to one in Massachusetts, significantly "privatizes" the state's cleanup program by requiring volunteer parties to choose an independent site cleanup professional who will certify to the state that the site has been cleaned according to plan. This professional will issue to the volunteering party a "No Further Action" letter, which is then sent to the state. Ohio EPA subsequently will issue its Covenant-Not-to-Sue. In addition to other provisions, the new law also offers low-interest loans and a ten-year state tax abatement on increases in the value of the remediated property.

In addition to EPA's pilot grant, Cuyahoga County has seen additional funding and support flow to its brownfields efforts. EPA provided a separate \$150,000 grant to the "Environmental Workforce Equity Project" in order to position the Cuyahoga County Community College (known as Tri-C) as a major player in ensuring that local residents benefit from employment and other activities associated with site cleanup and redevelopment. Tri-C is developing environmental science curricula and trying to recruit and train local residents and high school students for future employment opportunities. The college also plans to offer free training workshops for local employees of minority-owned and small businesses, and to offer them non-credit courses in environmental education. Targeting both minority residents and local businesses, it also is acting as an outreach center for general education about the risks and opportunities posed by contaminated sites. In addition, Cleveland State University (CSU) received a two-year grant from the U.S. EPA Comptroller's Office to develop a Brownfields Redevelopment Finance Center, the only one of five Environmental Finance Centers nationwide that is focused on brownfields. Towards that goal, CSU sponsored a symposium to discuss the results of a 1994 survey on the financial capacity of area municipalities to conduct brownfields remediation activity. A conference is planned for Spring 1996 to address further brownfields financing obstacles and opportunities.

Bridgeport

EPA awarded its second brownfields pilot grant to the City of Bridgeport, Connecticut's largest city. With a population of approximately 141,000, Bridgeport boasts an impressive manufacturing history; access to rail, land, air, and sea transport (as one of Connecticut's three port cities); a highly skilled workforce; and a densely populated region that ensures a large market for businesses locating there. Despite these advantages, the city has lost more than 10,000 manufacturing jobs during the last decade, leaving 8.3 percent of the city's residents unemployed, with more than 20 percent unemployed in some areas. Bridgeport's Office of Planning and Economic Development (OPED) believes the major factor impeding reinvestment in the city is the widespread contamination of more than 500 acres of prime industrial land. Many of the buildings targeted for cleanup and rehabilitation date to the early part of the century.

The EPA grant has enabled Bridgeport to begin tackling a number of tasks, including development of a brownfields inventory, site selection criteria, and targeted outreach to potential developers and businesses that might be recruited to improve the sites. Ultimately, the city's goal is to select between two and six sites that will serve as models for eliminating financial and regulatory barriers to cleanup and reuse. Like Cuyahoga County, Bridgeport plans to target redevelopment efforts within specific corridors of the city — the West End and Seaview Avenue. Seaview Avenue, the city's oldest industrial area, still is home to many of Bridgeport's remaining manufacturing jobs, although a recent study suggested that more than 2,000 of these jobs are "at risk."

Bridgeport has selected Roy F. Weston, Inc., an engineering and environmental management firm, to assist in the process of selecting the model redevelopment sites. To date, the firm has developed an inventory of almost 300 of the most "developable" properties within the targeted corridors. Weston, as well as a local architectural engineering company and a real estate development firm, also are

scheduled to conduct the following tasks:

- Create a data base of these sites that details the environmental, economic, and planning information available from city and state sources. The data base will be a Geo-based Information System (GIS) available to developers and the public, who will be able to pull up information on particular parcels of land within Bridgeport's industrial corridors.
- Develop screening criteria and other information with OPED's CLEAN Task Force to highlight those properties with the most development potential. The firms will use these criteria to narrow the list to about 25 properties.
- Obtain detailed information on these properties, including projected costs of remediation, rehabilitation, demolition (if necessary), and other activities.
- Present this information to the City of Bridgeport and the CLEAN Task Force, and help with selection of between two and six model sites.
- Develop property remediation and redevelopment strategies and plans for the selected sites. In addition, the firms will survey potential sources of funding to cover costs.

The Office of Planning and Economic Development acknowledges that site selection is only a fraction of the redevelopment effort. Also critical is active outreach to neighborhoods affected by brownfields, as well as to businesses that could be potential owners of redeveloped properties. In June 1995, OPED and the Housatonic Community College held an "education summit" to discuss the recruitment of local residents and students into job training opportunities associated with environmental remediation. The "Environmental Education and Job Training Summit" drew more than 80 people from local schools and colleges, private industry, the Chamber of Commerce, and local, state, and federal agencies. Through a series of roundtable presentations, the summit covered higher education activities that can broaden access to environmental courses; specific job training certificate programs; urban environmental education; and community-based response. The latter discussion, with attention given to environmental justice concerns, focused on educating the general public about the risks, reasons, and opportunities extant in brownfield sites.

OPED also plans a series of "Investors Forums" that will present to targeted developers, financial institutions, and other businesses an accurate picture of the redevelopment potential at the selected sites. To further its efforts, the city has sought and received the cooperation of local and state economic development and environmental agencies; support from local business interests, such as the Bridgeport Regional Business Council and the United Illuminating Company; and a funding commitment from Connecticut's Urban Sites Remediation Program, which is authorized to issue bonds to support site assessment and cleanup. In addition, other resources may be available to the many abandoned industrial sites that lie in Bridgeport's state-designated urban enterprise zone, and that will be included in the city's federal enterprise community projects.

Richmond

Richmond, Virginia, received its EPA grant in November 1994, the result of a carefully constructed application linking the city's brownfields challenge with its Empowerment Zone application to the U.S. Department of Housing and Urban Development. The State of Virginia already had named part of Richmond a state Enterprise Zone positioning the city to use Title XX Social Service Block Grants for site assessment and remediation efforts. The city wanted to leverage its brownfields pilot grant to develop strategies that cope with the problems accompanying urban decay, such as crime, poor education, deteriorated housing, and health issues. Unfortunately, the city did not receive federal Empowerment Zone status, and the need for additional financial resources to implement its proposed brownfields strategy became more acute. Richmond's Office of Economic Development (OED) quickly

launched a major lobbying effort within the Virginia General Assembly to expand the benefits available under the State Enterprise Zone Program; OED also requested that the governor name the North and East End areas of Richmond as Enterprise Zones. Success in both these endeavors has enabled the city to move forward with its brownfields strategy.

Chief among Richmond's activities is the readying of a 64-acre parcel of land owned by CSX Transportation, Inc., in the city's South End Enterprise Zone. This targeted land transaction is part of the city's ongoing business retention/business expansion campaign that uses available financial incentives — from both the city and state — to encourage large employers to remain within the city's boundaries. All told, the city has access to almost \$1 million from various state funds in order to attract or retain business activities. OED has identified at least one, and possibly four or five, major corporations that are interested in the CSX site, provided the price is competitive with that in outlying areas and, of course, that environmental contamination does not complicate the transaction.

Richmond is pursuing a contract with CSX that would result in a "joint development agreement," whereby both parties would take responsibility, as well as profits, for the upgrade, marketing, and sale of the property. Major improvements are anticipated, including the building of a road that provides access to this rail site. The consultants and OED also suspect the presence of hazardous materials in the soil or groundwater from years of industrial activities there. If the city-hired consulting firm discovers any environmental contamination at the site, Richmond would be allowed to revisit the terms of the agreement; it could (1) terminate the agreement and face no further liability; (2) proceed with the land use plan and exclude that portion of the property requiring environmental remediation; or (3) remediate the entire property to permit development. If the city chooses to remediate the site, it must be done in cooperation with CSX.

OED also has sought funding to launch training workshops and other courses at the local community college in order to improve the public's understanding of environmental health issues surrounding brownfields cleanup and redevelopment. Recognizing that the success of reuse projects depends largely on trust and support from the affected community, the city has acknowledged its poor history in coping with environmental justice concerns, and it has started to confront this challenge. The city plans to use its Neighborhood Teams Process, a citizen empowerment program, to ensure that local residents and community leaders are part of the process in determining the cleanups and uses selected for affected properties. The city also will spend approximately \$50,000 to develop courses that help small and minority-owned businesses recognize and take action to address environmental hazards, as well as to adopt pollution prevention technologies. At the close of this one-year project, the city will evaluate "the number of community residents and business managers who have received training, the number of times the community has participated in environmental decision making, the number of small and minority businesses who have complied with government environmental requirements, and the amount of new investment in new environmentally sensitive technologies."

New EPA Pilot Cities

To date the EPA has awarded brownfield pilot grants to 60 recipients. Applications from these grants show a creative mix of proposed activities. Highlights from some of the project summaries follow.

- **Baltimore, MD.** Promote new cleanup technologies; coordinate empowerment zone and brownfields pilot activities; and develop innovative financing mechanisms for assessment and remediation.

- **Birmingham, AL.** Link environmental protection approaches involving flood control and stormwater and groundwater contamination reduction with remediation of soil and site-specific contamination; and develop a consortium of community leaders to direct resources to targeted areas.
- **Cape Charles, VA.** Target assessment and cleanup plans specifically to the needs of the municipal dump.
- **Detroit, MI.** Explore barriers to reuse, and identify how they differ among residential, commercial, and industrial sites.
- **Indianapolis, IN.** Hire a brownfields coordinator who will oversee a site inventory and the development of a GIS-based information system; coordinate with potential purchasers and city officials on specific transactions; and review funding, liability, and other issues for the city.
- **Knoxville, TN.** Explore private party acquisition of properties; and work with lenders to establish low-interest loans to environmentally friendly companies.
 - **Laredo, TX.** Seek conversion of a brownfield into a waterfront recreation area near the campus of a community college.
 - **Louisville, KY.** Use GIS technology to inventory sites; explore idea of temporary municipal acquisition of sites to spur development; and conduct an area-wide assessment of the aquifer.
 - **New Orleans, LA.** Focus on community outreach to the city's predominantly African-American population; and establish a consortium of community representatives, city officials, bankers, and others to identify funding sources for brownfields redevelopment.
 - **Oregon Mill Sites, OR.** Test use of generic cleanup levels; and create a computer model to help predict the costs and benefits of redevelopment and cleanup.
 - **Rochester, NY.** Use neighborhood sector planning teams; and explore a brownfields revolving loan fund for developers and property owners.
 - **Sacramento, CA.** Ensure that local land use objectives are met in brownfields redevelopments; and develop an automated land use permitting process that overlays environmental information onto land use maps.
 - **St. Louis, MO.** Establish a revolving loan fund for properties with negative value; and prepare a brownfields redevelopment handbook to ensure replicability of lessons learned.
 - **Trenton, NJ.** Focus on cleaning and reselling one marketable site to initiate a revolving loan fund that can be used for future sites; create market analysis that can help match sites with future owners; and form an "eco-industrial park" advisory group.
 - **West Central Municipal Conference (Illinois municipalities), IL.** Establish a Brownfields Prevention Program to identify and prevent industrial practices that could lead to future brownfields.

[Click here to go to the most recent listing of EPA Brownfields Pilots](#)

Clarification of Liability Issues

Liability relief has been the rallying cry for many Superfund critics, as well as municipal officials, lenders, and local developers trying to attract investment to distressed communities. EPA's new Superfund Administrative Reforms address lender liability, municipal acquisition liability, prospective purchaser liability, liability for property owners situated above a contaminated groundwater aquifer,

and other future actions the agency hopes to take to increase the certainty in brownfield property transactions. These reforms are discussed in detail below.

Caught in a tug-of-war between industry, Congress, and environmental groups, EPA Administrator Carol Browner announced in 1994 her intent to enact Administrative Reforms to Superfund, independent of the congressional schedule. The agency in May 1995 issued a series of policy directives, guidance documents, and pilot approaches to alleviate some of the program's common problems. In announcing these Administrative Reforms, EPA sought to transform the law to be, in its own words, "faster, fairer, and more efficient." At least three of the package's 12 Administrative Reforms have direct bearing on how and whether properties characterized as brownfields are likely to be cleaned and returned to productive use.

Guidance on Agreements with Prospective Purchasers of Contaminated Property

This guidance updates and expands EPA's practice since 1989 of using "covenants not to sue" in certain types of land purchase agreements where the agency benefits directly (either through reimbursement for cleanup costs or cleanup of the property) by a prospective purchaser's (or prospective operator's or lessee's) decision to buy contaminated property. The new guidance expands the circumstances under which EPA can consider such covenants. Specifically, the agency now recognizes that, in addition to direct benefits it accrues through reimbursement for cleanup, response, or other costs associated with a contaminated property, it also should consider the indirect benefits afforded to host communities in the form of job creation or retention, productive use of abandoned property, and general revitalization of urban area "blights."

Under this guidance, the agency instructs its regional offices, when considering whether to enter into such an agreement, to ensure that the following criteria apply to the property in question and to the prospective purchaser:

- An EPA action at the facility has been taken, is ongoing, or is anticipated. For the most part, the approximately 25,000 sites (of a total 38,000 sites) removed from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) in January 1995 would not be eligible for such agreements. Nor would properties currently enrolled in state voluntary cleanup programs. Instead, the agency is focusing on sites where the prospective purchaser is already, or anticipates being, subject to the possibility that Superfund liability would apply to the title of his site.
- Either the agency should receive a direct benefit for the cleanup or a reduced benefit in combination with an indirect public benefit. When determining whether to grant a Covenant-Not-to-Sue, the agency historically has paid most attention to the degree of environmental cleanup realized at a site. With this new guidance, the agency now will give more weight to the "indirect benefits" to a community, such as reducing the public health or environmental risk posed by the hazardous materials on site; creating or retaining jobs; redeveloping the property for industrial, recreational, or open space; or improving the affected area or site through public transportation or other infrastructure repairs or expansions. If the agency considered these "indirect benefits" as reasons to grant such an agreement with a prospective purchaser, it still would seek partial reimbursement or cleanup.
- The continued operation of the facility or new site development will neither aggravate nor contribute to the existing contamination or interfere with EPA's response action. The agency generally will not enter into agreements with prospective purchasers where site activities are expected to exacerbate existing contamination or cause new contamination.

- The continued operation or new development of the property will not pose health risks to the community and those persons likely to be present at the site.
- The prospective purchaser must be financially viable.

The agency is required to guard against offering a Covenant-Not-to-Sue and failing to reap ample benefit on behalf of the community or the federal government. Specifically, EPA is required to consider: the property's purchase price, whether the agency will be left with any unreimbursed costs, and whether those costs can be recouped in the purchase price; the property's current market value, whether the purchaser is paying below or above that value, and what the expected value of the rehabilitated property will be; and the prospective purchaser's identity, whether it is a private company, a not-profit community organization, or small company.

Liability Exemption for Owners of Property Containing Contaminated Aquifers

Billed as both a Superfund Administrative Reform and an effort to remove barriers to brownfields redevelopment, this new EPA policy states that the agency will not pursue cleanup action or costs against innocent land owners whose groundwater has been contaminated by off-site migration of contaminants. Case-by-case study must be undertaken to show that the owner was neither directly nor indirectly responsible for the contamination. In addition, property owners who are being pursued by responsible parties for cleanup of the groundwater may seek *de minimus* settlements from the EPA as long as they are innocent with respect to the hazardous release.

This action is significant given the vast number of hazardous waste sites affected by groundwater contamination, and the inability of residential landowners to take reasonable steps to mitigate or stop that contamination. EPA's Administrative Reform similarly will absolve lenders and prospective purchasers from liability for the contamination of such properties.

Land Use in the CERCLA Remedy Selection Process

Although this Administrative Reform is targeted at the process for selecting cleanup remedies for National Priority List (NPL) sites, the EPA believes it will serve as a useful tool for stakeholders involved in determining cleanup standards and future land uses for brownfield sites. The directive is intended to cover two objectives. First, it is designed to encourage early dialogue among community residents, planning authorities, and local officials involved in anticipating future land use. Second, it is intended to allow EPA to use information about expected pathways and risks to decide ultimately upon a cleanup remedy. Figure 2 shows the typical sources and types of information that the agency judges would be of use in encouraging parties to investigate and determine likely land uses for a remediated site.

The agency emphasizes that it may be advisable in certain cases to work out several land use scenarios in order to provide the community with a range of information on the projected cost of cleanup, reductions in risk posed by the site once remediated, and any future restrictions placed on the land. Sites for which consensus exists regarding likely future land use (e.g., a former industrial site being returned to industrial use) would not normally be candidates for multiple land use and risk scenarios.

Of particular relevance to brownfield cleanup is the directive's guidance on additional outreach and communication activities in cases where environmental justice may pose concerns. First, EPA acknowledges that community residents have enjoyed varying degrees of input on land use master plans and other items of local interest. The agency asserts the need to work more closely with those neighborhoods that feel disenfranchised from this process, and to use innovative ways to achieve outreach to residents unfamiliar with mainstream politics.

EPA's January 1995 announcement also removed approximately 25,000 of the 38,000 sites from

Superfund's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). For economic development officials, this federal action formally removes the stigma of potential liability associated with these sites, thus improving their marketability. This action was praised by the U.S. Conference of Mayors and others.

Sources and Types of Land Use Information

- Current land use
- Zoning laws
- Zoning maps
- Comprehensive community master plans
- Population growth patterns and projections (e.g., Bureau of Census projections)
- Accessibility of site to existing infrastructure (e.g., transportation and public utilities)
- Institutional controls currently in place
- Site location in relation to urban, residential, commercial, industrial, agricultural and recreational areas
- Federal/State land use designation (Federal/State control over designated lands range from established uses for the general public, such as national parks or State recreational areas, to governmental facilities providing extensive site access restrictions, such as Department of Defense facilities)
- Historical or recent development patterns
- Cultural factors (e.g., historical sites, Native American religious sites)
- Natural resources information
- Potential vulnerability of ground water to contaminants that might migrate from soil
- Environmental justice issues
- Location of on-site or nearby wetlands
- Proximity of site to a floodplain
- Proximity of site to critical habitats of endangered or threatened species
- Geographic and geologic formation
- Location of Wellhead Protection areas, recharge areas, and other areas identified in a State's Comprehensive Ground Water Protection Program

SOURCE: Environmental Protection Agency, *Land Use in the CERCLA Remedy Selection Process*, May 1995.

Recognizing the cross-jurisdictional nature of brownfield cleanups, EPA also is working to clarify requirements for cleanup and liability in situations involving both RCRA corrective action cleanups and leaking underground storage tanks. As mentioned earlier, court rulings have stymied EPA's attempts to waive certain requirements under RCRA corrective action cleanups, including RCRA permit needs, groundwater monitoring at arid or remote sites, and land disposal restrictions for contaminated waste. As congressional interest mounts, EPA is working to revise its corrective action regulations in order to streamline and clarify the regulatory jurisdiction over cleanup of contaminated media. In addition, the agency is expected to issue regulations in Fall 1995 regarding when lenders are liable for properties containing underground storage tanks, which is often the case at brownfield sites. Finally, the states and EPA have been working to adapt Risk-Based Corrective Action (RBCA) that will identify regulations regarding cleanup of leaking underground storage tanks. The effort is intended, again, to target resources to those sites that truly pose a risk to human health and the environment,

while expediting cleanup, closure, and redevelopment efforts at less contaminated sites.

Partnerships and Outreach

The rationale for including a public participation program in any cleanup or redevelopment effort seems elemental. Most would agree that securing the buy-in of affected residents is critical to the success of such efforts. Yet public participation programs often are dreaded by local officials, and they are criticized by some as inadequate and by others as outdated. Emerging issues — such as environmental justice, the need for job creation and training in distressed communities, and taxpayer dissatisfaction with the subsidization of damaging corporate behavior — are overlapping with local efforts to engage community residents in brownfields revitalization efforts.

Public involvement is given brief mention in CERCLA Section 117, in which EPA is directed to offer communities affected by NPL sites the opportunity to comment after cleanup remedies are proposed, after the original remedy chosen is altered for some reason, and when a Consent Decree is available for public review. Numerous complaints by local residents affected by Superfund site cleanups have helped EPA understand the need for early, thorough, and ongoing community involvement in virtually all decisions regarding site cleanups and reuse. As a matter of principle, the agency has sought over the past several years to expand opportunities for public hearings, disseminate site information to broader cross-sections of the communities, and present understandable information on risks associated with alternative remedy selections. During the Superfund reauthorization debate of 1994, several companies testified as to how such steps help streamline identification, selection, and community acceptance of a preferred remedial action.

By most accounts, similar operating protocol should apply to brownfield cleanup and redevelopment efforts. Local governments have sought to enhance the public's understanding and buy-in, helping ultimately to improve the pace and efficacy of these projects. In Bridgeport, Connecticut, the Office of Planning and Economic Development explained "brownfields basics" to more than 80 community representatives at its job summit in 1995, which was part of an overall plan to improve community acceptance of redevelopment proposals anticipated in the city's brownfields corridors. A Rhode Island legislative proposal would require that developers negotiate with host communities, on issues such as the level of available tax abatements, before they obtain state benefits to rehabilitate brownfields. The approach helps local officials explore the community's willingness to absorb certain costs based upon expected further benefits resulting from rehabilitation.

At the federal level, Superfund reform bills in the House and Senate only touch on public access issues associated with brownfields reuse, requiring, at a minimum, prior notice of selected cleanup plans and the opportunity to comment on them. On the other hand, provisions relating to NPL cleanups would require federal and state officials to provide detailed information about risk assumptions behind proposed cleanup scenarios, to actively solicit and respond to community concerns regarding a site, and to ensure public access to all non-confidential documents regarding the site's cleanup and redevelopment.

EPA has recognized the importance of encouraging public participation "wherever feasible" when awarding covenants not to sue in its prospective purchaser agreements. The agency's new guidance reflects the belief that, since purchasers are receiving public benefits from a Covenant-Not-to-Sue and protection from CERCLA liability, EPA should invite ample public comment on proposed settlements. Furthermore, EPA acknowledges that basic channels of public notification, such as announcements in the *Federal Register*, are inadequate for reaching the most acutely affected populations, and the agency has proposed that its regional offices conduct outreach and notification on a case-by-case basis.

Local officials involved in brownfield site redevelopments, however, would be the first to acknowledge that these components alone do not allay local fears and concerns. Increasingly, communities are linking brownfield redevelopment to environmental justice and opportunities for neighborhood residents to benefit directly from the cleanups. Below is a discussion of the considerations that affect public participation programs designed and implemented by local economic development officials trying to rehabilitate brownfields.

Environmental Justice

Debates surrounding brownfield reuse are expanding to address broader issues about the quality of urban and small town environments devastated by plant closings, skyrocketing unemployment, and shrinking tax bases. The environmental justice movement, defined generally as people of color seeking to build healthy and sustainable communities, has been growing in strength over the past half-decade as local residents seek to remove sources of toxic contamination from neighborhoods and prevent new sources from entering.

Simply put, these communities seek a new paradigm of clean communities and clean jobs, a message similar to those advocating waste reduction, conservation, pollution prevention, recycling, and other measures of industrial efficiency as steps toward protecting manufacturing jobs and community health. EPA defines environmental justice as "the fair treatment of people of all races, cultures and incomes with respect to the development, implementation, and enforcement of environmental laws, regulations, programs, and policies. Fair treatment means that no racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from the operation of industrial, municipal, and commercial enterprises and from the execution of federal, state and local, and tribal programs and policies."

Low-income and communities of color increasingly see a critical intersection between their objectives and the cleaning and redeveloping of brownfields. Many environmental justice advocates are attracted to the opportunity of correcting past urban planning mistakes (i.e., the siting of facilities) in the process of cleaning abandoned, blighted property.

Landfills, waste transfer stations, incinerators, or other intermediary processing facilities often are sited proximate to communities of color. Experts differ on how this relationship evolved. Do local governments and businesses find these communities willing hosts because such facilities promise jobs and increased revenues through disposal fees and other measures? Or does the presence of such facilities naturally drive property values down and affluent families out, thus making area residences attractive to low-income individuals? Whatever the order, a recent study based on 1990 census data shows that nonwhites are 47 percent more likely to live near hazardous waste treatment, disposal, or storage facilities than are whites. The 1994 report, sponsored by the National Association for the Advancement of Colored People, the United Church of Christ, and the Center for Policy Alternatives, shows that the number of nonwhites living near these sites has increased from 25 percent in 1987 to 31 percent in 1994. Reclamation of brownfields sites in these communities thus confronts unique challenges in the selection of remedies, cleanup standards, and future land uses.

Zoning issues also pose questions for policymakers exploring brownfields cleanup. In cities and towns that have "grown up" around industrial facilities, where backyards literally abut facility boundaries, environmental cleanup and enforcement officials often are faced with an impossible task: How to clean the site adequately to residential standards, even though the facility and property likely will continue to be used for industrial purposes?

The trend in brownfields policy to tailor cleanup plans to future land use raises anew the issue of zoning for affected communities. In cities without zoning laws, such as Houston, Texas, the interests of

industry and an increasingly aware public continue to clash, as residents try to cope with contaminated properties and businesses try to move away from community opposition. Federal and state officials acknowledge that special arrangements need to be established in situations where residential and industrial properties abut. EPA's new Prospective Purchaser Agreement, for instance, requires the agency to consider the benefits of jobs created as a result of cleanup and redevelopment, and the potential costs of further environmental contamination caused by continued operation of industry in a mixed-use industrial/residential area. Environmental justice advocates see in this flexibility some opportunity to inject discussions about environmentally sustainable enterprises occupying former brownfields next to residential areas, or of converting past industrial properties to green space or non-polluting commercial operations.

While EPA has been the lightning rod for complaints from local residents about cleanup decisions and results, the process most often has broken down at the local level, in real neighborhoods and cities. In response to this problem and anticipating its impact on the BERI program, EPA recently sponsored five public meetings through its National Environmental Justice Advisory Council. The agency invited local community residents to air their views, concerns, and hopes regarding cleanup and redevelopment opportunities in their neighborhoods. Recommendations from the meetings — held in Boston, Philadelphia, Detroit, Oakland, CA, and Atlanta — will be used during EPA's evaluation of applications for brownfields pilot awards.

Job Development and Training

Job development and training also are ripe for discussion in the brownfields debate, particularly by groups representing dislocated workers, welfare recipients, or the chronically unemployed. Brownfields, after all, often are created when factories close their doors due to downsizing, bankruptcy, or relocation. In one area of Northwest Indiana, 100,000 manufacturing jobs have been lost over the last 20 years, and thousands of acres of industrial sites have been abandoned or left vacant. In response, the building, construction, and steel trade unions have argued that during site assessment and remediation, skilled and unskilled laborers can be candidates for typical urban revitalization jobs, including construction and demolition activities. With the completion of remedial technical courses offered at local community colleges, such workers also can perform more specialized work involving removal of asbestos, lead-contaminated materials, and other hazardous substances.

The EPA, and to a lesser extent the Department of Labor, are launching efforts to integrate job training opportunities into brownfields cleanup efforts. EPA's goal is to ensure that local community colleges and other existing training centers adapt curricula to attract individuals who might benefit from the cleanup and development activities underway in their communities. The agency envisions a range of curricula and training courses tailored to community needs, including 20- or 40-hour certificate courses for mid-range construction jobs, as well as two-year associate degrees that would allow the individual to transfer to a four-year college or university to complete engineering and other technical degrees related to environmental remediation.

Bridgeport, Connecticut, one of EPA's first brownfields pilot cities, held a "job summit" in June 1995 as part of the Economic Development Office's public outreach strategy. The summit attracted students, community college administrators, business executives, environmental and economic development officials, and local job training agency officials. Workshops covered environmental education, business and employment opportunities in cleanup disciplines, and the health hazards posed by illegal dumping and other conditions characterizing brownfields. City officials acknowledge that the link between environmental education and economic development is rarely made, but they argue that such linkages must be part of a comprehensive strategy that enlists all actual or potentially affected parties to convert

brownfields to productive use.

With a grant from EPA, the Hazardous Materials Training Research Institute (HMTRI) is developing and disseminating environmental education materials. HMTRI is a consortia of local community colleges nationwide that sees a growing need for community colleges to fill a gap in the education of dislocated workers, the chronically unemployed, and even local government officials finding themselves ill-equipped at adapting to a changing budgetary and regulatory environment. Advocates of community college involvement in brownfields cleanup and redevelopment argue that these institutions, largely because of their low overhead costs, are much cheaper than four-year universities. Community colleges also increasingly offer what is known as "seamless education," where students starting off with the intention of completing a two-year associate degree can subsequently continue their education at a four-year college without having to make up course requirements. This approach has both a cost and educational advantage. For instance, where a university engineering curriculum might be rooted almost entirely in abstract issues of technology, community college courses typically offer hands-on technical work that improves the marketability of an engineering degree in the environmental remediation field.

Several challenges confront community colleges as they move to meet the demand presented by brownfields. First, these institutions must determine — through personal contacts with employers, public officials, unions, and other stakeholders — that there will be redevelopment jobs available. Second, these colleges must not exaggerate the potential of brownfields reuse to cure a multitude of urban ills, unemployment among them. Third, they must locate the greatest need for education, be it technical, regulatory, public outreach, or all of the above. Finally, community colleges must seek out new sources of funding for this type of course development. HMTRI suggests that community colleges try to tap into state programs as well as EPA's planning grants.

In addition to working with community colleges and their trade associations to develop training sessions and curriculum, EPA has assigned staff in each of its ten regional offices to be the central contacts on brownfields issues for interested states or private parties. The agency also has targeted other staff to provide technical assistance to brownfield efforts in Chicago, Detroit, and the state of Maryland. Finally, EPA's cooperative efforts — with the Economic Development Administration, Department of Labor, and Department of Housing and Urban Development — continue to expand the government's multi-faceted approach for converting brownfields to productive enterprises.

Other Tools Available to Help Level the Playing Field

Existing strategies aimed at transportation planning, traffic congestion mitigation, air quality improvement, and preservation of open space can supplement EPA's Superfund and brownfields programs in facilitating the reuse of industrial sites. Many of these strategies can be linked creatively to help tilt the balance toward brownfields redevelopment. Below is a brief description of some of these measures, as well as examples of how individuals, cities, and towns are using them.

As millions of Americans flee urban centers and sprawl into undeveloped areas, economic development practitioners face an array of challenges. The City of Chicago projects only a 4 percent population growth rate in the next 20 years, yet it predicts that a staggering 25 percent of the remaining undeveloped land surrounding the metropolitan area will be developed. St. Louis, Missouri, is another victim of "donut development," where infrastructure and housing continue outward, leaving the urban core abandoned and empty.

The human costs include inner-city crime, unemployment, poverty, and exposure to contamination. From an environmental perspective, these trends blight urban areas and threaten sensitive ecosystems.

The abandoned steel mills ringing the southern coast of Lake Michigan, for instance, contain unchecked pollution that harms Great Lakes water quality and, hence, the drinking water for 28 million people living in the Great Lakes Basin.

Vigilant attention to development priorities can help reverse these patterns and redirect growth and investment back into existing cities. The more local government officials place their redevelopment plans and hopes in a larger context — i.e., improving transportation and air quality through high-density, mixed-use development — the easier it will be to secure community, regulatory, and financial support. Attempts to refashion our nation's cities on the tenets of environmental protection and sustainable development already are underway. Following are examples of local initiatives to protect open space, as well as descriptions of federal environmental and planning laws that, through creative combinations, can help local and state officials encourage developers to invest in brownfield cleanup and reuse.

Transportation Planning

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) is a landmark law that takes a comprehensive look at how transportation needs affect a number of societal, economic, energy, and environmental factors. ISTEA is heralded with broadening the diversity of interests invited to collaborate on transportation planning and priority setting, expanding from the traditional state Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to include public interest groups, private-sector companies involved in supplying and building transportation infrastructure, and freight and transit services. The participation of these and other new parties is an important factor for efforts targeted at brownfield cleanup and redevelopment and the preservation of open space.

Under ISTEA Section 134(f), federal certification of MPO transportation plans requires consideration of 15 factors, including

- the consistency of transportation planning with applicable federal, state, and local energy conservation programs, goals, and objectives;
- community long-range plans detailing future transportation objectives, including economic development projects;
- the need to relieve congestion and to prevent congestion from occurring where it does not yet occur;
- the likely effect of transportation policy decisions on land use and development, and the consistency of transportation plans and programs with provisions of all applicable short- and long-term land use and development plans; and
- the overall social, economic, energy, and environmental effects of transportation decisions.

ISTEA also requires that Transportation Improvement Programs, or TIPS, concur with the State Implementation Plans, or SIPs, required under the Clean Air Act. TIPS must focus on factors such as environmental protection, the preservation and upgrade of existing facilities and infrastructure (including both transportation and industrial facilities), land use planning, freight operations, and the development of intermodal operations. All of these factors can help tilt the playing field toward brownfield redevelopment.

Congress designated the National Highway System in fall 1995. The Senate in July 1995 passed such a measure, which includes an amendment allowing governors the discretion to use ISTEA's Congestion Mitigation and Air Quality Fund (CMAQ) to enhance inter-city rail travel, in addition to the fund's originally proscribed use as a way to improve highway and mass transit operations. For congested areas

like the Northeast Corridor, the Los Angeles-to-San Diego route, or the Detroit-to-Chicago route, use of CMAQ could help reduce automobile traffic. Spin-off benefits encompass the potential enhancement of affected train stations and surrounding brownfield development.

At the local level, a growing number of urban planners and government officials recognize the value of transportation access to private citizens and businesses, of locating home, work, and recreation close together through high-density, mixed-use development. Added to this model is the trend toward transportation-oriented development, a concept developed by urban architect Peter Calthorpe, which seeks to replace automobile-centered development with that based on public transit, and to reclaim land otherwise used for automobiles for pedestrian and other uses. This concept, beginning to take root in several American cities as well as internationally, can tip the balance even further toward developing brownfields. Bridgeport and Baltimore, for instance, are remediating brownfield sites based upon their inherent geographic access to multi-modal transportation — highway, rail, barge, and air — as well as to existing energy, water, sewer, and telecommunications infrastructure. A recent study by the Regional Plan Association for Union County, New Jersey, proposes "transportation development districts" to assist with the capitalization needs of multiple developers who share a financial interest in funding road and related infrastructure improvements that will help revitalize several brownfield sites. Finally, even a few utility companies are beginning to examine preferential electric rates for infill development in order to offset the enormous costs of extending utility lines and services into ever-distant suburbs.

In response to air pollution, congestion, and other environmental problems, other cities are pursuing policies to discourage automobiles from the urban core. Amsterdam voters, for instance, banned all traffic from downtown. Other overseas communities have reduced speed limits to 18 miles per hour, cut in half the number of available parking spaces, and improved public transit and bicycle access. Such approaches may seem far-fetched in the car-oriented United States, until one realizes that 43 percent of commuters in Portland, Oregon, use mass transit to get to work.

From a sociological perspective, transportation-oriented development also can address other factors deteriorating the fabric of American communities. Violent crime, vandalism, and illegal dumping are problems associated, at least in part, with abandoned industrial properties; these problems perhaps are exacerbated or allowed to flourish in urban centers where the work force every night literally flees the city for the suburbs.

Similar in concept to ISTEA, the 1990 amendments to the Clean Air Act (CAA) require states to develop and submit State Implementation Plans (SIPs) for approval by the U.S. Environmental Protection Agency. Among other guidelines, the SIPs are to outline state plans for meeting air quality improvement goals. For the so-called "dirty air areas" of the country, which include about 112 metropolitan centers that are classified as nonattainment areas for health-based criteria air pollutants (such as nitrogen and sulfur dioxides, both of which contribute to urban smog), CAA Sections 110 and 173 require that new construction entail a "preconstruction review process" to help facility owners determine the needed level of on-site air pollution control technology. Upon such determination, EPA would specify MACT — or maximum available control technology — as a requirement in the facility permit.

Of importance for brownfields redevelopment, these pollution control requirements are more stringent for new construction, including construction in greenfields, than for modifications at existing facilities or for new construction in urban areas. In the latter two cases, "offsets" in emissions levels can be negotiated among polluting facilities to avoid an overall net increase in emissions allowable in that area. (If a company chooses not to devise an offset arrangement, it can instead install pollution controls to keep emissions below regulated levels.)

The CAA goal of "prevention of significant deterioration" of air quality is targeted at keeping clean air

areas clean. This underlying purpose, in theory, should help focus development within already developed areas. According to some experts, however, the legal threshold for proving the potential for "significant deterioration" is so high that a proposed facility or development in a greenfield would need to operate at unrealistically dirty levels in order to trigger the regulatory constraint.

Local government familiarity with these CAA regulations is inconsistent across the country, leading to widely diverging views of appropriate development priorities. Consider the Disney America proposal for northern Virginia. In this case, the Virginia legislature approved permitting, transportation enhancements, and other expenditures for the planned 3,000-acre theme park less than one hour from Washington, D.C. The District of Columbia and Maryland members of the Metropolitan Council of Governments, however, were forced to reconsider their approval once they realized that the resulting traffic congestion and air pollution would have used up most of the region's available incremental increase in emissions allowable under the CAA.

EPA has proposed numerous steps that local governments could take to improve air quality (and possibly receive CAA credits) and to increase urban development including:

- elimination of minimum parking requirements in zoning codes, thereby allowing the developer to orient the building less toward automobile commuting and more toward public transit;
- zoning that encourages greater density around existing transit facilities;
- zoning that encourages accessibility to transit stops on the public roadway and that provides for pedestrian and bicycle facilities;
- elimination of zoning requirements that prevent mixed-use neighborhoods in urban areas;
- public safety and education initiatives to encourage development in pedestrian- and transit-friendly neighborhoods; and
- local tax incentives to encourage urban redevelopment.

The EPA attributes roughly 50 percent of air emissions to "stationary sources," such as factories or small business, and 50 percent to motor vehicles or "mobile sources." Thus, despite gains in controlling air pollution from industries, concerns about increased air emissions from additional vehicle miles traveled (VMT) will continue to influence the redevelopment of urban lands proximate to mass transit services, particularly in comparison to developments on the urban and suburban fringe, where access is limited mostly to cars.

Open Space Preservation Efforts

Brownfields represent for many urban planners and architects an opportunity to rebuild from the ground up this nation's urban areas and abandoned, inner-ring suburbs. They offer the chance to design cities that integrate work, housing, and recreation through high-density, mixed-use development, and plenty of open space. After decades of public policies that have heavily favored suburban and outer-fringe development, the growing concern for brownfield reuse can level the playing field and offer incentives for businesses and residents to relocate in already developed areas. One key benefit is the long-term preservation and conservation of open space. The value of open space to a community should not be underestimated, argues the Trust for Public Land, an organization that purchases land outright or encourages citizens, through bond issues, to put land into public ownership.

Creating open space and parks is possible because the inventory of sites potentially available for cleanup and redevelopment often outstrips the city's or region's needs in terms of projected growth in employment and economic activity. For example, an inventory of Union County, New Jersey, showed that redevelopment of just 10 percent of the 2,500 acres available for industrial activity would meet the county's projected short-term employment growth. For this reason, the Regional Plan Association,

which conducted that inventory, engaged local environmental organizations and state and local officials in a planning process that incorporates wetlands restoration and ecologically sensitive waterfront redevelopment.

Numerous factors — including simple economics and public appreciation of cherished natural resources — can strengthen a city's resolve to focus development inside its borders, to contain sprawl, and to preserve nature. Portland, Oregon, voters in spring 1995 approved a \$135-million open spaces bond to preserve about 6,000 acres of land in and around the city, as part of the Metro Government's Greenspaces Program. The vote followed the defeat in 1992 of a similar initiative, which advocates think failed because it did not specify the parcels of land targeted for preservation. Part of the 1995 strategy involved informing low-income and working-class voters about specific park proposals situated in their communities.

This lesson from the Portland vote is valuable for city planners trying to reclaim space in densely populated and developed areas of older cities. In Bridgeport, CT, economic development officials believe that a mix of development options — including industrial, commercial, residential, and open space — can show affected city residents the positive aspects of brownfields reuse. Local opposition to the redevelopment of an industrial site (due to concern over cleanup standards or the future operation of the site itself) may be tempered, in some cases, by additional proposals to create parks and open space in the same neighborhood. Bridgeport officials are considering proposals for an open bike trail linking the waterfront to the city's valley area, thus creating an urban park at a derelict industrial site on the East End. The concept was developed with help from Great Britain's Groundwork Trust, a \$35-million consortium of community-based trusts that has fostered open lands projects in about 35 cities in England.

Closer to home, the Trust for Public Land and New York City's Audubon Society played a pivotal role in reclaiming the devastated area known as Jamaica Bay, just a stone's throw from John F. Kennedy Airport. Once a bustling pitstop for migratory birds traveling the North Atlantic Flyway, the bay became a dumping ground for decades, turning a valuable ecosystem into a choking public hazard. Raw sewage threatened water quality and wildlife, while vandals and midnight dumpers exacerbated the problem. Through a collaborative effort, public, private, and nonprofit parties created what is now the Bayswater Point State Park, 12 acres of reclaimed industrial land.

Success at Jamaica Bay depended on several factors, including the city's willingness to accept donation of the land in exchange for private parties managing it; compelling research and documentation on the economic and environmental value of restoring the Bay as an important buffer zone between the human and natural environments; diligent volunteers, such as the City Volunteer Corps, who worked to remove visual pollution from the area; and private-sector donations. The Trust for Public Lands and New York City's Department of Environmental Protection subsequently have returned other shorelines and wetlands, 115 acres so far, to open space. Additional prospects reside in the Jamaica Bay area at what are now municipal landfills, which officials expect to be returned to open space once environmental hazards are remediated.

Chapter 4

State Voluntary Cleanup and Brownfields Programs: Tools for Local Officials

The sheer number and cost of hazardous waste cleanups has inspired a backlash against conventional hazardous waste remediation programs — at both the federal and state levels. The number of voluntary cleanup programs and brownfields initiatives has risen dramatically in response to this frustration. As of Fall 1996, the total number of state voluntary cleanup programs has risen to 37, with 33 of these having been created or formalized in the past 5 years. Several more states are following close behind and plan to unveil programs in the next year.

This chapter summarizes how each state facilitates the cleanup of hazardous waste, either through voluntary cleanup or brownfield programs. The following elements are included: Liability and Potentially Responsible Parties (PRPs), Site and Party Eligibility, Certification, State Oversight, Private Party Requirements, Cleanup Standards, and Financial Assistance. States are presented by EPA Region, as indicated by the following groupings:

Region I	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont
Region II	New Jersey, New York, and Puerto Rico
Region III	Delaware, Maryland, Pennsylvania, Virginia, and West Virginia
Region IV	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina South Carolina, and Tennessee
Region V	Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin
Region VI	Arkansas, Louisiana, New Mexico, Oklahoma, and Texas
Region VII	Iowa, Kansas, Missouri, and Nebraska
Region VIII	Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming
Region IX	Arizona, California, Guam, Hawaii, and Nevada
Region X	Alaska, Idaho, Oregon, and Washington

Region I

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Connecticut

Connecticut's Urban Sites Remedial Action Program was established in 1992 and operates in conjunction with the state's 1985 Property Transfer Act. The program is conducted mainly by the Department of Environmental Protection's (DEP) Water Bureau, although the Department of Economic Development (DED) also is involved. Under the program, site cleanup can take three different forms: Type I sites receive expedited review and approval of voluntary cleanup proposals; Type II sites involve more state participation in the development of cleanup proposals, and allow the state to implement the cleanup plan in distressed communities; and Type III sites can be purchased by the state for cleanup, which then allows the state to remediate and lease the rehabilitated property to parties interested in its reuse, using lease payments to fund the cleanup process. (The state can assume liability and cleanup costs of up to \$15 million.) The Industrial Parks Program and Manufacturing Assistance Act provides for state oversight of cleanups as part of site preparations for industrial redevelopment. The Connecticut Development Authority, moreover, has an Environmental Cleanup Fund. There are presently 25 private-party funded cleanups being conducted under the Urban Sites Program.

Liability and PRPs: Like federal CERCLA, Connecticut's liability is strict, joint, and several. PRPs are a site's owners and any parties responsible for generating the waste present on a site. Lenders are not liable, as long as they do not own the site. Local governments are liable for any contaminated sites they own, including those obtained through tax recovery and foreclosure.

Eligibility: To participate in the Urban Sites Remedial Action Program, sites must be located in urban areas and deemed by the Department of Economic Development (DEP) to have potential for economic development. These sites may be under the jurisdiction of other programs, such as Superfund, LUST, or RCRA. Other factors also determine which part of the program a site falls under: Type I sites involve a party responsible or willing to take responsibility for cleaning the site; Type II sites consist of orphan sites, or a site where the owner is unwilling or unable to clean the site; and Type III sites have a prospective purchaser interested in reusing the site. Type II and Type III sites must be located in distressed municipalities, as defined by the Department of Economic Development.

Oversight: Each of the three different types of sites has a corresponding set of requirements and procedures associated with them:

a) The Type I site program involves expedited state oversight of cleanup activities. After the initial application has been approved, DEP reviews its files for any information on the site in question; the ensuing site investigation then builds on any file information found. Investigation criteria vary from site to site, but usually go beyond Phase I assessment standards to include sampling. Once the investigation has been deemed appropriate and the extent of contamination on the site has been quantified, the party may submit a plan for remedial action. Once that has been approved, remedial activities may begin. Through review of a final site report, the DEP then decides whether the site has been cleaned properly.

b) Under the Type II site program, the DEP conducts the site investigation and drafts a remedial action plan. In sites that DED classifies as economically significant, the agency may hire contractors to implement the remedial action plan.

c) The Type III site program allows DED to purchase the site in consultation with the Department of Environmental Protection, which then conducts the investigation and contracts for remediation of the site, with the intent of locating the prospective purchaser's business there. The state can assume liability and cleanup costs of up to \$15 million. Once the cleanup is completed, the DED leases the property to recover the state's costs.

Requirements from Participants: While DEP will review cleanup plans, Type I site participants are required to pay for DEP's oversight costs and to take full responsibility for the site's remediation. Type II and III sites also involve cost recovery measures — lease payments on the property — by the DED and the Department of Environmental Protection.

Cleanup Standards: In January 1996, the state of Connecticut adopted remediation standard regulations. The new standards address cleanup under different contamination scenarios, including direct exposure, contaminated soil mobility, and volatilization from ground water.

Under the direct exposure scenario, the state has developed two sets of numerical standards for soil cleanup — one set for residential areas and one for contaminated soils in industrial/commercial areas. To address mobility, the state also has issued additional cleanup standards for contaminated soils with respect to groundwater quality. Connecticut differentiates between groundwater that is presumed to have been impacted by development and groundwater that is presumed to be unimpacted and which, therefore, may be available as a drinking water source. A third scenario addresses volatile organic compounds (VOCs) in groundwater. The new regulations establish numeric criteria for groundwater that is contaminated with VOCs and is located within 15 feet of a structure or building.

Certification: If remediation is satisfactory, the Department of Environmental Protection may issue the party a letter acknowledging completion of activities at the site. It also issues covenants-not-to-sue to new owners of remediated land. If cleanup standards are made more stringent in the future, or if contamination undetected by the site assessment is subsequently found, re-opener clauses in the letter of completion enable the state to require parties to bring their sites into compliance. However, the same is not true for the covenants; it may be very difficult for the Department of Environmental Protection to obtain a re-opener on those sites.

Financial Help: The Urban Sites Remedial Action Program was instituted in 1993 along with a \$25 million bond fund to spur site assessment and cleanup activities. The fund has now reached a total of \$30 million, \$22 million of which has been dispensed to date.

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Maine

Maine initiated its Voluntary Response Program three years ago. The state also maintains a Controlled Sites Program, which is activated when voluntary cleanups are not completed in a satisfactory manner. There are currently 65 applicants, while 42 sites have been resolved.

Liability and PRPs: Liability is strict, joint, and several. PRPs include present owners and operators, past owners, and generators of the site waste (especially in cases involving landfill remediation and closure). Lenders and development authorities are not liable as long as they are merely acting as financiers, rather than as participants in the management of the site. Local governments with sites may or may not be liable, depending on the site, according to state officials. They may not be liable if they are not managing the site. Often they may be named as PRPs of a site, but not be pursued.

Eligibility: Any sites not falling under the jurisdiction of other programs, such as Superfund, LUST, or RCRA, are eligible to participate in the program. Sites operating under Department of Environmental Protection licenses, such as waste management and landfill facilities, are ineligible to participate.

Oversight: Responsible parties or prospective purchasers take the initial step of site investigation. There are no specific state standards for site investigations, although state officials say that a Phase I assessment done in accordance with ASTM (American Society for Testing and Materials) standards will put the party on a good footing for further action. Depending on the results of the Phase I assessment, a Phase II assessment may be necessary. Once the presence and level of contamination are determined, a remedial action plan is submitted to DEP for review. If that plan is deemed satisfactory, cleanup activities may begin. Upon completion of the cleanup, the party is to submit a final report demonstrating that the plan was carried out and remediation accomplished.

Requirements from Participants: Parties are responsible for payment of oversight costs, not to exceed a rate of \$50 per hour, as well as an initial \$500 nonrefundable fee.

Cleanup Standards: Cleanup standards are site-specific, but must achieve a minimum of 10-5 risk level, applicable for each contaminant on-site as well as to the site as a whole. Some contaminants have additional numerical targets for cleanup, established by DEP toxicologists and determined by past experience at other sites. The DEP is working on a "conservative, worst-case" table of numerical cleanup levels. Current cleanup levels take future land use into consideration, but the DEP table is expected to have different contamination standards for different land uses. Decisions on the use of institutional and/or engineering controls are also site-specific.

Certification: Covenants-not-to-sue are not yet available in Maine. If a site assessment submitted to DEP shows no or *de minimis* levels of contamination, a "no remedial action" letter is granted. If contamination is found and successfully cleaned up, a certificate of completion releases the party from liability for all contaminants identified in the site assessment. Reopener clauses apply in limited circumstances, including subsequent detection of new contamination not identified in the site assessment, and cases involving partial voluntary response actions. In the latter example, parties who opt to remediate soil but not groundwater contamination may find themselves responsible for doing so should technological developments (and corresponding tightening of cleanup standards) later improve the feasibility and costs of groundwater remediation. In general, however, re-openers do not apply if the state introduces more stringent cleanup standards (if any future action is taken, the state would have to pay for it). The certificate of completion does not affect third party or federal actions, but DEP is testing a tacit agreement on some sites (some of which are NPL-caliber) in which EPA would not seek enforcement against Voluntary Response Action Program Sites.

Financial Help: No financial assistance programs are available on the state level, nor are there plans to institute any. Some municipalities may provide help for cleanups through tax increment financing.

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Massachusetts

The Massachusetts Clean Sites Initiative targets sites that have both development potential and prospective purchasers. The Commonwealth also has a Waste Site Cleanup Program, for interested responsible parties, that addresses those sites with sub-standard development potential. Both programs follow the guidelines of the Massachusetts Contingency Plan, which enables state regulators to categorize, determine oversight procedures, and set standards for the cleanup of sites. To be eligible for the program, sites must be located in one of 30 areas defined as economic targets. At least 30 covenants- not-to-sue have been granted. The City of Boston has its own Brownfields fund. Participants in running the state programs are the Department of Environmental Protection (DEP), the Executive Office of Economic Affairs, and the Office of the Attorney General. Initiatives under development include an Industrial Sites Recycling Program and a loan guarantee program.

Please note that new legislation, due to be introduced October 1996, could provide additional liability relief and financing mechanisms. Details are provided at the end of this program summary.

Liability and PRPs: Liability provisions for the programs are those of the state Superfund, which are strict, joint, and several. PRPs include current owners, past owners (where it can be proven they are responsible for contamination) and generators and transporters of site contaminants. Lenders which own sites through foreclosure, or which hold interest in a site, may be exempted from liability provided they did not cause or help cause contamination, and that they take measures necessary to eliminate contaminant exposure. The same is applicable to local governments, as long as their foreclosed sites are due to tax delinquency enforcement.

Eligibility: Clean Sites Initiative projects must involve land reuse for commercial and industrial purposes, and their respective sites must be located in a state Economic Target Area, or deemed by the Executive Office of Business Development (EOBD) as a development opportunity. Applicants must be prospective purchasers willing to ensure the cleanup of the site as required by Superfund law and its ensuing regulations (the Massachusetts Contingency Plan, or MCP). PRPs of contaminated properties or owners of properties already in compliance with state cleanup standards are not eligible.

Oversight: The Clean Sites Initiative process begins with the filing of an initial application that DEP and EOBD review to determine whether the site is eligible or if any outstanding debts exist to the DEP pertaining to previous action taken on the site. The DEP strives to return applications within 30 days, although applications involving negotiation of these past debts take somewhat longer. Once approved, assessment and cleanup activities may begin on the site. For the Waste Site Cleanup program, the party is to notify DEP of releases that have taken place on the property.

State oversight applies to both programs, and depends on the nature of the site, in accordance with MCP categorization guidelines. The Numerical Ranking System is the means by which this is done. It

is conducted by the independent Licensed Site Professional (LSP), selected by the party to the cleaning and assigned to the site. The numerical ranking may be done at any time within the first year after DEP has been notified of the site, but it becomes mandatory after that date.

Tier IA sites encompass the most serious and complex types of corrective action. These sites must follow a Superfund-style oversight process, where the LSP hired by the party conducts the remedial action plan under direct DEP oversight. The LSP first submits a Phase I assessment report for site classification purposes, followed by a Phase II investigation, the results of which are submitted to DEP for approval. Where applicable, the LSP may conduct a risk assessment and feasibility study, also subject to DEP approval. The remedial work plan is then developed and approved by DEP before actual remediation can be undertaken. Upon completion of the remedial action, the LSP submits the final report outlining the remediation done at the site, accompanied sometimes by split samples taken by the DEP. If approval is granted, written assurances for the owner may be in order.

Tier IB and Tier IC sites have much more limited oversight stipulations. The LSPs are required to submit to DEP permit requests that would allow them to manage remediation of their respective sites. Once permits are granted, LSPs may initiate activities on the site without direct DEP oversight.

Tier II sites can be managed by an LSP without need for DEP approvals or permits. Remediation concludes with the issuance of a Response Action Outcome Statement by the LSP, outlining the activities performed on the site. All cleanups are to comply with the Best Response Action Management Approach, as outlined in the MCP. While compliance in Tier IA cleanups is accomplished through the oversight process, it is achieved in Tiers IB, IC, and II by LSP licensing requirements, and by annual DEP site audits of 20 percent of the sites worked on in the previous year. Affected community residents may request public participation plans from LSPs.

Finally, DEP must honor approvals granted to sites under the former waste site cleanup program. Meanwhile, LSPs and parties at those sites are free to use the new reporting procedures, as well to use the new cleanup standards to devise the best remediation action for their site.

Requirements from Participants: Under the Clean Sites Initiative, participants must agree to ensure proper cleanup of their site of interest, or be subject to enforcement actions. Cost recovery is achieved through annual compliance fees and permit issuance fees.

Cleanup Standards: Cleanup standards are in place that require demonstration of "no significant risk" to human health or the environment. They are intended to achieve a risk reduction level of 10⁻⁶ for the individual and 10⁻⁵ for the aggregate of cancer-causing contaminants, as well as a Hazard Index level of 1 for non-cancer-causing contaminants. These levels may be achieved in three ways. Method 1 makes use of numerical standards derived for 107 of the most common contaminants; these standards reflect background levels of contamination. Method 2 makes use of the Method 1 framework but allows for some site-specific adjustments. Method 3 allows for a full risk assessment of the site to enable a site-specific standard to be created for the property.

Certification: Clean Sites Initiative participants may receive a Covenant-Not-to-Sue from the Office of the Attorney General (AG) upon determination that their site is eligible, and they must in turn ensure that the appropriate response actions are taken on the site. The AG may reopen the covenant if it finds that response actions are not consistent with those required by the MCP. The AG also may reopen the covenant following completion of the cleanup if: (a) it finds that the response actions taken in the cleanup did not meet the relevant standards at the time they took place; or (b) new releases occurred at the site after the cleanup. The AG also may void the covenant if it finds that the covenant was obtained through fraud. Covenants also may be reopened in cases when releases not detected by the site assessment, or addressed by the response action, are later found, or when contamination found in the surrounding properties is found to stem from the cleanup party's site.

Financial Help: Financial assistance programs geared towards remediation are not available yet in Massachusetts, although considerations are underway for a loan guarantee program and an Industrial Sites Recycling Program, which would make available low-interest loans for remediation and redevelopment of industrial property.

Looking Ahead in Massachusetts: Officials at DEP report that legislation, due to be introduced in Fall 1996, could provide important new liability relief measures and create innovative financing mechanisms. As a reminder, the below measures are not final. They are simply being discussed by state officials.

Liability Relief. The new legislation will propose generic "endpoints" to liability. In other words, there would be a statutory "end to liability" once a party had met certain conditions, including either of the following: 1) the party is "innocent;" or 2) a permanent solution for the entire site or portion of the site containing hazardous materials has been implemented. The proposed legislation will also offer liability relief for property owners situated above contaminated groundwater that has emanated from an off-site source.

Financing Mechanisms. The legislation will propose two new financing mechanisms. First, a state loan guarantee program would be developed, called the Brownfields Access to Capital Program, that is designed to encourage lenders to finance remediation activities. Second, a small revolving loan fund would be established through issuance of a \$15 million state bond. The fund, which would target facilities in Economic Target Areas, could provide low-interest loans, credit enhancements, and possibly grants to recipients.

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New Hampshire

New Hampshire's Waste Management Division has jurisdiction over cleanup efforts (cooperative effort between the State Site Corrective Action Section and the Groundwater Protection Bureau). Cleanup standards are in the final stage of development and will follow the conceptual framework of ASTM's Risk-Based Corrective Action (RBCA) standard. Contact New Hampshire Department of Environmental Services (NH DES) to obtain the current status of its Risk Characterization and Management Policy, which contains the cleanup standards and risk assessment process protocols. On June 10, 1996, the Governor signed into law Brownfields Statute Chapter 147-F, which became effective July 1, 1996. One month after program startup, one site is enrolled and several applications

are being prepared.

Liability: Liability under the state's Hazardous Waste Management Act is strict. Relief from strict liability is provided to third parties by statute, when the property owner did not cause or contribute to the contamination. There is no liability for property owners related to contaminated groundwater originating from an off-site, up-gradient source. Additionally, liability protection is available in the form of a Covenant-Not to-Sue under the state's Brownfields Program. The Office of the Attorney General may bring action to recover state response costs and can place an environmental lien on properties. Failure to comply with NH DES requirements during the remedial process can result in the loss of the Brownfields Program Covenant-Not-to-Sue liability protections or an order. Compliance with orders is generally achieved through referral to the Attorney General's Office.

Eligibility: Sites are eligible for the Brownfields Program if remedial costs are not eligible for substantial reimbursement under the state petroleum site reimbursement funds and there are no unaddressed order(s) against the site. Participants in the Brownfields Program can include tenants, prospective purchasers, municipalities, and lending institutions, as long as they did not cause or contribute to the contamination. Current and former owners also may be eligible, but a number of eligibility restrictions apply. Sites that are ineligible for the state's Brownfields Program are eligible for the same remedial process as Brownfields sites but will not receive Covenant-Not-to-Sue liability protections.

Oversight: There is an application form for determining Brownfields Program eligibility. Eligibility determination are finalized in 30 days, per statutory requirements. Typical remedial process oversight includes the review and approval of work plans, site investigations, Remedial Action Plans (RAPs) and RAP Completion Reports, as necessary. Risk assessment protocols and procedures are set by the Department of Health and Human Services. If the cleanup meets performance standards, a Certificate of Completion or a Certificate of No Further Action can be provided by the NH DES.

Requirements from Participants: The key requirement is the implementation of the NH DES-approved Remedial Action Plan and achievement of its performance standards. The Covenant-Not-to-Sue does not get attached to the property deed until RAP completion.

Cleanup Standards: NH DES is in the final stages of the development of statewide cleanup standards. The standards are contained in the Risk Characterization and Management Policy. This policy contains look-up tables that provide soil and groundwater standards and protocols to develop site specific numbers, based on standardized risk assessment protocols.

Certification: A Certificate of Completion is available to parties that have completed a NH DES approved Remedial Action Plan (RAP). A Certificate of No Further Action is provided by NH DES when no significant risk remains and no significant additional involvement by NH DES is required. A Covenant-Not-to-Sue is provided to Brownfields Program participants upon entry into the program and is recorded into the deed upon RAP completion.

Financial Help: Financial assistance is not available at this time.

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Rhode Island

Rhode Island's Voluntary Cleanup Program, in place since 1993, was revised in July 1995 through the Industrial Property Remediation and Reuse Act. The Industrial Property Remediation and Reuse Program offers liability relief to third parties and financial institutions participating in the program. Approximately 80 sites are currently enrolled. Additional legislative proposals under consideration would provide economic incentives and add an economic development agency to assist the Department of Environmental Management (DEM) with the site selection process.

Liability and PRPs: Liability under the state's Hazardous Waste Management Act is strict, joint, and several. Failure to comply with DEM requirements throughout the cleanup process can result in "responsible party" designation, whether or not the party to the cleanup was originally responsible for the contamination.

Agreements with DEM are determined by the party's cooperation in executing program guidelines. Recalcitrant parties may be required to enter into a Consent Agreement. DEM's Adjudication Division, which can issue a Notice of Violation, ensures compliance with cleanup projects. There are no liability exemptions for lenders or local governments that acquire sites through foreclosure.

Eligibility: The state requires that sites be low-priority contaminated properties, as well as candidates for redevelopment. Unable to participate in the program are sites that pose an imminent and immediate threat to human health and the environment, including those under the jurisdiction of DEM's RCRA, LUST, and Superfund programs. Some of the concepts underlying the Industrial Property Remediation and Reuse Program may be applied toward cleanup of underground storage tank sites on a case-by-case basis.

Responsible parties, voluntary parties, and prospective purchasers (which could be individuals as well as businesses) are eligible to participate in the program with varying levels of responsibility toward the DEM. Responsible parties include current and past owners and operators at the site; persons who arranged for hazardous materials disposal at the site; and persons who brought to the site hazardous materials that subsequently were released to the environment. Voluntary parties are persons who are not responsible parties and who conduct a site assessment and/or a cleanup in accordance with DEM requirements. Prospective purchasers include persons who are not responsible parties, who do not hold a 10 percent or greater interest in the ownership or operations of a site, and who intend to buy the contaminated site at fair market value.

Oversight: Site investigations and remediations are conducted under the state's Site Remediation Regulations, which require responsible parties to notify DEM of accidental releases of hazardous chemicals to the environment. Voluntary parties and prospective purchasers must notify DEM of their intent to clean a site, and they must adhere closely to DEM requirements to avoid becoming responsible parties.

Public notification requirements have been expanded under the Industrial Property Remediation and Reuse Act, and will be specified through regulation. At a minimum, notification consists of publishing announcements in local papers, as well as distributing reports among residents of the surrounding communities. In addition, DEM must consider environmental justice issues when reviewing site cleanup plans.

Requirements from Participants: Requirements vary according to the party's relation to the site. Responsible parties (RP) must conduct site investigations and cleanups according to the DEM's Site Remediation Regulations. Notice of hazardous releases that pose an imminent threat must be reported immediately to DEM, followed with a written notification in 48 hours. Other releases must be reported within 15 days. Enforcement actions generally are not invoked by DEM provided the RP cooperates

with the state during the investigation and cleanup.

Voluntary parties (VP) may submit a site investigation work plan, for sites known or suspected of contamination, to DEM for approval. VPs must submit the results of that investigation to the DEM to avoid becoming a responsible party. If a site is known to be contaminated and an incomplete assessment has been done, VPs may conduct a second-phase investigation and avoid becoming a responsible party by reporting the results to the DEM. Second-phase investigations must not exacerbate the conditions at the site. DEM recommends that it review second-phase investigation work plans to ensure that planned actions do not make matters worse at the site.

Bona fide prospective purchasers (PP) must enter a Settlement Agreement with DEM to complete or conduct an assessment and remedial action in order to avoid becoming a responsible party for sites at which contamination is known or suspected. In cases where remedial action is necessary, the Settlement Agreement binds the PP to undertake and complete the cleanup; failure to do so results in being designated an RP. Similarly, PPs who fail to enter a Settlement Agreement prior to taking ownership of the property, or beginning operations at the site, become responsible parties and subject to the cleanups procedures under the Site Remediation Regulations. A Covenant-Not-to-Sue would not be issued to such a party.

Cleanup Standards: Rhode Island DEM has developed cleanup standards that became effective in September 1996. These cleanup standards are intended to reflect the current and reasonably foreseeable future land use at a site and to acknowledge the groundwater classifications. In so doing, the regulations have promulgated four basic classes of standards:

- direct exposure criteria for **industrial land use**,
- direct exposure criteria for **residential land use**,
- leachability criteria for protection of ground water resources used for **drinking water**, and
- leachability criteria for protection of ground water resources in **urban areas**.

The regulations contemplate a modified Risk-Based Corrective Action (RBCA) approach to managing areas that have been impacted by a release of hazardous materials. For specific questions about Rhode Island's new cleanup standards, call DEM's Greg Fine at (401) 277-3872 ext. 7129.

Certification: The state may issue covenants not to sue, which are transferrable with the property title, to voluntary parties and prospective purchasers who successfully complete cleanup. These parties also are protected from legal action brought against them by other responsible parties. The covenants also extend to lenders and others qualifying for the secured creditor exemption under CERCLA.

Responsible parties who report hazardous releases to DEM receive either a Letter of Responsibility, outlining what steps are necessary to investigate and/or clean up the site, or a Letter of Compliance, which states the DEM's finding that no action is necessary at the site.

Financial Assistance: Nothing available at this time.

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Vermont

Vermont's Contaminated Properties Redevelopment Program, signed into law in Spring 1995, began accepting applications for participation on January 1, 1996. The program is designed to handle low-

priority sites that would otherwise go unnoticed by the state. Vermont operates a Underground Storage Tank program rather than a state Superfund program, since 87 percent of its hazardous waste sites are from leaking underground petroleum tanks. Vermont's environmental enforcement officials historically have worked to remediate the remainder of the state's hazardous waste sites under the direction of the federal government.

Liability and PRPs: Liability is strict, joint, and several for PRPs. Only third parties (i.e., bona fide prospective purchasers) may seek relief from liability following successful corrective action at eligible sites.

Eligibility: Sites must not be under the jurisdiction of CERCLA, RCRA, or Vermont's Underground Storage Tank program. Only third parties, or prospective purchasers, may participate in the program. The state offers no liability relief for responsible parties.

Oversight: The Department of Conservation's (DEC) Hazardous Materials Management Division maintains oversight authority throughout the cleanup, including approval of site investigation work plans, on-site sample collections, corrective action work plans, and the corrective action itself.

Requirements from Participants: An initial application fee of \$500 is required for DEC review. Following acceptance into the program, participants make a \$5,000 deposit, from which costs are drawn. The state may recover additional costs for future oversight. Also, the state reserves the right to pursue cost recovery from responsible parties associated with the site.

Cleanup Standards: Cleanup standards associated with Vermont's Contaminated Properties Redevelopment Program are the same as those required under other DEC programs. Cleanups must comply with Vermont's Groundwater Protection Rules (currently under revision), which contain MCLs for Class III (i.e., potable) groundwater. The state has no soil cleanup standards at this time, and instead relies on EPA Region III's Risk-Based Tables for contaminated soils, as well as an interim soil guidance document that is based in part on the state's groundwater standards. Generally, cleanup standards are done on a site-by-site basis, with oversight by the state.

State Assurances: Following a successful site investigation and cleanup, the DEC issues to the third party prospective purchaser a Certificate of Completion, which releases him/her from liability for the contamination identified and remediated through the site investigation. Re-openers exist for contamination found subsequently on the site.

Financial Assistance: None available at this time. The state will seek budget authority to hire two full-time equivalents to manage the Contaminated Properties Redevelopment Program.

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Region II

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New Jersey

Industrial site cleanup and redevelopment are presently done under the authority of the Industrial Sites Recovery Act (ISRA), passed in 1993. ISRA replaced the state's longstanding Environmental Cleanup Responsibility Act (ECRA) of 1983, which served as a model for industrial site recovery in many other states throughout the 1980s.

Under ISRA, cleanups are conducted by voluntary parties, who may notify the Department of Environmental Protection and Energy (DEPE) of their remediation efforts at any stage of the cleanup. Oversight by the department is limited. A Memorandum of Agreement is submitted for approval by the DEPE once the cleanup is completed. If the cleanup is judged to be satisfactory, a no-further-action letter is issued; covenants-not-to-sue are not used in New Jersey. A Hazardous Waste Discharge Fund helps mitigate the costs of both site assessment and remediation. It consists of loans of up to \$1 million, at 5 percent interest for up to ten years. Further, communities with orphan sites can apply for grants or loans of up to \$2 million to conduct assessment and remediation at those sites; this program has been in place for 4-5 years and active cleanup sites number in the hundreds.

Liability and PRPs: The Memorandum of Agreement (MOA) contains no enforcement provisions, so volunteers may exit the program without fear of DEPE action. PRPs also may withdraw from the MOA without fear of enforcement actions, provided the site is a low priority for DEPE. If the site becomes a priority while it is under remediation, the cleanup party may be required to produce a schedule of compliance. Failure to demonstrate cooperation with the DEPE can trigger termination of the MOA and can institute an Agreement of Consent Order, which is enforceable. Liability depends on the particular enforcement program into which the site falls.

Eligibility: Sites must be a low DEPE priority to be eligible. Furthermore, neither sites regulated under LUST nor landfills are eligible. With exceptions, sites under a DEPE permit for remedial action are eligible. PRPs, as well as non-PRPs, are eligible.

Oversight: Where the scope of cleanup work to be done is not extensive, DEPE oversight of the site is limited. Under the Voluntary Cleanup Program, a cleanup party need only submit a remedial action report to DEPE if the cleanup involves soil contamination, and the cleanup effort takes less than five years. Where either groundwater contamination or a longer cleanup effort is involved, submittal of a remedial work plan also is required.

Oversight can be more extensive if the party so desires. For example, the party may enter into a MOA with DEPE, which outlines actions to be taken on-site and establishes a timetable for completion. The MOA may cover any facet of the cleanup process, from investigation to remediation. Points of oversight may include

- reviews of the preliminary assessment, which involves review of site history, and data on past discharges, past permits and enforcement actions;
- site investigation work plan and report, to determine what the existing contaminants are and which are present at levels above the acceptable thresholds;
- remedial investigation work plan and report, to extract a more detailed picture of the

- contamination on-site;
- remedial action work plan, including the cleanup levels to be achieved, and outlining the sorts of remedies to remove the extant contamination. Where applicable, it is to include a feasibility study and risk assessment; and
- remedial action report, to show the work done and the results achieved.

Public notice procedures depend on the nature of a site. Complicated cleanup efforts may involve the holding of meetings and public forums. Procedural standards for the stages are delineated in the DEPE's "technical requirements." If the resulting remedial action report is acceptable, DEPE may provide written assurances.

Requirements from Participants: Entrance into an MOA with DEPE is required, provided that the cleanup does not only involve soil remediation and does not take longer than five years. The MOA is a voluntary agreement that allows for termination by either party, and it contains no enforcement provisions: no penalties or financial assurances are stipulated. It outlines procedures and standards for the actions to be taken on site. Oversight costs are billed according to the number of staff hours spent on a particular project; the oversight rate averages about \$75/hr.

Cleanup Standards: Goals for soil cleanups are a risk reduction to 10⁻⁶ for carcinogens, and to a Hazard Index=1 for non-carcinogens. These levels may be reached by use of:

- **DEPE soil cleanup standards.** These are available under two alternate sets of exposure and inhalation assumptions, to reflect residential and industrial land use.
- **Impact-on-groundwater standards.** These apply for sites where groundwater is present, and they set the contaminant levels where, under the applicable migration assumptions, contamination of groundwater will not occur above the MCLs.
- **Site-specific standards.** The cleanup party may conduct a feasibility study and risk assessment to devise site-specific standards, which may be used if approved by DEPE.

Groundwater standards must reach the standards set by DEPE's technical requirements, which are for drinking water use and tend to reflect EPA's MCLs. Industry is advocating that the state establish a set of "2B" standards that would reflect industrial uses. Additional subsets of standards are applicable depending on the site. For example, "3B" standards may apply where water salinity makes groundwater unfit for drinking. Classification Exemption Areas apply to sites that are candidates for alternative groundwater cleanup remedies, such as well monitoring and pump-and-treat programs.

Engineering and institutional controls may be used where they are determined to be necessary to reach the necessary risk reduction goals. Historical contamination may be taken into consideration when deciding on cleanup standards.

Certification: For completed cleanups, parties may receive no-further-action letters from DEPE. These do not provide any explicit release from contamination liability, and they may be "reopened" if new information arises about contamination on a site, the remedy fails, or DEPE cleanup standards are raised above present standards by a level of one order of magnitude or more.

Financial Help: The Hazardous Discharge Site Grant Program has been appropriated \$55 million. Private parties may be eligible for loans of up to \$1 million at 5 percent interest, payable within ten years. Municipalities may be eligible for grants and loans of up to \$2 million per year for action on orphan sites or sites obtained through tax sale certificates.

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New York

A Voluntary Cleanup Program, launched in fall 1994, is administered by the New York State Department of Environmental Conservation (DEC). A "release from liability" is provided to parties that complete cleanup successfully; however, such releases are subject to re-opener provisions if the cleanup level is not appropriate to the site's intended use. This release does not guarantee exemption from possible EPA enforcement action, although the EPA has an informal agreement with DEC not to pursue action against program participants. So far, almost 30 voluntary agreements have been signed.

Liability and PRPs: Voluntary parties to a cleanup who choose to withdraw from the program are held in breach of contract and are subject to enforcement action by DEC, unless the agreement provides an "out" or the department otherwise agrees to the withdrawal.

Eligibility: Site eligibility is determined mainly by the interested party's relation to the site, rather than the program jurisdiction under which the site falls. Although NPL and RCRA sites are not eligible, LUST and State Superfund sites may be, as long as the applicant is not a PRP. Some PRPs may be eligible under certain situations. Lenders cleaning up sites to improve their collateral, municipalities foreclosing on sites to recover taxes, and Industrial Development Authority (IDA) financiers may qualify for the program.

Oversight: The DEC reviews initial applications from interested parties to determine eligibility for the program. Upon approval, DEC requests that it and the party enter into either an agreement or consent order that outlines the actions to be taken on the contaminated site. The agreement commences with the steps of the cleanup process that remain to be done. For example, if a party already has done investigation compliant with DEC standards, the agreement would start with a proposed remedial work plan. On the other hand, if no action has been taken at the site, the agreement would cover the initial investigation with remediation covered under a separate commitment document after the state of contamination is ascertained. Withdrawals are allowed upon department approval; however the site must be left no worse than it was at the beginning of the process.

Parties may not enter into the program after completion of the remedial planning stage, as the proposed cleanup must receive DEC approval before it can begin. Once the work plan has been approved and remedial action has been completed, the party must show that the proposed work plan was implemented successfully. If that is done, written assurances concerning the condition of the site are granted to the party.

Requirements from Participants: Participants are required to enter into an agreement or consent order, which specifies the following: (a) activities to be taken on the site so that DEC may deem it as having been properly remediated; (b) procedural guidelines to be followed in completing these activities; (c) a requirement allowing DEC staff access to and oversight of the site; (d) requirements for progress reports and reviews; (e) a "hold harmless" clause to the state; and (f) a provision for reimbursement of state oversight costs. Neither the agreement or consent order can address penalties assessed to the party for other obligations.

Cleanup Standards: Cleanup standards are determined on a case-by-case basis. Although no

numerical standards have been issued for the program, DEC's Soil Standards Guidelines may be used. Land use is also a factor when determining cleanup standards, and institutional controls may be required on a site depending upon risk assessment and feasibility study findings. Groundwater cleanup standards must be in compliance with the state's Groundwater Standards Regulations.

Certification: Upon approval of remediation activities taken, DEC issues the party a No Further Action (NFA) letter, which releases it from DEC remedial enforcement action relating to the contamination remediated. Re-openers apply in the following circumstances: (a) contamination not found in the site assessment is subsequently found; (b) the state/EPA adopts new, more stringent cleanup standards needed to maintain the site's safe use; (c) the remediation of the site is not deemed adequate for the property's intended use; (d) a future owner changes the use of the site to one requiring higher levels of remediation; or (e) information has been withheld from DEC or the party otherwise enters into the agreement or consent order in a fraudulent manner.

Financial Help: No financial assistance is available for these projects at this time.

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Puerto Rico

No program at this time.

Region III

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Delaware

Delaware has had a Voluntary Cleanup Program (VCP) in place for three years. In 1995, it was officially added to the state Superfund law through a statutory amendment. For the past year, the Delaware Department of Natural Resources and Environmental Control (DNREC) has been drafting regulations to clarify provisions of this new law. DNREC officials anticipate the rules will be final by October or November 1996.

Liability and PRPs: Liability is strict, joint, and several. PRPs include current owners and operators, past owners and operators, and any party responsible for generating and transporting waste to the site. Lenders and development authorities financing a site, or assuming ownership through loan default, are exempted, as long as they did not or do not become involved in managing the site. Local governments potentially are liable if they obtained a site through foreclosure, but they are not liable if the site was recovered due to the owner's tax delinquency. Both lenders and local governments may sell foreclosed property that is contaminated without triggering liability. Further, if they conduct or attempt to conduct cleanups without state supervision, it does not constitute "management" of the site.

Eligibility: Some restrictions apply, but their use often is subject to DNREC discretion. Ineligible are: (a) sites subject to LUST or RCRA; (b) sites affected by soil or groundwater contamination levels with a cancer risk greater than 10^{-4} or a hazard index equal to 1; (c) sites with a well contaminated at or above the MCL; (d) sites with soil or groundwater contamination within 300 feet of a public well or within 150 feet of a domestic well that DNREC determines has potential to contaminate the well; (e) sites where contamination affects a surface source of drinking water and contamination levels are at or above the MCLs; (f) sites where contamination affects surface water quality in excess of one order of magnitude over the ambient water quality; and (g) sites where there may be any other reasons that the DNREC deems sufficient to reject the party's involvement with the VCP.

Sites not under the jurisdiction of other programs, and with contamination exceeding the above-mentioned standards, are referred to the Hazardous Substances Cleanup Act (HSCA) program, which acts as the state's Superfund program. However, DNREC may allow these sites to take part in the VCP if it deems the cleanup party competent enough to carry out the cleanup. Further, a "deferral agreement" with EPA Region 3 allows DNREC to place potential NPL sites under the VCP if it deems the cleanup party competent to handle the cleanup.

Oversight: DNREC requests an application from the interested party and, upon approval, drafts an agreement with the party. Cleanup parties may enter the program before or after the site investigation stage, but not after the remedial plan stage. Parties are encouraged to enter the program at the earliest stage possible, as the department reserves the right to reject any previous investigations and studies done by the party if they do not conform to DNREC standard guidelines (for investigation, Phase I studies must conform to ASTM standards, and Phase II studies must conform to the Delaware Rules and Regulations on Facility Studies).

Upon approval of the investigation conducted at the site, the party then submits a remedial work plan. Upon completion of remedial activities, the party must submit all information showing that the cleanup was done according to plan and DNREC guidelines.

DNREC will only approve of work submitted by consultants that are fully qualified, meaning they must comply with the Professional Qualification Program. This program will be spelled out in the statute; details are to follow in the Fall 1996 rules.

Requirements from Participants: Eligible participants must sign an agreement with DNREC, outlining the work to be done on the site. Agreement provisions include: (a) a requirement to conduct all cleanups in accordance with HSCA regulations; (b) a requirement to follow all federal, state, and local laws and regulations; (c) a requirement to allow for site access and oversight by DNREC staff; (d) payment of all DNREC oversight costs; (e) a "hold harmless" clause to the state; (f) an "agreement termination" clause for both parties; and (g) a provision to indemnify the state. Agreement provisions must **not** include: (a) penalties for non-compliance; (b) public notice provisions; (c) a request for financial assistance; (d) strict liability provisions; or (e) dispute resolution during the Remedial Investigation/Feasibility Study (RI/FS) stage, although it may be applicable in the Remedial Design/Remedial Action (RD/RA) stage, if the participant requests it. Payment of oversight entails an

initial \$5,000 deposit, from which costs are drawn. Additional costs may be paid quarterly, at a rate of \$45 to \$65 per hour. The forthcoming regulations define the direct/indirect cost rate and the hourly rate of wages for state involvement.

Cleanup Standards: Parties have two options for selecting appropriate cleanup levels for the site. First, they may apply "trigger levels" derived from the EPA Region 3 Risk-Based Concentration Tables. These include a level of 10-6 cancer risk or Hazard Index=1, developed for nearly 600 chemical contaminants. Sites with contamination above trigger levels are required to perform further investigation, while sites below those levels (in both soil and groundwater) may receive an No Further Action (NFA) letter from DNREC. Or, the party may choose to apply site-specific cleanup standards. They also may take future land use into consideration (as separate standards for residential and industrial/commercial land are applicable), and may allow for institutional and engineering controls. Cleanups must reach a health-based risk assessment level of 10-5. When contaminants are limited, however, participants choosing not to conduct such an assessment may simply go ahead and clean the property to trigger levels. The new rules, due to be final in Fall 1996, establish DNREC's policy of giving equal weight to containment vs. treatment as a remedial option.

Certification: When investigated sites fall below trigger levels, DNREC may issue the party an NFA letter. Parties who have cleaned sites to health-based risk assessment levels or to trigger levels (whichever applies to the site), also may receive NFA letters. Such parties may further request that DNREC review and approve language in the property deed to confirm that the site has been cleaned. Contribution protection for prospective purchasers also is provided from liability under 7 Del. C. Chapter 91, HSCA, provided the purchaser signs a consent decree and provides assurances to the DNREC on the site's condition. New owners of remediated properties also may be given a Covenant-Not-to-Sue.

NFA letters do not apply to third party or federal action, although an "unwritten agreement" between EPA Region 3 and DNREC may reduce the likelihood of federal action.

Financial Assistance: There are four primary options for brownfields financial assistance in Delaware. First, there is a grant program administered through the Delaware Economic Development Office that offers to fund 50% of total costs, up to \$25,000, for brownfields site assessment and remediation. Second, for sites demonstrating development potential, tax credits covering up to the full cost of cleanup may be available. The tax credit amounts to \$500/year for each new job created through the redevelopment of a site, and it runs until the cost of cleanup has been recouped. Third, the Hazardous Substances Cleanup Act established a \$250,000 loan program to assist brownfields activities. Fourth, DNREC officials are currently working to expand the scope of an existing state revolving loan fund (which traditionally supported wastewater treatment activities) to include brownfields assessment and remediation.

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Maryland

Although no formal voluntary cleanup program exists at this time, the Maryland Department of Environment is able to enter into Voluntary Agreements and Orders at sites under the current statutory authority provided by the State's superfund law in Title 7 of the Environment Article, Annotated Code of Maryland. These agreements include prospective purchaser agreements.

The Department of the Environment will be drafting regulations that clarify and establish the following components of a voluntary cleanup program: 1) eligibility requirements; 2) the application process; 3) requirements for Voluntary Remediation Agreements and Orders; and 4) the types of letters that will be offered, including Final Closure Letters and Off-Site Determination Letters. The Department plans to propose these regulations by the end of 1996. The Department also plans to address cleanup standards through regulation at a later date.

Several important elements of a voluntary cleanup program, such as financial incentives, require legislative authorization. During the 1996 legislative session, two bills were introduced — one in the House, one in the Senate. Although both passed their legislative houses unanimously, the bills died in conference committee after time ran out. Governor Glendening has announced that brownfields will be one of his top legislative priorities during the 1997 legislative session, which begins in January and ends in April of 1997.

The Department has staff dedicated to voluntary cleanups. Anyone interested in these issues should contact the Department for the latest information as the situation will likely change during 1996 and 1997.

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Pennsylvania

Pennsylvania introduced in May 1995 a new site remediation initiative, called the Land Recycling Program (LRP). The program is administered by the Department of Natural Resources (DNR), which takes care of cleanup standards and oversight. The Department of Commerce (DOC) also participates by providing financial support for parties interested in conducting a voluntary cleanup. The LRP, as well as the two financing programs now available from DOC, were instituted by Senate Acts II, III, and IV (also referred to as SB 1, 11, and 12, respectively).

Liability and PRPs: For responsible parties, potential cleanup liability depends on the relevant enforcement statute. Sites under the state Superfund carry strict, joint, and several liability. Responsible parties with sites under other jurisdictions, such as the Solid Waste Management Act and the Clean Streams Act, face somewhat different liability provisions. Prospective purchasers and innocent landowners are not subject to any liability if they enter the program and are not required to be subject to an enforceable agreement. This is not the case with participants under the program's Special Industrial Areas section; these participants must enter into an enforceable agreement outlining the work

plan for the site. Financial institutions, economic development agencies, municipalities, and conservancies are not responsible for cleanups where they did not directly cause or contribute to site contamination.

Eligibility: To be eligible for the program, sites must not be under the federal CERCLA program, State Superfund, or LUST. RCRA sites may enter the program, although the guidelines applicable to these sites are EPA's own. Sites operating under a DNR permit may or may not be eligible, depending on the requirements imposed by the specific permit involved. Both PRPs and non-PRPs may participate in Pennsylvania's program.

Oversight: Oversight procedures vary according to which set of cleanup standards the interested party chooses. In the case of "background" or "statewide health" standards, oversight is limited to the requirement that parties notify DNR, the municipality in which the site is located, and the public of their intent to conduct a cleanup at the site and of the cleanup standards they intend to use. These parties also must submit a final report to DNR outlining the remedial activities accomplished at the site. Approval of investigation and remedial work plans is not required, and failure of the DNR to review and make a decision on final reports within 60 days of receipt results in automatic approval of the report. In addition, state environmental permits are waived during the remedial action period.

If site-specific standards are chosen, these projects are subject to greater DNR involvement, beginning with submission of an investigation work plan for the department's review. Once approved, site investigation may begin. The cleanup party conducts a risk assessment of the site to determine what sort of cleanup level is adequate, and the party submits it for DNR approval. The approved risk assessment is then addressed in a remedial work plan, also subject to DNR review and approval. Remedial actions begin upon approval of the work plan, and involve submission of a final report to DNR for final approval of the project.

For all three types of standards, public participation may be required by a request from a municipality within the first 30 days of the party's initial notification of intent. Within that time, the municipality may request the party to draft a public involvement plan, which may include notice requirements as well as public hearings.

Finally, special provisions may apply to orphan sites and sites in enterprise zones. Any party interested in such sites must conduct a site assessment and remediate any containerized wastes, or any wastes posing serious health risks, in accordance with any of the three cleanup standards noted above. The notable differences in these circumstances are that cleanup is limited only to the property at hand, rather than additional contamination adjacent to the property from migration, and that cleanup is required only on those portions of the site that are going to be used and that present the likelihood of human exposure.

Requirements from Participants: DER imposes cost recovery requirements for fees associated with reviewing site work plans and reports. The fees are \$250 for review of each requested work plan or report, with the exception of review of a site-specific final report, which amounts to \$500. As noted, participants also must address public participation and notification if it is raised as a concern.

Cleanup Standards: Three sets of standards exist to allow flexibility of cleanup remedies:

- *Background.* These are the most stringent standards, entailing restoration of the site to its condition before the contamination occurred.
- *Statewide health.* Risk assessment goals for cleanups must fall between 10-4 and 10-6, the lower range of risk reduction being reserved for non-residential sites, and the higher range for residential sites. Numerical thresholds for soil contamination are available for both categories of sites. For groundwater contamination, standards depend on whether the source is used for

drinking water or for agricultural purposes (in which case the relevant MCLs apply, or the lifetime health advisory levels when MCLs are not available for a contaminant), and whether the source is close to residential areas.

- *Site-specific.* The party may choose to undertake a detailed risk assessment of the site to achieve a site-specific remedy for the contamination. Risk reduction must be on the order of 10-4 to 10-6. Limitations on use of institutional and engineering controls are applicable, and standards achieved may be no lower than federal standards.

Given the recent passage of legislation enacting this program, a transitional provision exists that makes the cleanup standards now in place effective for up to three years after the date of the new law's enactment. This provision does not apply for groundwater contamination levels, or for background or site-specific standards, as all of these existing standards were incorporated into the new law, and are applicable from the date of the act's enactment. Further, these new standards do not affect cleanup efforts already underway through agreements of remediation with the DNR.

Certification: Compliance with DNR standards of remediation will result in a release of cleanup liability. Re-opener clauses apply in the following cases: (a) the DNR demonstrates that the executed remedy does not work; (b) contamination not previously found on the site is subsequently discovered, in levels that increase health risks beyond the applicable risk assessment standard; (c) stricter standards are adopted by DNR in the future (this does not apply for sites being remediated during the transition period); (d) land use of the site changes, causing the site's human exposure patterns to change; and (e) a discharge occurs on a non-industrial site after the effective date of the legislation enacting the program. This final condition applies only where engineering and institutional controls have been used exclusively and where it is now feasible to conduct remediation.

Financial Help: Along with the LRP enacting legislation, the state reformed the conditions under which financing is available. The Industrial Sites Reuse Program provides grants and loans to defray costs of site assessment and remediation. Total funds available for financing are \$17 million, \$5 million of which is set aside for grants. Eligible municipalities may receive grants and loans (if grant funds run out), while private parties may receive loans. No more than \$200,000 in state funding may be used in any one assessment project, and no more than \$1 million may be used in any one remediation project. The interest rate for the program loan is 2 percent, payable over 15 years. There is a 25 percent matching requirement for all grants and loans. The Infrastructure Development Program may be used for site remediation, clearance, and for new construction. Total funds available from this initiative amount to \$26.2 million, and loans may not exceed \$1.25 million per project. The applicable interest rate is 3 percent, also payable over 15 years.

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Virginia

Virginia's voluntary cleanup program significantly changed as a result of House Bill 1847, passed by the General Assembly in 1995, requiring promulgation of regulations for voluntary cleanups. The new

regulations, which must be approved by the governor-selected Waste Board, will be final by July 1997; in the interim, the state has operated a stopgap process to allow continued entry into the voluntary cleanup program. At present, 26 parties have signed voluntary remediation agreements under the statute. As many as 100 additional private parties are monitoring DEQ's efforts to decide upon entry into the program. DEQ has developed an internal guidance document that is being distributed to the public. For further information, you may contact the department's home page on the Internet world wide web at <http://www.deq.state.va.us>.

The General Assembly mandated that future regulations address:

- contaminated properties not subject to court or regulatory action under federal CERCLA and RCRA or state water, solid waste, or other environmental laws;
- parties subject to the agreements may include owners, operators, security interest holders, or prospective purchasers;
- cleanup standards that are site-specific, risk-based, and no more stringent than federal cleanup standards for soil, groundwater, and sediments;
- cleanup standards that take into account protection of human health and the environment; future land use, and surrounding properties; reasonably available cleanup and detection technology; available institutional or engineering controls that protect human health and the environment; and the natural background levels of hazardous constituents;
- reduced time and expense required for cleanup;
- provision of "certification of satisfactory completion of remediation" from the DEQ, suggesting that no further action is necessary to clean up existing contamination. Certification effectively gives liability immunity to responsible parties or prospective purchasers, but DEQ officials acknowledge that this certification in no way precludes future involvement by U.S. EPA in the site.
- registration fees to be paid by voluntary party (the lesser of \$5,000 or 1 percent of the cost of remediation); and
- site access to adjacent properties if necessary to complete cleanup.

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West Virginia

New program. Regulations to be written by July 1997.

Region IV

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Alabama

Alabama has had an informal voluntary cleanup program in place for nearly 15 years. Recently, though, the state Department of Environmental Management (DEM) has sought to formalize its program requirements through a guidance document entitled "Voluntary Cleanup Guidelines." This document, currently being reviewed by EPA Region 4, also contains a Memorandum of Agreement (MOA) between EPA and the state. The MOA, once signed, will essentially indicate that at sites where successful remediation under Alabama's program has occurred, EPA does not plan to initiate any federal action under CERCLA. It should be noted that the following program requirements, based on the draft "Voluntary Cleanup Guidelines," are not derived from regulations. Instead, they are administrative procedures based on existing, appropriate state statutes.

Liability: Liability is proportional.

Eligibility: Eligible sites include inactive or abandoned hazardous substances sites; sites where hazardous wastes have been disposed without interim status or permit; and sites with groundwater contamination. Ineligible sites include those on, or proposed for listing on, the National Priorities List (NPL); those that are permitted or have interim status under the State Hazardous Waste Law; those undergoing RCRA Corrective Action; and those subject to current, formal ADEM enforcement action.

Oversight: ADEM reviews assessment plans, provides limited oversight of field activities, and may do some confirmation of site sampling.

Requirements from Participants: Participants submit a written request to complete a voluntary cleanup, including a brief description of the site. ADEM reviews the request and either accepts or rejects the proposal. If the site is accepted, ADEM meets with the party and maps out a remedial work plan, including development of cleanup standards, extent of department oversight, and schedule of work.

Cleanup Standards: Cleanup standards are site-specific, risk-based, based on a determination of the property's end-use. Remediation must achieve a cancer risk level between 10⁻⁴ and 10⁻⁶.

Certification: When all assessment and/or cleanup activities have been completed, ADEM may issue a Notice of Completion. The Notice of Completion serves as ADEM's determination no further action is required at the site.

Financial Help: None available at this time.

Contact:

Dan Cooper

(Note: DEM numbers are expected to change in Fall 1996. Call the DEM switchboard at (334) 271-7700 for new listings.)

Georgia

Georgia's Hazardous Site Reuse and Redevelopment Act became effective July 1, 1996. Regulations are to be introduced to the Board of Natural Resources by Spring 1997. The following program elements are derived from the statute; certain aspects will be clarified upon promulgation of rules next year.

Liability and PRP's: Liability is strict, joint, and several, according to the Hazardous Site Response Act of 1992.

Eligibility: The program is not open to responsible parties, sites on the NPL, or sites subject to enforcement action.

Oversight: The 1996 statute does not provide a great deal of detail on departmental oversight procedures. These will be clarified in the forthcoming regulations. Currently, there is no fee structure in place for oversight costs. However, participants must reimburse the DNR any corrective action costs.

Requirements from Participants: The participant submits a corrective action plan to the DNR. The DNR offers comments on the plan and, when all information is complete, enters into a Administrative Consent Order with the party.

Cleanup Standards: Cleanups are conducted under the 1992 Hazardous Site Response Act.

Certification: The DNR will provide some sort of certification, although the exact type has not been determined yet. Covenants-not-to-sue will not be available. However, officials indicate that as long as a party is in compliance with the consent order, limitation on liability will be enjoyed.

Financial Help: None available.

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Florida

Florida does not have a formal voluntary cleanup program at this time. However, the Florida Department of Environmental Quality is considering the development of such a program in the near future.

Kentucky

A Brownfield program is forthcoming. Legislation passed in April 1996 to extend No Further Remediation letters to public entities.

Mississippi

No program at this time.

North Carolina

No program at this time.

South Carolina

South Carolina has had an informal voluntary cleanup in place for many years. The program operates under the South Carolina Hazardous Waste Management Act and is administered by the Department of Health and Environmental Control (DHEC). Currently, there are approximately 25-30 active sites.

Liability: Liability is strict, joint, and several. However, in practice, officials indicate that the approach is more case-by-case and often becomes proportional and causation-based.

Eligibility: The program is open to both responsible parties and innocent parties (i.e., third parties, prospective purchasers). Ineligible sites include those subject to enforcement action by DHEC and those operating under a permit, such as RCRA facilities. Sites containing underground storage tanks are addressed under a separate program.

Oversight: The department provides oversight of any site assessment activities and, if necessary, remedial actions. While there currently is no charge for DHEC oversight, department officials indicate that a fee structure will be in place by December 1996.

Requirements from Participants: Participants contact the DHEC and propose site assessment activities. When these activities are approved, the party and DHEC will enter into a contract. Where necessary, remediation will take place with department oversight. Participants may decide to drop out of the program at any time, although DHEC may opt to take enforcement action at its discretion.

Cleanup Standards: There are two primary options for cleanup in South Carolina. First, parties may conduct site-specific risk assessment. Second, parties may establish cleanup goals according to EPA Region 3's Risk-Based Concentration Levels. These levels may not be acceptable if there is a concern about contaminant transfer to air or groundwater. Cleanups must achieve a cancer risk reduction of 10⁻⁶.

Certification: When the party has successfully completed the agreed-upon scope of work, DHEC will issue a completion letter indicating that no further action is required at the site. At such time, DHEC also may issue a Covenant-Not-to-Sue.

Financial Help: No financial assistance available at this time.

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Tennessee

Tennessee's Voluntary Cleanup Oversight and Assistance Program (VOAP) was established in the Division of Superfund by an amendment to Part 2 of the Tennessee Hazardous Waste Management Act and is codified in TCA Section 68-212-224. The program allows willing and able parties to conduct investigations and cleanups of inactive hazardous substance sites with Departmental oversight after entering into a consent agreement. The consent agreement outlines steps to be taken for investigation, cleanup, monitoring, maintenance, and oversight cost reimbursement. Participants must pay a \$5,000 fee to enter the VOAP. Participation fees maintain a voluntary cleanup oversight and assistance fund used for program development and administration.

Liability: Tennessee's statute gives the commissioner the discretion and authorization to establish an allocation of liability in a consent order with a voluntary party and pay for the orphan shares out of the State's Remedial Action Fund. In assessing the party's apportioned share, the commissioner may consider equity issues, including, but not limited to, the following: monetary benefits derived from the disposal of hazardous substances at the site; the culpability of each liable party; and efforts of each liable party to restore the property to its natural condition. Since the Remedial Action Fund is used for high-priority sites in the enforcement program, fund use on lower priority voluntary cleanups would only occur in extraordinary circumstances. However, Tennessee does allow for multiple parties to form a response group which determines apportionment among themselves. All participating parties in the response group are listed in the consent order.

Eligibility: The VOAP was established to address inactive hazardous substance sites. A hazardous substance site is any site where hazardous substance disposal has occurred. While by definition petroleum is not a hazardous substance, a site that has had a petroleum release is not automatically excluded from the program. Acceptance of petroleum contaminated sites is done on a case by case basis and with approval of the state's Division of Underground Storage Tanks. Furthermore, disposal of hazardous substances cannot be an ongoing activity at the VOAP site. In light of this, site eligibility is based upon the following:

- The party must be able to conduct an investigation and cleanup;
- The party must enter into a consent order and agreement with the Department outlining steps to be taken for investigation, cleanup, monitoring and maintenance, and oversight cost reimbursement; and
- The party must pay the \$5,000 participation fee and reimburse the Department any expenditures from the Remedial Action Fund prior to the party's participation in the VOAP program.

Oversight: Parties that have entered into a consent order under the VOAP are provided with regulatory oversight from Tennessee's Department of Environment and Conservation.

Requirements from Participants: The voluntary party is required to pay a \$5,000 participation fee to enroll in the program.

Cleanup Standards: Risk assessments are conducted on a site-specific basis. In selecting containment and cleanup actions, the commissioner shall evaluate reasonable alternatives and select those actions necessary to protect human health, safety and the environment.

Certification: Upon completion of all terms and conditions agreed to in the consent order, the commissioner shall issue a letter to the voluntary party participating in the program. The letter will indicate that the party's obligations under the consent order have been completed and, if appropriate, that no further action will be required of the participating party. Covenants-not-sue are not available at this time. However, the Department is working on a state Memorandum of Agreement (MOA) whereby

EPA Region IV would refrain from taking action at any site that enters or completes the VOAP. There is no time frame as to when this agreement will be finalized.

Financial Help: No financial assistance available at this time.

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Chapter 5

Success Stories: A Look at Community Progress

Several case studies of actual remediation and redevelopment projects are presented below in order to provide a functional context to the extensive regulatory and legal information provided in this guidebook. Success stories from Akron, Ohio; Chicago, Illinois; Minneapolis, Minnesota; Fort Collins, Colorado; Mesa, Arizona; and Meadville, Pennsylvania bring to life the challenges encountered and creative solutions sought by communities facing brownfields blight. Given the interests of local economic development practitioners, each case study attempts to describe, in as much detail as possible, the financing aspects that helped make the project a success. In addition, background information on the problems, solutions, and regulatory framework is provided, as well as insights from the key players associated with impacts and lessons learned.

BF Goodrich Plants — Akron, Ohio

Key Players

- BF Goodrich — owner of property
- Covington Capital Corporation — investor and project manager

Background and Nature of the Problem

Akron, Ohio, once proclaimed the "rubber city," witnessed the decline of its significant industrial past in the 1970s and 1980s. BF Goodrich, the giant of Akron's industrial economy, gradually began to shut down its operations in the early 1980s. The company's world headquarters was reduced to a mere handful of buildings on the 38-acre property along the Ohio and Erie Canal. The company's plan was to raze the remaining, vacant structures and market the industrial parcel. With the BF Goodrich Tire Complex closed and slated for demolition, Akron's economy was threatened with instability.

Fortunately, Covington Capital Corporation realized the site's potential for successful redevelopment and convinced the company to postpone demolition. BF Goodrich, in hopes of a redevelopment project that would bolster Akron's economy, delayed destruction of the complex. In 1988, Covington Capital purchased several buildings, including a manufacturing plant with a total of 3.2 million square feet and began plans for redevelopment of the site into a business park, now known as Canal Place.

Meeting the Challenge

BF Goodrich cleaned the site, contaminated after more than a century of manufacturing use. Remediation required stripping the facilities of asbestos, retrofitting PCB-laden transformers, removing all underground storage tanks, and treating contaminated soil. Despite the complex's industrial history, cleanup was relatively problem-free.

With cleanup completed, BF Goodrich and Covington Capital jointly invested more than \$4 million to renovate the plant. A few buildings were demolished to make way for new construction, parking, and landscaping. The main office building, built in the Italian Renaissance style of the 1920s, was renovated and preserved as the centerpiece of the complex's redevelopment.

Regulatory Framework

BF Goodrich chose to conduct the site's abatement independent of any state voluntary cleanup program. The Mayor's Office of Economic Development was consulted briefly to guide the property's remediation. However, BF Goodrich preferred the absence of government intervention, in hopes of a timely and effective cleanup.

Financing

Although no municipal or state funds were secured, the city did support the project through low-cost power supplied from Akron's trash-burning plant. The city was well aware of the beneficial and lasting impact of the project. By 1990, Canal Place had already landed numerous tenants, and was using the incoming rents to finish renovating much of the remaining square footage.

Impact

Today, Canal Place is a highly successful business community, housing more than 140 companies and employing 1,800 people. Canal Place houses several different types of businesses, including computer companies, a banking facility, printing companies, architectural and engineering firms, security companies, telecommunications companies, law firms, a day care center, restaurants, and light industrial operations. More than 85 percent of the complex's square footage currently is leased.

In the general vicinity of Canal Place, economic growth has exploded. Established companies continue to move into the area, while new businesses are started regularly. Hotels and restaurants also are considering Akron's downtown as a viable location for business. Recently, the city approved funds to construct a baseball stadium for the Canton/Akron Indians two blocks north of Canal Place.

The area surrounding the Ohio and Erie Canal also has prospered from Canal Place's success. A new park and recreation area have been built, and the towpath along the canal is expected to undergo beautification in late 1996.

Canal Place, in light of its ongoing success, continues to consider the renovation of old structures that still lie empty. When BF Goodrich was readying the plant for demolition, several buildings at the northern end of the complex, which require considerable redevelopment efforts, had electrical lines cut and other infrastructural concerns removed. Canal Place Planning and Development, the redevelopment company, plans to tackle these structures once the complex's available square footage has been leased. These sites are to be marketed as investment opportunities for private parties considering Akron's downtown area. Canal Place hopes these buildings can be developed jointly as the final phase of this extensive project.

Lessons Learned

According to Ken Roberts, administrator of Canal Place Planning and Development, the key factors that contribute to a successful project of this nature are the tenacity to follow a vision through to the end and the ability to fund that vision. Those behind the Canal Place redevelopment were willing to persevere to carry their project forward. Also, they were willing to fund the project independently, without having to rely on city assistance.

Contact

Virginia Lee

AES Business Campus — Akron, Ohio

Key Players

- Mayor's Office of Economic Development, City of Akron, Ohio — acquired site at bankruptcy auction
- Tell Companies Limited — developer
- Advanced Elastomer Systems (AES) — anchor tenant

Background and Nature of the Problem

Buildings 40 and 41 of the former BF Goodrich Tire complex in Akron, Ohio, were sold by the corporation in 1984. A private developer purchased this 800,000 square-foot, two-building parcel, while the remainder of the plant was bought and redeveloped into the above-mentioned Canal Place. The buyer of this other complex, who had hoped for similar success, encountered none.

Shortly after the developer purchased the two buildings, environmental costs were assessed at \$2 to \$3 million. Due to this high cleanup cost, as well as the inability to secure future tenants, the developer was unable to obtain financing and was forced into bankruptcy. The property sat vacant for a considerable time, with the site's environmental status gradually deteriorating. At the bankruptcy auction, the lending institution, holding a \$600,000 loan on the project, refused to bid on the property for fear of implicating itself in liability issues. Instead, the Mayor's Office for Economic Development purchased the ten-acre industrial parcel in hopes of redeveloping the site.

Meeting the Challenge

An environmental audit conducted by the city in 1994 reconfirmed the presence of various contaminants. Several underground storage tanks had leaked, causing widespread soil contamination; the site also housed numerous drums containing PCB-contaminated oil products. Both buildings were found to contain friable asbestos and lead-based paint. Groundwater contamination also was identified.

Undertaking the cleanup of the property, the city removed the various storage tanks and drums, cleared the buildings of all friable asbestos, sandblasted the lead paint from the walls, and proceeded with soil treatment. However, complications arose. With a structure already in place, the city was incapable of excavating and treating contaminated soil below the foundation of the building. The USEPA permitted the site to exceed PCB cleanup standards since excavation would have undermined the building's structural integrity and possibly halted the project. Groundwater testing began in 1995 and revealed slight contamination. Working with the state's voluntary cleanup coordinator, the mayor's office decided to continue routine sampling throughout early 1996 but delay launching a full-scale groundwater treatment program until the state promulgates its new groundwater cleanup standards, expected to be approved by the fall 1996. At that time, the city hopes to move to site closure under the state's regulatory framework by securing a Covenant-Not-to Sue (CNTS) on behalf of the developer. Such a CNTS could prescribe a long-term groundwater monitoring plan, although city officials expect

that sampling will continue to show that contamination is minimal.

With both a developer and a major tenant secured, the site proceeded to the renovation phase in late 1994. The smaller Building 40, subject to extensive deterioration, was demolished to provide space for the complex's outdoor parking area. The Tell Companies, a real estate development firm on its flagship development project, proceeded to renovate the fifth and sixth floors of Building 41 for Advanced Elastomer Systems (AES), a leading polymer research company. With the AES's commitment to the redevelopment effort, the complex was christened the AES Business Campus. AES recently moved into its new 100,000 square-foot corporate headquarters. The Tell Companies will continue to develop the remaining floors for the influx of businesses that continue to settle in the Akron area.

Regulatory Framework

Projects undertaken by the Mayor's Office of Economic Development are supervised by the Ohio Environmental Protection Agency. For this project, several other agencies — including the Air Quality Management Agency and BUSTER, an underground storage tank cleanup agency — were involved in a coordinated remediation effort. Together, these entities swiftly produced a cleaned site ready for redevelopment.

Upon passage of the new law, Ohio EPA ran the voluntary cleanup program in an interim status, only promulgating rules to establish a fee structure to make the program self-funding and to put in place the certification programs necessary to facilitate site cleanups. By the fall of 1996, the state intends to gain legislative approval of its proposed criteria for eligibility in the program, soil and groundwater cleanup standards, and loans and tax abatements applying to sites cleaned up under the voluntary cleanup programs.

Financing

The Tell Companies secured \$22 million for the project's renovation, while the city contributed another \$4.5 million for environmental cleanup. The city's funding for this project was derived from tax-increment financing.

Impact

AES, a St. Louis-based company, is one of many to contribute to the hotbed of polymer research and development in the Akron area. For the city of Akron, AES's presence means 175 high-technology positions. The company is using 100,000 square feet on the fifth and sixth floors, and expects to expand by another 150,000 square feet within several years. Continuing development plans include installation of a child care center, a fitness facility, banking services, and restaurants within the complex. With space available, the Tell Companies continue to look for businesses interested in the AES complex, marketing the facility aggressively. Continuing projects of this nature promise to greatly enhance Akron's economic vitality.

The AES complex has created an open, campus-like setting adjacent to the National Heritage Corridor of the Ohio and Erie Canal, which runs through Akron. The city plans to make significant improvements in the canal front area adjoining the AES complex.

Lessons Learned

Without the solid partnership fostered between the city, the developer, the various agencies involved, and the company, Akron officials believe the project's success could not have been achieved. In

addition, the Tell Companies are marketing the historic and aesthetic setting of the 1925-era building, pointing out that space within the structure can be adapted for much less cost than new construction.

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Sears in Lawndale — Chicago, IL

Key Players

- Sears, Roebuck and Company — owner of property and primary financial partner
- The Shaw Company — development manager
- Dames and Moore — environmental consultant
- Chicago Department of Housing — overseer and subsidizer

Background and Nature of the Problem

The Lawndale section of Chicago has experienced a long decline. Since 1960, Lawndale has lost more than 60 percent of its population and over half of its housing. The area's economic vitality was further weakened when Sears, Roebuck and Company, Lawndale's defining institution, left Lawndale and moved its headquarters to its current location at the Sears Tower in 1973. Currently, the area's median household income, at approximately \$12,000 per year, is half that of the rest of Chicago, and Chicago officials estimate a 40 percent unemployment rate in the Lawndale section.

Sears had been involved in Lawndale since 1903, and the community had long been associated with the company. According to Kristen Dean of The Shaw Company, Lawndale is a "loyal community." Thus, a primary concern of Lawndale residents was whether the redevelopment of the 55- acre Sears property would significantly change the community's social composition. In order to avoid this, about 600 multi-income housing units were planned in concert with one-million square feet of commercial space for office and light industrial use. This plan was designed to bring jobs to Lawndale, while providing housing units priced according to the existing economic make-up of the community.

Sears and The Shaw Company developed a three-component revitalization plan — housing, commercial development, and community services — all based on the redevelopment of the Sears property, which was renamed Homan Square. In response to a market assessment that determined Lawndale most needed housing, that component of the plan was addressed first. The housing development was planned for four phases: the first has 74 low- to medium-income units for purchase and rental, and the second has 54 units for purchase, including 16 market-rate houses. The last two residential phases have yet to be designed. The market-rate units are planned in response to the desires of the "better off" residents of Lawndale, who feared that they would not qualify for the subsidies attached to the non-market rate houses.

Homan Square's central location should make it attractive for commercial investment. It is a ten-

minute drive to downtown Chicago, two blocks from an "el" mass transit stop and the Eisenhower Expressway, and three miles from St. Luke's Medical Center. The site has been designated a federal Empowerment Zone, gaining access to incentives that make Homan Square even more attractive to business. The developers will try to attract "major" employers who will provide secure jobs for the community. According to a *New York Times* report, commercial tenants will be obliged to hire a percentage of their employees from the Lawndale community.

The community service component of the revitalization strategy has yet to be developed. The developers wish to provide such services as a day care center, job training facilities, and a gymnasium. They are hoping to construct a new building for this purpose.

A major obstacle to the Homan Square development was the environmental contamination resulting from nearly 80 years of Sears operating a warehouse at the site. The residential development was hindered by the removal of asbestos and PCB ballast that contaminated the three-million square foot Catalog building that was demolished. Environmental problems of the commercial phase included asbestos and lead paint removal. The levels of remediation in these instances depended on future building use.

On two blocks of the site had been a Sears auto center, where BTEX contamination (a mixture of benzene, toluene, ethyl benzene, and xylene) from underground storage tanks was found. Several contractors excavated and removed the contaminated soil to landfills. The entire remediation was overseen by Dames and Moore, an environmental consulting firm based in St. Louis. The expedited manner in which these environmental problems were confronted prevented the expression of any serious concern from the community over potential health hazards.

Regulatory Framework

The remediation followed regulations laid out by the Illinois EPA and the Chicago Department of the Environment. The state laws regarding B-TEX remediation changed in February, 1992. This affected the project as the law was adjusted to accommodate the use of a risk assessment, with particular regard to the threat to groundwater. This change significantly reduced the cost of remediation as it ended the need to remove certain soils. The Chicago Department of the Environment acted as the agent of the federal government in this development by overseeing NEPA rules. This arrangement made sense since some funding came from the U.S. Department of Housing and Urban Development. HUD required a Finding of No Significant Environmental Impact (FONSEI) for the funds to be distributed. The master plan for the development had to be approved by the city before it could be implemented.

Financing

The project's funding has come primarily from Sears. Of the \$30 million spent, approximately \$1 million has gone to environmental remediation and a large portion of that amount covered landfill costs. The city paid for one-third of the cost of remediating contamination that existed under public domain during phase one of the development.

Each housing unit for purchase is subsidized by Sears for \$13,000. Furthermore, potential home buyers can apply for a subsidy from Chicago's Department of Housing. Under the department's New Homes for Chicago program, applicants with sufficient financial need qualify for a capital grant of \$20,000.

Harris Bank, LaSalle National Bank, and Old Kent Bank, all based in Chicago, are three major banks processing mortgages for potential home owners. One lender, Harris Bank, anticipates a 90 percent approval rate for applicants.

Impact

Of the five buildings on the site before the project began, all have been retained for commercial use, except the Catalog building, which has been demolished to provide space for residential development. Phase one of the housing development began early in 1994. These units began to be occupied in the fall of that year. As of June 1995, about 75 families were living on the site. More than half of the home buyers, and over 70 percent of the renters, are from the Lawndale community. To improve the quality of life for these residents, 24 percent of the land developed has been set aside for common green areas, including land donated to the city by Sears for the creation of a park. Furthermore, the Shaw Company undertook high-quality construction in order to show that the area is indeed rebounding.

Lessons Learned

Sears' redevelopment of its property exemplifies several lessons in brownfield redevelopment. It shows how redevelopment is easier when the prior owner and the developer are the same entity. The fact that Sears took the responsibility for redeveloping its own property, rather than selling or abandoning it, made the project more viable on three counts. First, it prevented any confusion over liability for environmental remediation as Sears is clearly the responsible party. Second, Sears took more pride in the quality of its redevelopment because of the company's strong ties to the community and Chicago. Third, Sears' familiarity with the community and the community's familiarity with Sears spawned high levels of cooperation. This redevelopment also shows the benefits of addressing environmental issues early in the development, a step that reduces the risk of encountering unexpected and costly contamination after construction has begun.

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Soo Line Railyard — Minneapolis, Minnesota

Key Players

- Minneapolis Community Development Agency (MCDA) — took title to facilitate prompt cleanup
- Soo Line — acquired site after bankruptcy of original owner
- Milwaukee Road — original owner

Background and Nature of the Problem

Around the turn of the century, the Milwaukee Road, a regional rail line, inhabited a 40-acre stretch of land in northern Minneapolis. During the 1960s and 1970s, the property was used primarily as a transfer point for rail cars, as well as for storage and repair work. The site also housed an auto marshalling yard, where automobiles were delivered from the factories and distributed to local

dealerships.

In 1986, after several years of persistent financial difficulties, Milwaukee Road declared bankruptcy. Legal proceedings required the property's sale to another railroad. The Soo Line railroad company purchased the site, while the auto marshalling yard was separately transferred and sold off to another buyer. Soo Line, in turn, promptly sold the property to the Minneapolis Community Development Agency (MCDA) for cleanup and redevelopment.

Meeting the Challenge

In hopes of assuring an effective cleanup effort, MCDA applied a "divide-and-conquer" strategy to the 40-acre site. It was divided into two 20-acre parcels — one clean, one contaminated. The clean parcel has been fully developed and currently houses several light industrial outfits, including a welding company, haberdashery, food processing plant, photographic company, graphic services firm, and air-conditioning and heating unit dealership.

The contaminated 20 acres were further broken down into four zones to facilitate cleanup. Two of the zones — the central and the western zones — encompassing less than five acres, were determined to meet environmental standards. Although a small pocket of contamination was discovered in the western zone, the MCDA was granted a letter of "no further action." However, the two remaining zones — the northern and southern zones — required considerable attention.

The southern zone, a seven-acre site, had once housed two above-ground storage tanks used for refueling. Much of this zone's petroleum-based contamination originated from storage tank leaks. The groundwater was found to be considerably affected. Bioremediation was undertaken, which involved the spraying of water into the soil to wash contaminants into the groundwater, and then the pumping of the groundwater into a bioremediation tank for treatment prior to recirculation. The abatement of the southern zone has been completed at a cost of \$2.5 million. The MCDA currently awaits site closure. The city has found a buyer for the southern site and is currently involved in negotiations with DC Sales, a distributing company.

The northern zone, consisting of ten acres, involved more troublesome contamination. Although the specific use of the northern zone has not been determined, city officials believe the site once served as a railroad roundhouse and may have been used for refueling activities. Heavy fuel oil product had seeped into the soil. In many places, standing pools of fuel oil were discovered. The MCDA has proceeded with cleanup procedures involving free product recovery, as well as air sparging, in which natural biodegradation is triggered by the spraying of air into the soil. This zone is two years into cleanup, with another year to a year and a half expected before completion. Cleanup costs for this segment have been estimated at \$2 million.

Regulatory Framework

Minneapolis is one of the earliest cities to set, as policy, the redevelopment of contaminated industrial sites within its boundaries. During the 1980s, sites were purchased through the Minneapolis Light Industry Land Acquisition Program, in which the city accepted responsibility for the site's environmental cleanup costs. Currently, sites are purchased directly by the Minneapolis Community Development Agency (MCDA). Through the state Volunteer Investigation and Cleanup Program (VIC), a transfer of property without a transfer of liability is possible. Thus, the polluter remains the responsible party despite MCDA activity on the site. The MCDA then can pursue reimbursement for cleanup costs from the responsible polluter. Under the VIC program, municipalities, private parties, and lenders are given this risk protection.

The state of Minnesota, through the Contaminated Sites Cleanup Program, recently appropriated funds — \$7.8 million — for cleanup of contaminated sites in an effort to refuel economic redevelopment. This measure became effective on July 1, 1995. The money is to be dispersed through competitive grants, which are then to be matched by local funds. Sites are subject to certain eligibility criteria, one being that a site cannot be designated a Superfund site. Three-quarters of these state appropriations have been earmarked for metropolitan cleanup sites, while the remaining fourth is intended for rural and suburban remediation sites.

To remedy the various problems surrounding the movement of economic development (involving new jobs and new housing) into outer-ring suburbs, the state has levied a cleanup/redevelopment tax on the Twin Cities metro area. The property tax creates a fund of approximately \$6.8 million per year, all of which is intended for site remediation grants to be distributed by the Metropolitan Council. Although no specific criteria have been written into the recently-enacted statute, eligibility requirements are being developed. The grants would be available to sites in Minneapolis and St. Paul and in the counties surrounding the two cities. The passing of this statute guarantees a considerable collection of funds for redevelopment and cleanup costs. Funds from this statute will be available for use following the tax collection in 1996.

Another recently-passed statute involves the intended use of a redevelopment site when judging cleanup standards. Although the Minnesota Pollution Control Agency (MPCA) had considered such factors in the past, the issue of "how clean is clean" is now determined in light of future site use.

In May 1995, MPCA and federal EPA's Region V office signed a memorandum of understanding that exempts purchasers of cleaned-up sites from any past liability on the federal level once the state has issued a certificate of completion, a letter of no further action, or a letter of no association. Although EPA previously had promised verbally to honor the state's liability exemption measures, private parties continued to be suspect of EPA intervention. With this clause now in writing, private parties have been more willing to undertake the development of contaminated sites. MPCA officials believe this agreement's impact will far outweigh the effects of various statutes recently passed in the Minnesota state legislature.

Financing

Funds for the Soo Line railyard were derived from a tax-increment financing (TIF) mechanism, known as hazardous waste subdistricting. This approach, authorized in 1988 and renewed in 1994 through a land write-down mechanism, utilized funds taken from the difference between the base assessment and the new increment after redevelopment. In order to utilize monies from this financing plan, the cleanup site must be approved by and under the supervision of the Minnesota Pollution Control Agency.

The MCDA also is pursuing reimbursement for the Soo Line project through the state's Petro Fund. The Petro Fund law requires petroleum companies to place a tax on their products into a fund to aid in the cleanup of petroleum tank leaks. This measure has been supported by the industry.

Impact

When cleanup of both the northern and southern zones is complete, MCDA expects developers to begin considering the other two zones, which have remained undeveloped — because of fears about spreading contamination and liability — since being declared suitable in 1988. With all 20 acres remediated, MCDA foresees considerable light industry redevelopment. A fulfilled project promises an influx of jobs, income, and economic vitality.

Lessons Learned

Larry Heinz of the MCDA firmly believes the long-term benefits of a cleanup project, like Soo Line, far outweigh the difficulties encountered in such an endeavor — railroad bureaucracy being one of the most frustrating. Future development activity on this property promises to more than repay the city for its investment.

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Wilensky Salvage Yard — Minneapolis, Minnesota

Key Players

- Minneapolis Community Development Agency (MCDA) — acquired site to expedite cleanup and reuse
- Minnesota Pollution Control Agency (MPCA) — oversaw cleanup effort
- Wilensky Salvage — original scrapyard owner
- Microtron — new site owner

Background and Nature of the Problem

The Wilensky Salvage Yard, located at 1200 North Washington Avenue in Minneapolis, has been one of MCDA's more recent redevelopment projects. For the past 50 years, the three-and-a-half-acre Washington Avenue property has served as an automobile scrapyard for the salvaging and disposal of auto parts. The property, owned by the Wilensky family, was purchased by MCDA, along with similarly used properties, in 1994.

The Wilensky Salvage Yard is part of the existing North Washington Industrial Park, which is largely blighted and under utilized. City officials would like to restore light industrial activity to the park, which has excellent transportation access to nearby interstate highways and the Minneapolis River Terminal on the Mississippi River.

Meeting the Challenge

An environmental audit conducted prior to purchase detected the presence of heavy metals and some petroleum-based soil contamination. In February 1995, cleanup efforts commenced. Several structures, including garages, sheds, and other minor buildings, were demolished and cleared from the site. The

petroleum contamination required the removal and incineration of the top three feet of the property's soil. Also undertaken were excavation, treatment, solidification, and removal of the heavy metals to an approved hazardous waste landfill. Groundwater contamination levels were assessed at levels satisfactory with state health concerns. In May 1995, cleanup efforts were completed, with the cost of remediation totaling \$900,000.

In June 1995, MPCA approved the site remediation activities and issued a letter of "no further action." Microtron, a minority-owned electronics company seeking to expand its Minneapolis-based operations, expressed interest in the property but was wary of the liability issues involved in the purchase of a cleanup site. To allay the company's fears, the city arranged for a letter of "no association." With this, the new purchaser was cleared from all liability for past contamination. Reassured, Microtron purchased the property and has since begun construction of a 65,000 square-foot facility.

Regulatory Framework

When planning to undertake a redevelopment effort, the MCDA conducts an environmental audit and a property appraisal prior to negotiating a selling price with the owner. A parcel's purchase price is determined by subtracting the estimated cleanup costs from the property's clean value. The private owner is offered the selling price, as well as an exemption from site liability. An environmental cleanup procedure, to be approved by MPCA, is compiled and carried out. A site's closure is approved by MPCA and a buyer is sought. The new purchaser is offered the parcel at its clean-property value and provided with an exclusion from liability.

Through the state's Volunteer Investigation and Cleanup Program (VIC), a transfer of property without a transfer of liability is possible; this can expedite reuse. Thus, the polluter remains the responsible party despite MCDA activity on the site. The MCDA can then pursue reimbursement for cleanup costs from the responsible polluter. Under the VIC program, municipalities, private parties, and lenders are given this risk protection.

Effective July 1, 1995, Minnesota, through the Contaminated Sites Cleanup Program, made available \$7.8 million of appropriated funds for cleanup of contaminated sites in an effort to refuel economic redevelopment. The money is dispersed through competitive grants that are then matched by local funds. Sites are subject to certain eligibility criteria; for example, they cannot be designated a Superfund site. Three-quarters of these state appropriations are targeted for metropolitan cleanup sites, with the remaining funds devoted to rural and suburban projects.

The state also has levied a cleanup/redevelopment tax on the Twin Cities metropolitan area in order to counter the various problems associated with urban sprawl. The property tax, beginning in 1996, will generate \$6.8 million per year, which is placed in a fund that provides site remediation grants distributed by the Metropolitan Council. Although the new statute contains no specific criteria, eligibility requirements are currently being developed. Grants are available to sites in the two cities and in the seven counties surrounding Minneapolis and St. Paul.

Another recently-passed statute directs MPCA to consider the intended use for a redevelopment site when judging cleanup standards. In May 1995, MPCA and EPA's Region V also signed an agreement exempting purchasers of cleanup sites from any past liability on the federal level once the state has issued a certificate of completion, a letter of no further action, or a letter of no association. With this new policy, private parties have been more willing to undertake the development of contaminated sites.

Financing

Funds for the Wilensky scrapyard project were raised through the hazardous waste subdistricting tax-

increment financing (TIF) mechanism established by special legislation in 1994. In this case, property tax revenues collected from businesses in the eight-block area surrounding Washington Avenue are devoted to this brownfield reuse effort. Thus, the city's completed redevelopment projects, as well as other businesses, contribute to on-going cleanup efforts within the district.

Although the city applied for state grant money, the absence of severe groundwater contamination disqualified the site for funding.

Impact

Microtron's redevelopment of the parcel is expected to retain 114 jobs and provide another 50 new positions, as well as contribute to the city's tax revenue. Moreover, Zipsort, a 150-employee premailing and packaging company housed in Microtron's current facility, has reconsidered plans to move out of Minneapolis. Microtron's expansion promises to afford Zipsort enough space to hire an additional 50 employees.

The city is hopeful that such successful redevelopment efforts will encourage other companies to consider the revamping of prior industrial sites as a viable business option. MCDA currently is negotiating the purchase of numerous under-utilized parcels in the vicinity of Washington Avenue in an effort to unite several smaller plots purchased from the Wilensky family. With a larger site, the city is confident of securing a major developer. With each completed project, the city is hopeful that this section of Minneapolis, now known as the North Washington Industrial Park, can be reborn as a center of economic vitality. When completed as planned, the industrial park will include 400,000 square feet of manufacturing space and provide nearly 1,000 jobs. The property's market value is expected to increase from its current \$2 million to approximately \$15 million.

Lessons Learned

MCDA's Patrick Connoy, director for this project, argues that cleanup efforts of this magnitude require solid financing. Municipalities, as well as private parties, need to possess the necessary funds prior to beginning such a project. He advises against depending upon government aid programs, which, complicated by the uncertainties of politics and bureaucracy, can threaten a project's success.

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Lone Star Steel Plant — Fort Collins, Colorado

Key Players

- Lone Star Steel — current owner of the idle manufacturing facility
- Colorado Department of Public Health and Environment — oversaw voluntary cleanup effort
- Temple and Petty Construction — new site owner

Background and Nature of the Challenge

Lone Star Steel, a Texas-based company, sought in 1994 to market its inactive Fort Collins, Colorado, plant. The property, a 12-acre parcel situated on the outskirts of the city, had undergone considerable manufacturing use. For more than two decades, the facility had been utilized for the manufacturing and finishing of steel piping. In 1962, Southwestern Pipe purchased the property and constructed a pipe-making facility. In 1970, the plant was acquired by Lone Star Steel, who continued manufacturing pipe until the plant's closure in the mid 1980s. After two owners and much manufacturing-related contamination, the property required cleanup. In order to secure a buyer for the site, Lone Star set to work to bring the plant within acceptable environmental standards.

Meeting the Challenge

In September 1994, Lone Star Steel submitted its remediation strategy to Colorado's Voluntary cleanup Program. With this plan approved, Lone Star began cleaning the facility's waste pits in November of 1994. These pits, used for the disposal of various manufacturing materials, were contaminated with manufacturing debris: scrap metal and machine cuttings, wood, concrete, and absorbent materials mixed with hydraulic oils. None contained hazardous waste covered by the Resource Conservation and Recovery Act (RCRA), although two pits contained PCB-contaminated materials. During site investigations, the company removed a total of 4,360 cubic yards of contaminated material from the site, including 160 cubic yards of high-level PCB-contaminated waste, which was taken to a hazardous waste landfill. Eight hundred cubic yards of fill and debris exhibited low-level PCB contamination—defined as below 50 parts per million PCBs—and was disposed at an industrial landfill. The remaining 3,400 cubic yards were classified as oily waste and dumped at a municipal landfill operated by Waste Management, Inc.

Low levels of hydrocarbons also were discovered in the groundwater at areas of the site away from the waste pits. After conducting a risk assessment and finding levels of BTEX (benzene, toluene, ethyl benzene, and xylene) too low to warrant remediation, the company filed a no-action petition with the state, agreeing to monitor the water table for a year after the site's abatement. In December 1994, after just a month of remediation, the site cleanup effort was considered complete.

Regulatory Framework

The cleanup effort was filed under Colorado's Voluntary cleanup Program, as established by the Voluntary cleanup and Development Act of 1994. Within this framework, the company's remediation plan was discussed, altered, and approved. A schedule and deadlines for the site's abatement were set. The program's structure allowed the project to move quickly and smoothly, with only a few pitfalls. Lone Star was the first site to be completed through the Colorado cleanup program.

Financing

Lone Star Steel spent more than \$200,000 on studies and analyses, and an additional \$250,000 for the cleanup effort. None of these funds came from cleanup grant or loan programs. With this private-sector investment in the Fort Collins plant, the facility was quickly sold and much of the company's cleanup funds recouped.

Impact

Following remediation, the site was purchased by Temple and Petty Construction, which proceeded with some minor demolition and extensive retrofitting of the facility. The site is now complete, and a number of tenants already have been secured for the future light-industry incubator complex, including electricians, contractors, a cold storage company, and a canvas-awning manufacturer. The complex, situated in the midst of an extensive high-technology industrial area where properly-zoned space is in high demand, has attracted much business interest. The finished facility promises to further contribute to Fort Collins' economic development.

Lessons Learned

For Leah Cooper, Manager of Environmental Projects at Lone Star Steel, the success of this endeavor originates with the support and assistance of Colorado's Voluntary Cleanup Program. With the program in place, Lone Star's remediation effort was easily coordinated in a timely fashion within the state cleanup requirements. Texas, the company's home state, recently passed similar legislation. Lone Star is using this new program to help remediate a site in Texas.

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Williams Air Force Base — Mesa, Arizona

Key Players

- Williams Economic Reuse Advisory Board — overseer
- Intergovernmental Agreement Group — owner and operator of airport
- ERT Master Planning Steering Committee — developer of education, research, and training complex
- Federal Aviation Administration (FAA) — financier

- Economic Development Administration (EDA) — financier
- Air Force Base Conversion Agency (AFBCA) — overseer responsible for environmental remedy

Background and Nature of the Problem

Williams Air Force Base was established in 1941 as an Army Air Corps Training Facility. In September 1993, the Air Force left the 4,042-acre base with its three 150-foot-wide parallel runways, 200 buildings, and approximately 700 single family housing units. The Williams site also offers 1,023 undeveloped or "unimproved" acres for industrial and commercial development.

The base had several environmental contaminants that the Air Force needed to address before it could be converted to civilian use. Several areas of the site were contaminated with fuel spills or underground storage tanks. A landfill left on the site required remediation. Asbestos and lead-based paint also pose problems.

Located 17 miles from Phoenix, Williams is easily accessible. It is five miles south of the Superstition Freeway and one-half mile south of the proposed San Tan Freeway. The site also is well served by a grid of arterial roads. The Southern Pacific Railroad provides rail access to Williams, with a line that nearly intersects the site's southwest corner.

Meeting the Challenge

When the federal government announced on July 12, 1991, that Williams Air Force Base would close, the region faced the loss of a major part of its economy. At peak operation, the Air Force employed 4,000 people at Williams. The Williams Air Force Base Economic Reuse Advisory Board, formed by the Arizona governor, began to develop a framework for accommodating possible future land uses at the base, with an emphasis on maintaining the site's importance as an economic contributor to the region. The board is comprised of nine representatives from the surrounding communities, Arizona State University, the Salt River Project, Arizona Department of Commerce, and Maricopa and Pinal Counties. In its Williams Air Force Base Economic Reuse plan, the board recommended the development of a civilian airport, to be called Williams Gateway Airport, on 3,300 acres of the site. On the remainder of the property, the board suggested developing an educational, research, and training (ERT) facility named Williams Campus.

When debating possible future uses for the areas without runway access, the board placed heavy consideration on the desires of the community. One of the most prevalent fears among local citizens was that the base would be converted to a federal prison or other facility that would not maximize the site's economic potential. The East Valley Thinktank, a local organization that addresses problems in education, proposed that the base be reused as an "educational mall," holding classes for kindergarten through the doctorate level.

The conveyance of the base to its civilian owners is contingent upon the remediation of the environmental contamination on the site. By federal statute, none of the property can be transferred until it has received a statement of no further action from EPA. Thus, before any buildings are occupied or any land developed, it must be inspected, and if contaminated, remediated.

Regulatory Framework

Environmental regulations did pose delays because the deed could not be transferred without a no-further-action letter. Of course, no renovations or development can begin until the deed is transferred.

In an effort to give communities the earliest access possible to closed bases so they can begin the economic redevelopment process, it is common for the sites to be leased to redevelopment authorities before the remediation is complete, even though renovations cannot begin until the deed is transferred. This practice has allowed progress to be made at Williams.

Several regulations allow property to be conveyed at no cost if it will be used for educational purposes or for a civilian airport. This significantly reduced the cost of the development of Williams Campus and Williams Gateway Airport. However, this did not extend to the Gila River tribe's acquisition of the base's golf course, as the no-cost conveyance regulations do not cover recreational uses.

Financing

The Williams Gateway Airport Authority has received funding from federal, state, and local agencies to cover the estimated \$253 million cost of redevelopment. The Department of Defense's Office of Economic Adjustment since 1992 has provided annual grants between \$300,000 and \$400,000, and it will continue to do so until 1996. These grants are used exclusively for planning and administration. Under its Title IX Sudden and Severe Economic Impact Program, the Economic Development Administration has provided about \$250,000 for the planning of utility systems. The Federal Aviation Administration has given approximately \$300,000 to the project as part of the Airport Master Plan Grant for the planning of the civilian airport. The Arizona Department of Commerce has granted \$350,000 for the marketing of the airport to prospective tenants. Collectively, the local governments have agreed to provide about \$5 million per year from their general funds for the last three years for operations and maintenance costs, and they will continue to do so until the airport breaks even, estimated to happen in 2015. The Williams Gateway Airport Authority further supports operations and maintenance costs from the profit the airport generates. In only its third year of operation, the airport is expected to generate income of about \$1.5 million.

All costs for environmental remediation were paid by DoD's Base Realignment and Closure (BRAC) account. This account is funded by annual congressional appropriations and by the proceeds from the sale of former military installations.

Impact

Williams Gateway Airport is currently in full operation, well ahead of production forecasts. Annual takeoffs and landings have increased to 130,000 from 114,000 in 1995. In 1996 the airport secured a major contract with McDonnell Douglas Corporation to run its Avionics Modification Program, which tests aircraft upgrades before expanding them to other airplanes. Already the project has created 1,000 jobs, and officials forecast a total of 17,000 jobs over the next 20 years. Seventeen companies have located at Williams, filling all but one of the site's original 40 buildings. Williams Campus also has begun to take form. ASU East currently leases three buildings and 100 houses from the Air Force. ASU's School of Technology has been moved to ASU East from the main campus, bringing 1,200 students to the site. ASU plans on moving its School of Agri-Business to ASU East as well; the university expects about 400 agri-business students at Williams by the fall of 1996.

Lessons Learned

Redevelopment of the Williams Air Force Base demonstrates the need for flexibility in brownfields planning. With the enormous number of regulations surrounding the reuse of a military base, players must adapt to the unexpected. In this case, the board had a reuse plan ready to implement when the Gila River tribe and homeless advocacy groups made their claims to the property. Though these claims

delayed development of the airport and campus, redevelopment authorities were able to accommodate these claims without drastically altering the substance of the original plans. This pleased all parties involved, as the tribe and homeless groups received their share while the development continued to move forward.

Utilizing existing facilities for redevelopment is another lesson that is particularly relevant to base reuse. Military bases usually have facilities that in their current form can be productively reused. This was certainly the case at Williams, as most of its buildings are being reused without modification.

The hierarchy of redevelopment authorities that was created for the reuse of Williams is another valuable lesson. From the Williams Air Force Base Economic Reuse Advisory Board appointed by the governor, to the Intergovernmental Agreement Group and the Education, Research, and Training Master Planning Steering Committee that shared responsibility for the redevelopment, to the community through meetings such as Public Information Workshops, multiple levels of authority were in place at Williams. This type of organization aided the redevelopment by involving many people and countless ideas. In 1996, the Williams Gateway Airport received the Facility of the Year Award from the National Association of Installation Development, an organization that focuses on military base reuse.

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Avtex Synthetic Fiber Plant — Meadville, Pennsylvania

Key Players

- Meadville Redevelopment Authority — redevelopment manager
- FMC Corporation — implementing environmental remedy
- PA Department of Environmental Resources — overseer
- Environmental Issues Management — environmental consultant
- U.S. Economic Development Administration — financier
- Pennsylvania Department of Commerce — financier

Background and Nature of the Problem

Meadville is a small community located in a depressed region of western Pennsylvania, about 40 miles south of Erie. The entire area, once filled with manufacturing and processing plants, is now in severe decline with closed factories and high unemployment. The Meadville Redevelopment Authority (MRA) has struggled for many years to attract industry back to Meadville and surrounding towns. Meadville still has intact rail links, and a trainable work force. It also has some seriously polluted industrial sites. Cleanup and reuse are high priorities for local and state agencies.

Redevelopment officials selected a former synthetic fiber manufacturing plant, northwest of Meadville,

as one of their larger projects. Several firms have occupied the site since the Vicoso Company began operations there in 1929; the FMC Corporation was there from 1963 to 1976, and Avtex Fibers Inc. bought the business in 1976 but began to phase out operations a few years later. The plant shut down completely in 1986, sacrificing 850 jobs and leaving the 300-acre complex, and over 1.4 million square feet of building space, empty. At its peak, the plant employed as many as 4,000 people.

The county in 1989 bought the western two thirds of the property and the main processing buildings, which it turned into the Crawford County Industrial Park (CCIP), now known as the William J. Bainbridge Technology Center. It leases the 125-acre parcel to the MRA, which runs the day-to-day operations and marketing. The eastern one third of the site currently is held by the bankruptcy trustee of Avtex, but it probably will be turned over to MRA by 1996 after it has been remediated. Remediation of the site was completed in October 1995. On August 6, 1996, the bankruptcy court ordered the property transferred to Crawford County Properties, Inc., a real estate holding corporation in the MRA office.

Meeting the Challenge

Renovations began almost immediately after the county purchased its parcel, which was the least contaminated portion of the property. The primary contamination MRA had to address was asbestos that covered the spinning machines used on the site. Once this was remediated, tenants began to occupy the site. According to Maryann Martin of MRA, the media played a large and helpful role in informing prospective tenants about the site, as news coverage of developments at the Center has been extensive. The Governor's Action Team, part of the Pennsylvania Department of Commerce, also has been helpful in finding tenants for the park. This team has matched companies in need of office or industrial space with the Center.

A primary impediment to reinvestment in the Center is the environmental problems on the property east of Broadway, the main access road into the center. The former owners of the plant burned coal and stockpiled fly ash, actions that elevated naturally-occurring arsenic levels in the soil. In addition, disposal of oil caused polychlorinated biphenyls (PCBs) to accumulate in the soil, and burning of certain types of debris caused carcinogenic polyaromatic hydrocarbons (PAHs) to do the same. USEPA inspected the site following its conversion into the Center and determined that the contamination was not extensive enough to warrant its involvement.

However, environmental difficulties were significant enough for the Pennsylvania Department of Environmental Resources (PADER) to name the area a state Superfund Site in 1990. In response, PADER proposed a remedy involving solvent extraction of PCB-contaminated soils, an experimental technology, and, in the event the solvent extraction failed, a contingency plan of excavation and off-site disposal. The agency also researched the site's prior occupants to determine who would be liable for the remediation, and found that Avtex had gone bankrupt and Vicoso no longer existed. PADER was able to identify two financially-viable potentially responsible parties. FMC was identified because it once owned and operated the facility. Hoechst Celanese Corporation (Celanese), a chemical company, was liable for some of the remediation costs based on its provision of acetate flake to the facility, which was found to be one of the contaminants at the site.

At an estimated cost of \$28 million for approximately four years of work, PADER's remediation plan was critiqued by several stakeholders, including FMC Corporation, Celanese, and MRA, which argued that the risk factors were inconsistent to the site's future use. They also objected to the plan's adverse impact on MRA's efforts to keep present tenants at the site and to attract further tenants. FMC contracted with Environmental Issues Management, Inc. (EIM) to help work with the community and elected officials to develop a cost-effective remedial plan that would be consistent with the site's future

use and be equally protective of human health. Once this was accomplished, FMC continued to advocate the alternative remedy to the community by working with community leaders, local businessmen, elected officials, and environmental consultants.

This educational effort included preparing fact sheets on both PADER's proposed remedy and the alternative proposed by FMC, Celanese, and MRA; assisting MRA prepare a presentation on the FMC/Celanese/MRA remedy to be used at PADER's public meeting; and hosting community meetings to discuss both proposals. As a result of these and other efforts, PADER reconsidered its initial proposal, accepted the FMC/Celanese/MRA remedy, and signed in March 1995 a consent order and agreement to implement that approach. This agreement allows tenants to continue their operations on the site, and it permits future expansion by providing locations where buildings could be constructed. At an estimated cost of \$5-10 million, implementation of the plan began in early May 1995, and was completed by December 1995.

Regulatory Framework

The regulations followed for this remediation were detailed under Pennsylvania's Hazardous Site Cleanup Act, the state's Superfund law that went into effect in 1990. The Avtex site, in fact, was first on the state Superfund list. Because Pennsylvania's Superfund regulations were more stringent than U.S. EPA's, the federal agency chose not to bring the site into the Superfund program, although it reserved the right to do so. PADER's strict adherence to the Hazardous Site Cleanup Act made it difficult for MRA, FMC, and Celanese to commit to the proposed cleanup plans. This conflict was resolved by FMC's public participation efforts and a change in agency leadership that brought in officials who seemed more willing to consider a less expensive remediation plan.

The state legislature in June 1995 passed Senate Bills 1, 12, and 13. These bills accomplished three things: they limited the liability of entities willing to redevelop contaminated property but did not cause the contamination; provided funding for site assessment and remediation; and establish a deed covenant that restricts the property's future use and forces those who wish to go outside of those restrictions to ensure the site's proposed new use is protective of human health and the environment. The Avtex project embodied the underlying principles of the new bills, even though these bills were passed after remediation had begun at the Center.

The site's reuse limitations, outlined in the Consent Order and Agreement, restrict the use of remediated areas, unless they are paved or sufficiently capped with clean soil, to industrial use and recreational exposure patterns. Certain areas on the site, such as those impacted by PCBs, will be restricted to industrial use and exposure patterns regardless of the required pavement. Use of the fly ash disposal area, once remediated, will be unrestricted, except to prevent the disturbance of the soil cover.

Financing

Public resources have proven essential to this project. Funding for this redevelopment has come primarily from federal Economic Development Administration (EDA) grants. MRA received three awards from EDA, two for \$1 million dollars each and one for \$700,000, which covered 50 percent of the costs of the renovation of buildings on the site and infrastructure improvements. MRA paid the remainder.

MRA also received funding through state programs. The Pennsylvania Department of Commerce, through the Industrial Communities Site Program, granted \$300,000 for MRA to upgrade the main road that bisects the site. That agency's Industrial Communities Action Program also funded this development through three grants of \$700,000, \$220,000 and \$175,000, a large part of which was used

to rebuild many of the roofs on the site. A rail link to the Center is under renovation, using two grants totalling about \$250,000 from the Pennsylvania Department of Transportation.

The state also has provided loans for the tenants on the site. The Pennsylvania Industrial Authority loans these businesses money at a lower interest rate than banks. However, the tenants must couple their state loans with loans from private investors, and the tenants must invest their own capital in their business in order to receive the state loans. Some of these loans came from the Sunnyday Fund and the Capital Loan Fund. The Sunnyday Fund provides capital for large companies capable of creating a high number of jobs, and the Capital Loan Fund provides money for businesses to invest in equipment, infrastructure improvements, and working capital.

The environmental remediation was funded by FMC and Hoechst Celanese, the only financially viable PRPs identified by PADER. By the time remediation is finished, it is estimated that FMC will have paid between \$5 million and \$10 million and Hoechst-Celanese \$500,000. PADER holds MRA responsible for the operation and maintenance costs associated with the site and its remediation.

Impacts

Prior to the beginning of the remedial operations, 800,000 square feet of space were renovated. This space now houses 19 businesses with more than 1,200 jobs. The payroll at the site exceeds \$10 million, and taxes generated by the Center for the local municipalities amount to nearly \$4 million per year. The park has brought international investment to the area, with companies based in Japan and England locating at the Center. Other firms at the site include motor products services, international packaging firms, screw manufacturing companies, and day care services.

With such a broad range of industries located at the Center, there was a need to upgrade significantly the transportation system to and from the site. The main access road, Broadway, was improved to handle the stresses of heavy truck traffic. Also, MRA purchased for one dollar and later upgraded the Vallonia Branch Railroad, a 1.1 mile track that Conrail abandoned. With a federal surplus locomotive engine purchased for \$6,000, MRA made its first delivery to the Center by rail on February 20, 1995. The shipment consisted of plastic pellets that Andover Industries, Inc. used in its plastic injection mold process to manufacture truck door panels.

As the centerpiece for the the Center's economic development, a three-story building is being renovated for use as the Technology Center. Key to this renovation, fiber optic cabling was installed; attracted to this high-technology redevelopment, the National Institute of Flexible Manufacturing (NIFM) was the first tenant to occupy the Technology Center. This is particularly significant to the Meadville area, as NIFM was launched to fit the needs of the tool and die industry, an important part of Meadville's economy. MRA is constructing an amphitheater that will be used as a multimedia communications center.

Lessons Learned

The Avtex project demonstrates the benefits of high levels of cooperation between public- and private-sector individuals on a brownfield redevelopment. The site's development almost certainly would have followed a different course — or halted altogether — had PADER refused to consider alternative remediation proposals. First of all, tenants at the site would have been displaced had the PADER plan been put into effect. This would have halted the progress MRA made in attracting businesses to the site, placing the redevelopment years behind where it is now. Furthermore, by implementing the alternative remedy, all parties who contributed to the cost of the cleanup, including PADER, saved a significant amount of money without compromising public health or environmental protection. By working

together, MRA, FMC, and Celanese not only were able to gain PADER's support for the alternative remedy, they informed tenants and the community of the nature of the site's environmental conditions and the proposed remedies. That this was an effective cooperative effort between all parties is proven by the lack of inquiries and complaints that PADER has received about the site.

MRA's decision to cater to businesses relying on state-of-the-art technological equipment, such as fiber optics, made the Center unique among industrial parks. MRA saved NIFM the cost of installing essential high technology features. NIFM, in turn, has become a stable employer at the Center, and will generate more business for the Meadville area through its operational and educational functions.

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Appendix B

Federal Legislative Proposals for Industrial Site Cleanup and Redevelopment October 1996

Congressional efforts to reauthorize and reform the federal Superfund program have provided the context for ongoing discussion of brownfield cleanup and redevelopment. Because of the relationship between brownfields and the Superfund program, and the key issue of liability in particular, it is likely that brownfields legislation will face fewer obstacles as part of a successful congressional effort in moving and passing a Superfund bill than if free-standing brownfields legislation is pursued independent of Superfund. Toward that end, the brownfields issue enjoys bipartisan support in Congress, perhaps because it represents to many a viable marriage of efforts to promote both environmental protection and economic development. Federal brownfields legislative proposals, for the most part, have focused on setting standards for state brownfields programs, providing funding in the form of grants or loans to facilitate assessment or cleanup of brownfields, proscribing limits to lender liability, and offering additional financial assistance tools available to the public- and private-sectors to boost cleanup and redevelopment efforts.

Nevertheless, serious consideration of brownfields legislation likely will occur only after the congressional committees having jurisdiction over Superfund reauthorization resolve some of the following major reform issues.

1. Liability

Superfund's current liability scheme provides for strict, joint, and several liability for parties responsible for a cleanup. Critics of this liability standard hold that it is unfair, especially to small businesses and *de minimus* contributors to hazardous waste sites, but also to companies that disposed of waste legally prior to the 1980 passage of Superfund. Their objectives are to repeal retroactive liability entirely; exempt *de minimus*, small business, and municipal contributors from cleanup actions; and allocate costs among responsible parties according to amount of hazardous materials they contributed to a site.

Supporters of the current system argue that Superfund's liability framework offers several advantages because it: requires those responsible for hazardous waste discharges to remediate them; acts as an incentive for companies to handle hazardous materials properly and safely in order to avoid accidents and releases; and protects human health and the environment. Perhaps most importantly, however, is the fear among supporters that, were retroactive liability repealed, state and local government and taxpayers would be required to find the funding for cleanups. According to U.S. EPA, more than 75

percent of all cleanups are being conducted by responsible private parties, who have committed more than \$10 billion. The National Governors' Association, the National League of Cities, the U.S. Conference of Mayors, the Association of Attorneys General, and the Association of State and Territorial Waste Management Officials are among those supporting retroactive liability in Superfund.

In an attempt to curtail burdens to small businesses but to preserve Superfund's incentives, some experts and members of Congress have proposed a partial repeal of the current liability framework. Partial repeal could evolve into some type of a system where truly responsible parties would remain liable for cleanups; strict, joint, and several liability is retained; mediation would be used to expedite cleanups; municipalities and other *de minimus* contributors to a site would be offered expedited settlements and caps on liabilities; and many small business interests would be removed from the system altogether.

As discussed earlier, the current liability system also is blamed for the underutilization or abandonment of former industrial sites, since liability extends to both current and past owners. Superfund's critics say the brownfields problem could be resolved by offering prospective purchasers of brownfields full protection from liability for pollution found at the site. Currently, they argue, such prospective purchasers and other developers generally choose to develop greenfield locations, where the threat of contamination is drastically reduced or non-existent. Proponents of the Superfund liability system, however, contend the law acts ultimately as a regulatory hammer, and thus encourages parties to participate in state voluntary cleanup programs.

2. Overlapping Authorities of Federal and State Agencies

In this era of defederalization, many Superfund critics advocate increasing state responsibility for implementing cleanup programs. To date, every state but Nebraska has its own Superfund program that meets or exceeds federal standards. A May 1995 estimate by the Clinton Administration and states themselves showed that only about 20-25 states would be staffed suitably and willing to accept full authority and oversight for cleanups. This estimate is important in the context of brownfields cleanup efforts because it suggests that only about half the states have created a climate conducive to these types of efforts. Among the elements critical to a state's ability to foster interest and support for brownfields cleanup and redevelopment are adequate resources and staffing to run the program, financial assurances available in the event that the state is compelled to complete cleanups or other obligations, and a track record suggesting success in bringing private parties into the program to undertake cleanup actions. This framework, in turn, buttresses the ability of local government to demonstrate an attractive context in which business can invest cleanup and redevelopment dollars. Not surprisingly, it is usually the states most experienced in running successful Superfund programs that also have the most advanced brownfields cleanup and redevelopment programs.

As discussed earlier, the Superfund program often is criticized for slowing down cleanups due to overlapping authority by state and federal agencies. While states currently oversee and manage cleanups at the vast majority of sites, the federal government retains the "final say" on whether cleanups are complete or satisfactory. (Washington, of course, also maintains access to the Superfund Trust Fund.) Critics argue that states taking the lead on designing cleanups, selecting remedies, and overseeing projects often are penalized by the federal government, which can step in at any point and seek to reopen a particular case.

3. Cleanup Standards and Remedy Selections

"How clean is clean enough?" is a question asked by all stakeholders in Superfund reform, and one with many answers. Critics assert that EPA requires that sites be cleaned to unrealistically pristine levels, which takes too long and costs too much, especially given the historically industrial use of many of these sites. According to EPA, however, the types of cleanups accomplished at Superfund sites to date are split relatively evenly among the broad categories of cleanup standards: industrial (34 percent); commercial (24 percent); recreational or agricultural (16 percent); and residential (26 percent).

Congress will consider several approaches to reducing the time, cost, and controversy associated with the current process of selecting remedies for sites, especially for those sites burdened with only mild contamination. A proposal by Rep. Michael Oxley (R-OH), chairman of the House Subcommittee on Commerce, Trade, and Hazardous Materials, would eliminate CERCLA §121's focus on the preference for cleanups that are permanent in nature and involve treatment, rather than containment or other approaches that would control exposure to hazardous waste. Rep. Oxley's proposal would direct EPA to "consider all options for addressing contamination at a site, including containment, treatment, institutional controls, natural attenuation, or a combination of these alternatives." In addition, the bill would place a greater emphasis on remedy selections based on the reasonableness of the cost, weighed against the incremental increase realized in protecting human health and the environment.

Rep. Oxley's approach, again, reflects the assertion by some states that federal regulators sometimes are insensitive to the costs associated with remedy selections. It also would allow EPA to establish generic or presumptive cleanup remedies, a move intended to save time and money; this step, however, would require an understanding of site-specific circumstances, no matter how "typical" the contamination scenario seems. Sites with underground storage tanks, which characterize many brownfields, are thought to be candidates for generic or presumptive remedies. Some experts, however, predict that the cost savings anticipated from pursuing this approach will not necessarily materialize, given the public's inherent mistrust of off-the-shelf remedies selected for sites affecting them.

Below are some of the other legislative proposals introduced in the 104th Congress.

House of Representatives 104th Congress

H.R. 200, The Lender and Fiduciary Fairness in Liability Act of 1995

- introduced on January 5, 1995, by Reps. Fred Upton (R-MI) and Billy Tauzin (R-LA).
- shelters "innocent landowners" from Superfund liability if they acquire property subsequently found to be contaminated (this provision clarifies Superfund's current secured creditor exemption); shelters lenders and lending institutions from Superfund liability unless they participate actively in the management of an organization subsequently found to be liable.
- same bill introduced in 1994 had 300 co-sponsors and became part of the Superfund reauthorization bill, which was not enacted.

H.R. 1297, The New Urban Agenda Act of 1995

- introduced on March 22, 1995, by Rep. Christopher Shays (R-CT).
- economic growth bill for cities.
- Title IV requires the president to identify contaminated facilities in distressed urban areas and to conduct a study of appropriate response actions.
- Title V would establish liability exemptions for municipalities acquiring brownfields.

H.R. 1381, The Comprehensive Economic and Environmental Recovery Act of 1995

- introduced April 3, 1995, by Rep. Carrie Meek (D-FL).
- Title I seeks to increase the pace of cleanup by establishing a loan program to help conduct voluntary cleanups and return contaminated sites to "economically productive or other beneficial uses."
- seeks \$10 million annually from the Superfund Trust Fund for a "Cleanup Loan Fund"; loans made on this fund shall not exceed \$750,000. Loan maturity term is up to ten years.
- Title II would create a National Environmental Business Development Program to develop "environmental jobs and business opportunities" in targeted urban areas through changes to the Internal Revenue Code; new, small environmental businesses would be tax-exempt for one calendar year upon start-up.
- Title III would require the Department of Labor and EPA to establish a national job training program for targeted urban area residents to be trained in environmental and emergency response careers; it also would offer grants to public agencies and nonprofits to teach and certify such individuals.

H.R. 1620, Brownfield Cleanup and Redevelopment Revolving Loan Fund Pilot Project Act of 1995

- introduced May 11, 1995, by Reps. Ralph Regula (R-OH) and Peter Visclosky (D-IN).
- establishes a three-year state revolving loan fund (RLF); \$5 million would be authorized for fiscal 1996, and \$7.5 million for both fiscal 1997 and 1998.
- to qualify for such capitalization loan, state applications to EPA administrator must include, at a minimum, evidence of active brownfields cleanup program; opportunity for public participation; sufficient technical assistance; oversight to ensure cleanups comply with federal and state laws; and certification to owner and prospective purchaser that cleanup is complete.
- state must match loan with at least a 20 percent share of the cleanup cost from new or existing state resources.
- state must submit description of how RLF would be used and show its ability to repay within five years;
- public and private parties conducting cleanups are eligible for loans if they cannot get loans from private lenders or other sources;
- loan priority is given to facilities that are to be reused for industrial purposes, that employ

environmentally-sound practices, and that will generate jobs for contractors or workers whose principal place of business is the political subdivision in which the facility is located;

- loans cannot be used for new construction, environmental fines or penalties, speculative assessments, or rehabilitation at facilities with little or no potential for economic redevelopment, or other activities determined by the EPA administrator.

H.R. 1621, Brownfield Cleanup and Redevelopment Act

- introduced on May 11, 1995, by Reps. Regula and Visclosky.
- EPA certifies state cleanup programs every two years, thereby giving them authority over the cleanup, provided they meet certain criteria, including: site is not a Superfund site; program provides for public participation in cleanup plans; program provides technical assistance throughout each voluntary cleanup; provides oversight and enforcement authority so that cleanups comply with federal and state laws; provides certification to owner or prospective purchaser that cleanup is complete; and exempts eligible facility from local, state, and federal permits for the cleanup action as long as cleanup is carried out according to the state certified program.

H.R. 1799, (no title at this time)

- introduced on June 8, 1995, by Rep. Philip English (R-PA), and original cosponsors Reps. Jerry Weller (R-IL), Gary Ackerman (D-NY), and Peter Blute (R-MA)
- would establish two types of tax incentives to encourage cleanup of contaminated sites: a credit to help offset the costs of cleanup, and tax-exempt bond financing for remediation activities.

Tax Credit Portion of H.R. 1799:

- would establish a tax credit equal to 40 percent of remediation costs incurred for cleanup activities carried out according to a plan approved by EPA or its designated agency.
- places an annual national limit of \$200 million on the amount of credits available.
- EPA or its designated agency must certify that the proposed remediation plan has been completed; then, the 40 percent credit is taken over a five-year period starting with the year in which the plan was completed.
- an "extraordinary cost increase" escape hatch is available to owners where unforeseen circumstances push the cost of remediation to more than 200 percent of the original cost estimate; the credit is available for costs incurred until the plan is suspended, once agency approval for cessation is received.
- the credit would be available only in states HUD designates as having established environmental credit remediation programs that include procedures for site assessment, a credit allocation plan, and non-federal matching resources for site remediation.
- sites eligible for credits must: not have been in "productive use" for at least one year; not likely to be redeveloped without the credit; have a "strong likelihood" for reuse in a way that generates jobs and tax revenue; and have remediation and reuse activities completed within "a reasonable period of time."

Tax-Exempt Bond Financing Portion of H.R. 1799:

- establishes tax-exempt "qualified contaminated site remediation bonds" as a financing mechanism that can be used to acquire or clean contaminated sites (presumably within the confines of volume caps and bond limits, except that the restriction against land acquisition will not apply to these bonds).

H.R. 2178, (no title at this time)

- introduced on August 3, 1995, by Reps. Sherrod Brown (D-OH), Richard Gephardt (D- MO), and John Dingell (D-MI).
 - would establish a federal financing mechanism for brownfield initiatives by earmarking a small portion of the Superfund Trust Fund for grants and loans to communities.
 - sets aside \$90 million in loans over three years for site assessments and cleanups; could be used by cities and development authorities to establish local revolving loan funds, with loan monies repayable to the federal government after ten years.
 - sets aside \$45 million in grants over three years for communities to carry out site assessments.
 - grants and loans would be awarded competitively based on their capacity to stimulate jobs, as well as the amount of local participation and financial support.
 - Superfund liability provisions would be amended to clarify and absolve liability for lenders and prospective purchasers.
-

Senate 104th Congress

S. 17, The New Urban Agenda Act of 1995

- introduced on January 5, 1995, by Sens. Arlen Specter (R-PA) and Carol Moseley-Braun (D-IL).
- similar to H.R. 1297.
- would establish liability exemptions for municipalities acquiring brownfields.
- bill embodies recommendations by mayors (mayor of Philadelphia, in particular).

BROWNFIELDS

STATE OF THE STATES

An End-of-Session Review of Initiatives and Program Impacts in the 50 States

Charles Bartsch

Senior Policy Analyst for Sustainable Development Studies
and

Rachel Deane

Research Assistant

NORTHEAST-MIDWEST INSTITUTE

Fifth Annual Edition – December 2002

Northeast-Midwest Institute

The Center for Regional Policy

The Northeast-Midwest Institute, a non-profit policy center, engages in research and education to promote the region's economic development and to enhance the quality of its environmental and human resources. It conducts research, develops public policies, analyzes public programs and their impacts, provides technical assistance, sponsors regional conferences, and distributes publications.

The Institute is unique among Washington policy centers because of its close working relationship with the Northeast-Midwest Congressional and Senate Coalitions. Founded in 1976, the Congressional Coalition, co-chaired by Reps. Marty Meehan (D-MA) and Jack Quinn (R-NY), is a bipartisan group of over 100 representatives who recognize the common problems facing their states. The Northeast-Midwest Senate Coalition, formed in 1978, is co-chaired by Sens. Susan Collins (R-ME) and Jack Reed (D-RI). Together the Coalitions seek to inform members of Congress about the impact of federal legislation and build consensus on issues of regional importance.

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ISBN:1-882061-89-6

BROWNFIELDS STATE OF THE STATES - 2002

WHAT'S HAPPENED IN THE 50 STATES THIS YEAR?

by

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and

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Research Assistant

The *Brownfields State of the States* report continues to receive wide national circulation. As the report notes, elected officials and program staff across the country have endeavored to make certain that their programs reflect local brownfield project needs, run smoothly, and take advantage of opportunities to tie brownfield cleanup and redevelopment assistance with regulatory incentives. This updated report highlights their successes and challenges over the past year.

During 2002, many varied – but equally effective – approaches have been put into place to meet the multiple challenges and common objectives of brownfield reuse. Several states have implemented new legislative changes to encourage cleanups. For instance, **Florida** passed legislation that modified the “brownfield bonus,” making it available to companies which create jobs in brownfield areas. A company in

Florida may now qualify for a tax refund of at least 20 percent of the average wage of the jobs created, provided that they give benefits to their employees, make a capital investment of at least \$2 million, and create at least ten jobs. Other states also are offering new financial incentives to attract investment in brownfields. **New Hampshire** now provides low-interest loans and some direct financial assistance for its brownfield projects, and **Nevada** has added program targets which include rural communities, underground storage tanks (UST), mine-scarred lands, and drug labs.

Although they do not formally track economic benefits from brownfield cleanups, many states have provided us with a few cleanup success stories. In **Nebraska**, for example, sites near and along Omaha's riverfront are in the process of being redeveloped. Plans for these sites include a convention center and arena complex, greenspace, a national park office, and the Gallup Educational Headquarters Campus. Program contacts from Nebraska report that as a result of this initiative, "more projects are likely to spawn off of this redevelopment."

As we use this report as a springboard to look ahead to 2003, the picture is more troubling.

Fiscally, 2003 promises to be a very rough year for all programs within the states, not just brownfields. Site reuse initiatives will find themselves competing with education, health care, and other basic services, which may make them hard to justify— even with their proven track record and growing rate of return on public investment. Brownfield financing programs across the country are bracing for funding cuts and incentive suspensions. A growing number will not only be asked to do more with less — they will be required to do more with nothing at all.

So it is from this vantage point that we examine the 2002 *State of the States* in brownfields. At the same time, it is important to emphasize that while these programs may be operating with severely reduced funding, they still exist — and still provide the building blocks for cities, developers, local groups, and others with an interest in brownfield site reuse to proceed.

Report Organization for Each State

Program Description: This section describes state voluntary cleanup programs (VCPs) and/or other brownfield-related cleanup programs, and the various types of liability relief it may offer. It lists legislative or program requirements, as well as changes or additions enacted or pending during 2002.

Financial Elements: Identifying "*Financing Programs Targeted to Brownfields*" and "*Incentives to Attract Private Investment to Brownfields*" continues to prove challenging. Typically, in practice, the applicability of specific programs comes down to an agency interpretation that brownfield-type site activities are eligible. This report includes information on programs directly available through state VCPs, as well as those identified by state agency staff as having consistent applicability to brownfield reuse efforts. The most common types of assistance include grants and revolving loan funds (RLFs). The report does not include federal resources passed through to states or cities that are widely available (except for a couple of instances noted, such as in the case of competitive EPA grants).

Technical Elements: This section provides information on state approaches to cleanup methods, standards, and controls. The section tracks how many state VCPs have entered into Memoranda of Agreement with U.S. EPA, which contaminants are allowed into the program, types of standards that are used, and whether or not the program uses institutional controls to monitor sites. This section also includes each state's definition of "brownfields" (noted only when available) as a point of reference. Many states use the original U.S. EPA definition of brownfields — *abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination*.

In a related element, the Missouri Department of Natural Resources carried out its own "state of the states" survey this year to determine the state's use of penalty provisions (and what types are imposed) as part of a program in which institutional controls are used in conjunction with a voluntary cleanup program. We are pleased to report the summary findings here and thank Missouri DNR for sharing them. DNR talked with 49 states and found that the most common penalty (as noted by 25 states) is revocation or voiding of a certificate of completion or other liability protections. Other penalties: enforceable action/authority (eight states), prison (two states); and monetary penalties (seven states). Five states reported no specific penalties.

Reuse Benefits: Consistent with prior years, we have tried to get information on five common redevelopment benefit areas associated with brownfields, to help provide some sense of the impact of the various VCPs. The five are: (1) number of sites that have entered the program and/or subsequently completed it; (2) jobs created; (3) housing units developed; (4) tax revenues added to the local economy; and (5) businesses created. As in past years, we have tried to get information on program impacts and benefits. Most states have yet to gather hard economic information on their programs. Many programs have not yet been able to find the resources to collect any data beyond the number of sites in their programs. However, increasingly states are finding that documenting the benefits of brownfield reuse are

worth the investment of staff time and program resources. This year, we asked the states to provide us with information on economic benefits from brownfield remediation, "using whatever tracking system they had in place."

Impacts of New Federal Brownfields Law: This new section of the report tracks how state VCPs are responding to the new federal brownfields law enacted in January 2002. The new law shifts both responsibilities and opportunities to the states. We asked if states have implemented any changes to accommodate the new brownfields law (listed under *Changes to Accommodate Law*) and if they felt the new law would help or hinder their brownfield cleanup efforts (listed under *Impacts of Law*). Many states reported that it is too early to tell how the new law will impact their brownfield cleanup efforts. However, there seems to be a confidence boost in the potential for more funding for program development and investigation and remediation assistance.

Lessons and Advice: As we have seen, many success stories are built on the lessons of others (i.e. leveraging resources, attracting new users and investment, site marketing, streamlining the process, etc.). This new section identifies the advice, frustrations and/or encouragement state agency staff wanted to share with others who work on brownfields.

Survey Methodology and Definitions

In 2002, 41 of the 50 states participated in the survey. As in previous surveys, information in the report's tables is based on telephone interviews, faxed responses, and e-mail correspondence with environmental and/or economic development agency contacts in all 50 states. Several states are increasingly facing critical staffing issues – as communities market more of their local sites to new users who need VCP action in a timely manner, and as greater use of institutional controls increases the need for state monitoring of sites where these controls have been made an integral part of the cleanup remedy. Therefore, we would like to extend a most sincere and hearty "thanks!!" to all of the state staff who took the time to respond, often in great detail, about state program accomplishments, changes, and issues. We know that many of them provided this information on their own time (given those late night and weekend e-mail responses we received), because their work days have been filled with meetings and site inspections. Full information on all state changes this year are in the following report, which updates the November 2001 report.

Consistent with prior years, please note that:

< Eligible sites typically are limited to volunteers, but include all types of contaminated sites except for Superfund, RCRA, or LUST sites, as well as landfills; exceptions are noted on the table.

< The most common assurance provided, as noted below, are "No Further Action" (NFA) letters, "Certificates of Completion" (COCs), and "Covenants Not to Sue" (CNTS).

< Some states are developing generic cleanup standards pegged to types of site use, and virtually all voluntary cleanup programs take future site use into consideration. More and more states are using some type of risk-based corrective action (RBCA) approach (even if it is not a formal RBCA process).

< The new format provides more complete information on each state's approach to cleanup standards, as well as information on whether or not the state VCP accepts sites with several common contaminants – petroleum, asbestos, lead-based paint, and PCBs. The table notes either "yes" or "OK" on each of these (sometimes, with certain conditions, such as being exterior contamination) – or simply "no".

< As in the 2001 survey, we have tried to get information on state involvement with institutional or engineering controls (noted as "ICs" on the table), which are growing in importance as they help bring remediation costs down. Some states provided more complete information on conditions and constraints imposed on ICs, as well as the benefits they bring and concerns they carry.

A final note – States designated with an asterisk * after their name did not respond to the 2002 survey. The information shown is the most recent we have on file.

* * *

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ALABAMA

Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110
BEST INFO SOURCE: P: 334 271 7754
F: 334 279 3050

<http://www.adem.state.al.us>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

The Alabama Land Recycling and Economic Redevelopment Act (ALERA), signed into law on May 21, 2001, gave ADEM the authority to promulgate brownfield and voluntary cleanup regulations for abandoned or unused industrial sites, and provided for liability protection for program participants, particularly for 'clean hands' parties who did not cause or contribute to the contamination at a property. These regulations became effective on May 16, 2002, after a public review process.

Offers a "Letter of Concurrence" granting the various "limitations of liability" stated in ALERA upon receipt and review of a "certification of compliance" that confirms remediation efforts outlined in an approved cleanup plan have been met.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

Industrial development grants, up to \$375,000; can be adapted for brownfield purposes.

Incentives to Attract Private Investment to Brownfields

< Regulations for the Alabama Dry-cleaning Environmental Response Trust Fund Act (ADERTFA) program currently being finalized. ADERTFA acts as a voluntary "insurance policy" for those drycleaning operations and wholesale distributors that opted for coverage. Covered sites will conduct initial investigations and, based on those investigations, will be given ADEM priority for further assessment and possible remediation.

< EPA capitalized a \$1-million Brownfields Cleanup RLF targeted to counties and municipalities; awaiting passage of enabling legislation in 2003.

TECHNICAL ELEMENTS

MOA

No

Contaminants

Petroleum, asbestos, lead paint, PCBs all OK.

Standards

No formal RBCA or comparable/informal process in place; state uses U.S. EPA's Soil Screening Levels using DAF of 1, background, or EPA's Region III Risk-Based Concentrations table, using the residential numbers for soil and below MCLs for groundwater, at sites not using institutional controls. (see also next heading)

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Institutional Controls

Sites using ICs are addressed through a site-specific risk assessment and must have a longer term enabling mechanism (such as a permit or order) defined in the settlement agreement to ensure that ICs are maintained.

IC Benefits/Problems:

"More sites being cleaned and reused."

REUSE BENEFITS

Number of Sites

ADEM is currently providing oversight to 167 sites under the Brownfield Redevelopment and Voluntary Cleanup Program. A total of 38 sites has completed voluntary cleanups, 37 of these before adoption of the Brownfield Redevelopment and Voluntary Cleanup Program regulations.

Economic Benefits

Although Alabama does not currently track economic impacts, three sites are projected to be used for public activities in post-cleanup scenarios.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

The new federal law currently is under review by the state. Revision of the recently adopted regulations will be considered by the department.

Impacts from Law

State agency staff believe the law should have a positive impact on Alabama's brownfields program.

LESSONS AND ADVICE

“Alabama’s Brownfield Redevelopment and Voluntary Cleanup Program has officially been in effect for a relatively short period of time. The program already has proven to be very successful in terms of the number of sites that now have official oversight of assessments and or remediation activities by the state. The department has been contacted by numerous attorneys, consultants, lending institutions, and businesses concerning properties across the State. A major plus is that the regulations were written in 'plain' English and are not overly burdensome. Another major plus is having a clear understanding of where the program fits in terms of RCRA, CERCLA, and other programs that may have an overlapping interest. Incentives such as 'Limitations of Liability' and tax breaks can be essential to program promotion. This program needs promotion and in itself is self-promoting. Properties that have been sitting idle for long periods of time are now undergoing assessments and remediation and are being returned to use.”

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ALASKA*

Alaska Department of Environmental Conservation

Spill Prevention and Response Division
Contaminated Sites Program
555 Cordova Street
Anchorage, AK 99501
P: 907 269 7664
F: 907 269 7649

BEST INFO SOURCE: <http://www.state.ak.us/dec/dspar/csites/home.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program offers a streamlined cleanup process with less regulatory oversight for lower priority sites. Sites with petroleum and/or groundwater contamination are still eligible. Sites must meet specific inclusion criteria to participate.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

- < Cleanup grants for underground storage tanks.
- < Contaminated Sites Remediation Program — response fund (not limited to brownfields) available when companies not able to clean up on their own.

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

Definition

Alaska does not define a brownfield site in regulation or statute.

MOA

No

Contaminants

Petroleum, petroleum compounds, and inorganic metals; asbestos not regulated and not applicable to VCP; PCBs not eligible for VCP, but are managed through the conventional oversight program.

Standards

Formal, streamlined, RBCA-like process in place for VCP that allows default cleanup levels protective of ingestion, inhalation, and migration to groundwater pathways. Site-specific cleanup levels and risk assessment methods are not allowed.

Institutional Controls

ICs not now available through VCP; they are available through the conventional oversight program (which does not normally involve administrative orders, compliance orders, or consent decrees).

IC Benefits/Problems

Under the VCP program, more sites are addressed, which can be less expensive and quicker than the conventional oversight process. ICs are not available in VCP, due to anticipated additional oversight in establishing, communicating, and implementing the IC.

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REUSE BENEFITS

Number of Sites

In total, 138 applications, 128 acceptances, four withdrawals, 45 site closures/no further remedial action planned. For fiscal 2001 (ending June 30): 34 applications, 33 acceptances, 16 site closures/no further

remedial action planned.

Economic Benefits

N/A

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts from Law

N/A

LESSONS AND ADVICE

N/A

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ARIZONA

Arizona Department of Environmental Quality

3033 North Central Avenue, M0501D

Phoenix, AZ 85102-2809

P: 602 207-4109 or toll-free in Arizona 800 234-5677 ext 4109

F: 602 207 2302

BEST INFO SOURCE: <http://www.adeq.state.az.us/environ/waste/capdev/voluntary/index.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

2000 legislation revised Voluntary Remediation Program (1996); replaces three-component program with a single agency-wide VRP, that issues an NFA. Provides for participant reimbursement of ADEQ costs.

All sites eligible except those requiring a permit; UST sites seeking Assurance Fund reimbursement; WQARF Registry sites; and sites under decrees, orders, or judgments. An interim fee rule became effective in February 2001, but is currently under review.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Targeted site assessment grants available competitively, with priority given to applicants with redevelopment and financing commitments; Phase I and Phase II assessments done by contractors overseen by ADEQ staff.

< EPA capitalized Brownfields Cleanup RLF starting in November 1999; available to sites already assessed, and located in Phoenix or Tucson (up to \$500,000 per city).

Incentives to Attract Private Investment to Brownfields

< Starting in 1999, property used for environmental remediation (determined by ADEQ to be "reasonable and necessary") will be reclassified as Class 8 property with an assessment ratio of 5 percent of full cash value.

< Starting in 2001, counties can forgive all or part of a property tax lien on a brownfield site, up to the amount paid for remediation.

TECHNICAL ELEMENTS

Definition

Arizona uses the EPA definition of brownfields and does not itself define brownfields in regulation or statute.

MOA

No

Contaminants

Outdoor asbestos, PCBs, outdoor lead paint OK; petroleum OK (unless UST site seeking State Assurance Fund reimbursement).

Standards

No formal RBCA or comparable/informal process in place (except that UST program follows RBCA); VRP participants have choice of remediating to background levels, predetermined (residential or nonresidential) standards, or site-specific cleanup levels; non-residential sites require deed restrictions.

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Institutional Controls

- 2000 legislation allows a "Declaration of Environmental Use Restriction" (DEUR) that runs with the property title at sites where remediation is done to less-than-residential soil levels. A conditional NFA

may be issued for remediations that rely on the use of ICs to meet residential or non-residential soil levels.

< 2001 Final Voluntary Remediation Program Interim Fee Rule: The VRP provides an opportunity for program participants to obtain the department's review and approval of remedial actions. If remediation levels and controls meet statutory requirements, participants may obtain a determination that the department will not take or require further action at the site.

IC Benefits/Problems

"...expects more sites will be cleaned and reused as a result of this [DEUR] legislation."

REUSE BENEFITS

Number of Sites

Since 1996, VRP has reviewed 121 sites. Of those 121 sites, 62 sites have been closed and 58 are still active.

Economic Benefits

Although the state does not formally track economic benefits, VRP can point to a number of specific examples: three sites are being remediated for residential units; two elementary schools are being remediated; and one remediation resulted in space for 1,500 new workers and 1,000 residents.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

ADEQ is still awaiting federal guidance.

Impacts from Law

N/A

LESSONS AND ADVICE

"At this time the VRP is looking forward to new program options with the implementation of the new federal brownfields law. The voluntary sites unit is constantly investigating opportunities for marketing/education of internal and external customers so that we can continue to grow our Brownfields/VRP programs."

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ARKANSAS*

Arkansas Dept of Environmental Quality

8001 National Drive
PO Box 8913
Little Rock, AR 72209
P: 501 682 0854
F: 501 682 0565

BEST INFO SOURCE: <http://www.adeq.state.ar.us/default.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Voluntary Cleanup Program (1995) offers CNTS, and comfort letters to lenders; limited to prospective purchasers of abandoned industrial, commercial, or agricultural properties.

< Voluntary Cleanup Program (1997) added Certificate of Completion to law that will be issued after remedy is completed; Certificate is transferrable to future owners with conditions.

< Voluntary Cleanup Program (2001) added Letter of Intent to law allowing title acquisition prior to completion of Implementing Agreement.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situation

Low-interest loan program for brownfield projects, created within existing state RLF program.

Incentives to Attract Private Investment to Brownfields

< Related incentives include credits on income tax for average wage multiplied by 100 if the firm is in the state enterprise zone program.

< Refund on sales and use taxes on machinery and building material for EZ participating firms.

TECHNICAL ELEMENTS

Definition

Arkansas defines a brownfield as "an abandoned or underutilized industrial, commercial or agricultural property, the redevelopment of which has been complicated by known or perceived contamination and for which no responsible party can reasonably be pursued."

MOA

Yes – December 21, 2000.

Contaminants

Real or perceived contamination of hazardous substances with acute or chronic effects.

Standards

EPA Region 6 Risk Based Standards applied for intended land use.

Institutional Controls

< Includes provisions for ICs in the implementation agreement (IA).

< Provides environmental relief to new purchaser, using EPA Region 6 Risk Based Standards for intended land use.

< Notice of IA to be filed within 30 days of acquisition of title.

< Deed restrictions are filed "when situation warrants."

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IC Benefits/Problems

At this time, no seriously contaminated sites have sought ICs. Using the risk-based approach, tied to intended land use, has resulted in minimal cleanup at most projects so far.

REUSE BENEFITS

Number of Sites

23 sites have entered the program. Four sites, totaling 178 acres, have completed the program.

Economic Benefits

Not currently tracking economic impacts.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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CALIFORNIA

California Department of Toxic Substances Control

8800 Cal Center Drive Way

Sacramento, CA 95826-3200

BEST INFO SOURCE: P: 916 255 3745

F: 916 255 3696

<http://www.dtsc.ca.gov>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1993) offers NFA letter for sites needing no remediation; COC once cleanup is completed; prospective purchaser agreement policy adopted July 1996.

Legislation passed in 2001 (Senate Bills 468 and 526) created the California Financial Assurance and Insurance for Redevelopment Program (FAIR) to make comprehensive and cost-effective site environmental insurance coverage available in California for redevelopment of brownfield properties. A Request for Proposals has been issued.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Mello-Roos Districts — designation allows community to abate property taxes and issue bonds to capitalize RLFs for site assessment and cleanup.

< Urban Cleanup Loan Program (signed into law September 2000) authorizes two low-interest loan programs: (1) up to \$100,000 per applicant for "preliminary endangerment" assessments of underused urban properties (with a 75 percent repayment waiver if the site proves economically unfeasible); and (2) up to \$2.5 million per project for additional investigation and site cleanup. (Due to budget constraints, no funds currently are available for additional projects.)

Incentives to Attract Private Investment to Brownfields

Mello-Roos designation allows property tax abatements.

TECHNICAL ELEMENTS

MOA

No

Contaminants

PCBs, asbestos are OK; petroleum OK (except for underground fuel tanks); no lead paint-only sites (except at school sites).

Standards

< State uses site-specific risk-based cleanup standards pegged to EPA risk assessment guidance for Superfund.

< DTSC also has devised a conservative "preliminary endangerment assessment" — which can be done quickly, with a hand-held calculator — to determine if further site evaluation is required.

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Institutional Controls

< ICs used, generally land-use covenants that run with the land that are "geared to intended land use or more probable land use." Deed restrictions can be removed if additional cleanup to unrestricted use level is done.

< DTSC released draft regulations regarding land-use covenants, and the private site manager program, and took comments through late July 2002; these are currently being evaluated.

IC Benefits/Problems

No problems; benefits are the assurance that land use will remain restricted to safe and appropriate uses consistent with cleanup.

REUSE BENEFITS

Number of Sites

As of June 2002, over 500 sites have entered the VCP, with about 315 completed and 185 ongoing. (This does not include the over 850 school-district sites required to enter the VCP as a result of a January 2000 law that stipulates DTSC review of proposed school sites that will use state funds for acquisition and/or construction.) DTSC anticipates 100-125 new entrants in 2002.

Economic Benefits

The state does not routinely collect benefit information, but can attribute the following to selected reused sites: more than 21,000 permanent jobs created; 5,200 housing units, many of them single-family dwellings; nearly \$475 million in tax revenues added annually; 13 million square feet of office, commercial, recreational, and industrial space opened; and creation of parks, open space, and recreational areas. As of March 2001, more than 20,000 acres had been cleared for redevelopment.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

None has been required.

Impacts of Law

"It is too soon to know whether it will help our efforts."

LESSONS AND ADVICE

"It is important for land-use planning issues to be resolved to facilitate remedial planning. There are many different strategies for redeveloping property. The most successful seem to involve cooperative working relationships between the property owner, his/her tenants, the developers, local agencies, and the community. It is important to have a good environmental consultant who has experience in site characterization and cleanup. Good site characterization saves money and time in the long run."

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COLORADO*

Colorado Department of Public Health and Environment

Hazardous Materials and Waste Management Division

HMWMD-B2

4300 Cherry Creek Drive South

Denver, CO 80246-1530

BEST INFO SOURCE: P: 303 692 3300

F: 303 759 5355

OR BEST INFO SOURCE: <http://www.cdphe.state.co.us/hm/hmhom.asp>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1994) offers NFA letter; geared (but not limited to) current owners of contaminated sites.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations
Brownfield RLF — low-interest loans for site remediation.

Incentives to Attract Private Investment to Brownfields

2000 legislation provides a tax credit against the cost of the cleanup — 50 percent of the first \$100,000, 30 percent of the second \$100,000, and 20 percent of the next \$100,000.

TECHNICAL ELEMENTS

Definition

Colorado does not define a brownfield in statute or regulation.

MOA

Yes — as of April 1996.

Contaminants

Petroleum, asbestos, lead paint, and PCBs all OK.

Standards

No formal RBCA or comparable/informal process in place; VCP applicants choose from various cleanup standards or perform risk assessments. State allows risk-based closures.

Institutional Controls

Institutional controls are available at the land owner's request.

IC Benefits/Problems

2001 legislation provides for use and enforcement of ICs; the system is new, with no long-term experience yet.

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REUSE BENEFITS

Number of Sites

As of July 2001, 215 sites representing over 1,600 acres have entered the state VCP program.

Economic Benefits

At least 2,855 residential units added and 6,256 jobs created. VCP attributed with increasing tax revenues in each of several selected projects reviewed.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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CONNECTICUT

Connecticut Department of Environmental Protection

Bureau of Water Management

Permitting, Enforcement, and Remediation Division

79 Elm Street

Hartford, CT 06106-5127

BEST INFO SOURCE: P: 860 424 3705

F: 860 424 4057

<http://dep.state.ct.us/wtr/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Voluntary Remediation Program (1992; revised 1995 and 1998) — DEP offers two types of CNTS to new owners, or to current owners not associated with contamination: a free and less restrictive CNTS with more potential re-openers; and a CNTS that costs 3 percent of appraised value of land to get, but has fewer re-openers and DEP discretion.

< DEP may use a state "licensed environmental professional" to verify remediation on its behalf, retain oversight itself.

< Lending institutions with a security interest in the property also may use the program to seek a CNTS.

< Property transfer program in place

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Urban Sites Remedial Action Program — originally capitalized with \$40.5 million in state bond funds for assessment/remediation of sites in “Distressed Municipalities” and “Targeted Investment Communities”; DEP can clean up and the state can acquire a site if they choose, recovering cost from future users.

< Dry Cleaner Establishment Remediation Fund for financing (maximum \$50,000/year) soil and groundwater remediation and prevention.

< Special Contaminated Property Remediation and Insurance Fund provides loans to municipalities and private entities for Phase II and III investigations and demolition costs.

Incentives to Attract Private Investment to Brownfields

Enterprise Zone Program incentives provide tax abatement of five years and 80 percent of local property taxes on real estate improvements; 10 years/50 percent tax credit; seven-year minimum deferral of increased taxes resulting from property value rise after remediation has been completed.

TECHNICAL ELEMENTS

MOA

No

Contaminants

Does not restrict on basis of contaminants; petroleum, asbestos, lead paint, and PCBs all OK.

Standards

Remediation Standard Regulations in effect since January 1996 apply; they permit use of background concentrations, site-specific conditions, and future property use to determine appropriate criteria. RBCA process was used as a guide for developing the criteria.

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Institutional Controls

Land-use restrictions are an optional action of land owner only.

IC Benefits/Problems

“More sites cleaned up” because of the VCP.

REUSE BENEFITS

Number of Sites

Since 1995 – with “completion” meaning final remediation has been performed or all that may remain is groundwater/natural attenuation monitoring or the recording of an environmental land-use restriction – over 60 sites have entered the Urban Sites Remedial Action Program and about one-half are complete; 191 sites have entered the GA and GB groundwater resource voluntary remediation programs with 22 complete; and 883 Form III Property Transfer Filings recorded.

In general, the Property Transfer Program addresses certain commercial parcels when they are transferred and creates the obligation on the parties (e.g. seller or buyer) to investigate and provide all necessary clean up of the parcel. 66 sites have been completed since 1995 and six others sites notified as being complete are under review. 88 additional sites have been completed with final remediation in the property transfer program between 1985 and 1995.

Economic Benefits

Not currently tracking economic impacts; DEP does note that parks, open space, schools, day-care facilities, and recreational uses for brownfields are increasing since the legislature increased Department of Economic and Community Development's authority to address environmental liability concerns.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Comments reported from a CT brownfield stakeholder meeting on May 8, 2002:

< Under the new law, Quality Assurance Project Plan (QAPP) requirements very likely will be retained, but the QAPP may not need EPA approval in the future. EPA needs to be sure that federal funds are being used to generate quality data (not being wasted in generating data that doesn't get the job done). In the past, QAPP review by EPA has identified areas/issues that otherwise would have been missed by the consultant.

< After existing funding is used, Connecticut's USTfields Pilot Program will cease to exist, since petroleum sites will be eligible under the new brownfields law.

< Under the new law, Prospective Purchaser Agreements (PPA) may no longer be needed, since the statute is self-implementing. New PPAs will be limited from this point forward.

Impacts of Law

< Concern expressed that addressing lead and asbestos at residential sites could use up all available

funding.

< Need more clarification on the definition of administrative costs.

LESSONS AND ADVICE

"As we have seen, many of the program's successes are built on the lessons of others (i.e., leveraging resources, attracting new users and investment, site marketing, streamlining the process, etc.)."

Comments from a CT brownfield stakeholder meeting on May 8, 2002:

"EPA should look at state models for RLFs. Many states in Region 1 (including Connecticut) are already operating large, highly successful grant and loan programs."

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DELAWARE*

Delaware Department of Natural Resources and Environmental

Control

Division of Air and Waste Management

State Investigation & Restoration Branch

391 Lukens Drive

New Castle, DE 19720

BEST INFO SOURCE: P: 302 395 2636

F: 302 395 2637

<http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/sirb/brownfield.asp>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1995) offers NFA letters; prospective purchasers may sign a Consent Decree for contribution protection; and new owners of remediated sites may receive a CNTS, and can receive a COC for remedies, which provide liability protection waivers.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Grants for 50 percent of site assessment costs, up to \$25,000.

< Low-interest loan program up to \$250,000 for 90 percent of cleanup costs.

Incentives to Attract Private Investment to Brownfields

< Quasi-public Riverfront Development Corp has \$55 million to acquire, investigate, and redevelop sites.

< Tax credits of \$650/year per new job created related to cleanup and redevelopment (\$900/year in poverty areas).

TECHNICAL ELEMENTS

Definition

Delaware defines "brownfield" as "a vacant or unoccupied site with respect to any portion of which the taxpayer has reasonable cause to believe may, as a result of any prior commercial or industrial activity by any person, have been environmentally contaminated by the release or threatened release of a hazardous substance as defined under 7 Del C. c. 91 in a manner that would interfere with the taxpayer's intended use of such site." (Title 30 § 2010)

MOA

Yes — as of August 1997.

Contaminants

Petroleum is OK on a conditional basis; asbestos and lead paint OK if in the soil.

Standards

Risk-based standards (but not RBCA) are in place; VCP references a cleanup guide with standards based on intended land use. (Sister UST office does use RBCA).

Institutional Controls

ICs/land-use controls are allowed, including deed restrictions, operation and maintenance plans, and groundwater management zones. State notes that most of the city of Wilmington is subject to a GMZ.

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IC Benefits/Problems

State cites benefits of less expensive remedy; community concerns and fear over the efficacy of IC-linked remedies.

REUSE BENEFITS

Number of Sites

92 sites have entered the VCP (24 in 2000), and 49 sites currently are in the program.

Economic Benefits

The state has identified a number of economic benefits attributable to the VCP: more than 500 jobs and 50 businesses created; increased tax revenues; 266 apartment/housing units for University of Delaware students; three school sites in process; and several parks, open space, and recreational uses.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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FLORIDA

Florida Department of Environmental Protection

2600 Blair Stone Rd, MS 4505

Tallahassee, FL 32399-2400

P: 850 413 0062

F: 850 922 4368

BEST INFO SOURCE: <http://www.dep.state.fl.us/waste/categories/brownfields/default.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Brownfield Redevelopment Program (1997; amended 1998 and 2000) offers NFA letters with or without restrictions; PRPs are eligible and liability protection offered under certain circumstances; state incorporates risk-based corrective action principles into cleanup rule; offers liability protection for lenders and non-profit organizations that agree to clean up sites.

< 2000 amendment extended/clarified liability to sites contaminated due to geophysical or hydrological reasons, including migration of contamination from a nearby designated brownfield area to sites that had never been occupied by a business that used or stored those or similar contaminants.

< 2000 amendment further specified that sites within any designated brownfield area that use alternative cleanup target levels need not use institutional controls, if certain criteria are met.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< One-time (1997) \$3 million provided for disbursement to U.S. EPA pilot communities or pilot applicants.

< Revolving loan program provides low-interest loans to local governments, community redevelopment agencies, or non-profit corporations, for the purchase of outstanding, unresolved contractor liens, tax certificates, or other liens or claims.

< Loan guarantee program provides limited guarantees for up to five years for primary lenders financing redevelopment projects in brownfield areas.

Incentives to Attract Private Investment to Brownfields

< \$2500 tax credit "brownfield bonus" per job created at a remediated site for certain businesses. 2002 legislature modified the "brownfield bonus," making it available to companies that create jobs at any site within a designated brownfield area. A company may now qualify for a tax refund of at least 20 percent of the average wage of the jobs created provided that they provide benefits to their employees, make a capital investment of at least \$2 million, and create at least 10 jobs. Companies in certain targeted industry categories that create at least 10 jobs automatically are eligible for the maximum award of \$2,500 per job, regardless of the amount of capital investment.

< 35 percent tax credit (with an additional 10 percent tax credit upon issuance of NFA letter), up to \$250,000 per site, with a one-time transfer of the tax credit allowed; a local government (with no tax liability) is permitted a one-time transfer of the tax credit to induce private investment at a site.

< Projects in designated brownfield areas are eligible for an expedited permitting process.

< Local option sales surtax exemptions are available for sales made in an urban infill and redevelopment areas.

< 30 percent of funding appropriated annually for the Quick Response Training Program is set aside for six months to fund specialized training for employees of businesses choosing to locate in designated

brownfield areas.

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< State sales tax credit on building materials purchased on or after July 1, 2000, used for the construction of a redevelopment project (i.e., housing or mixed-use project) located in enterprise and empowerment zones, Front Porch communities, designated brownfield or urban infill areas.

< Petroleum stations and dry cleaning establishments eligible for participation in the Brownfields Redevelopment Program, and state-funded cleanups for eligible sites are available.

< Enterprise Zone program provides a variety of incentives in cooperation with local governments to encourage economic growth and investment in zones: job creation tax credits, enterprise zone property tax credits, building material sales tax refund, business equipment sales tax refund, and electrical energy sales tax exemption.

TECHNICAL ELEMENTS

Definition

Florida defines a brownfield site as "a site that is generally abandoned, idled or under-used industrial or commercial property where expansion or redevelopment is complicated by actual or perceived environmental contamination."

Florida defines a brownfield area as "a contiguous area of one or more brownfield sites, some of which may not be contaminated, that has been designated as such by a local government by resolution." Both definitions are found in statute and regulation - 376.80, Florida Statute and Chapter 62-785, Florida Administrative Code.

- 50 designated areas in 2002, an increase of five from 2001.
- Since the inception of the program, 23 sites have executed a brownfield site rehabilitation agreement and six sites received an NFA letter as of July 25, 2002.

MOA

Yes - as of December 1999.

Contaminants

Petroleum and PCBs OK; asbestos and lead paint accepted conditionally

Standards

RBCA-like process in place that provides greater flexibility in achieving target levels by the use of institutional and engineering controls and established default levels for residential and commercial/industrial scenarios.

Institutional Controls

ICs key to RBCA approach, allowed in three program areas: petroleum, brownfields, and dry-cleaning solvents. Property owner must agree to the use of an IC (e.g., land-use restrictions, deed restrictions, etc.) on the property; FDEP cannot compel their use.

IC Benefits/Problems

< ICs may provide greater flexibility in protecting the public and the environment at many sites; state notes that "it is still too early to determine the number of sites or dollar amount of savings, or issues (such as long-term accountability and public awareness) that might arise from the use of institutional controls."

< FDEP Institutional Controls Registry, or ICR, is a public, informational web site that provides information on contaminated sites. The ICR is a database of all contaminated sites in the state of Florida, pursuant to Chapter 376 or 403 F.S., which are subject to institutional and engineering controls. The web site uses ESRI's ArcIMS software, Internet mapping technology, to help visitors visualize, locate, and identify ICR sites in the state. The ICR is available at <http://depmap1.dep.state.fl.us/website/icr> or <http://www.dep.state.fl.us/dwm/programs/programs.htm>.

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REUSE BENEFITS

Number of Sites

< As noted, six sites have completed the Brownfields Redevelopment Program from the execution of a brownfield site rehabilitation agreement through cleanup and redevelopment. However, a number of other site owners and operators have chosen to clean up and redevelop sites using only the economic incentives offered to individual properties within a designated brownfield area. Once a property is contained within a designated brownfield area, the property is eligible for both economic and regulatory incentives. Some property owners have chosen to participate only in the economic incentives for business considerations.

< 15 sites underway in some phase of remediation and redevelopment. One additional site owner voluntarily withdrew from the program due to business reasons. As of July 25, 2002, 23 sites have

entered the program with FDEP.

< In 2001, Florida's RCRA and brownfields programs joined efforts in cleanup of a site under RCRA jurisdiction through the use of a site-specific brownfields/RCRA agreement. The agreement with the responsible party was the first in Florida for a RCRA site where the cleanup requirements and the economic incentives of the brownfields program were combined to achieve cleanup and redevelopment of the site. This project is an example of the flexibility of both programs to work toward a common goal.

Economic Benefits

The latest cumulative figures as of January 2002 show the creation of 1,158 direct jobs, 1,409 indirect jobs, and a capital investment of approximately \$44.6 million. The average wage reported for the jobs is \$40,693.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Florida's Brownfields Redevelopment Program meets the criteria listed in Subtitle C of the new federal Brownfields law as a "State Response Program." The 2002 Florida Legislative Session did not make any changes to accommodate the new federal brownfields law. Future changes may be required to accommodate the new federal law.

Impacts of Law

The new federal brownfields law will provide a mechanism for greater funding to state and local governments. With a recognized State Voluntary Response Program in place, the new law will provide another incentive to enter into the state's program and complete a cleanup.

LESSONS AND ADVICE

"One of the greatest assets in brownfield redevelopment is to network with financial institutions, developers, consultants, federal agencies, and local and state economic development agencies. Establish a statewide brownfield association that encourages participation from a diverse group of stakeholders, which have a common goal."

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GEORGIA

Hazardous Site Response Program
205 Butler Street SE
Floyd Tower East, Suite 1462
Atlanta, GA 30334

BEST INFO SOURCE: P: 404 657 8600

F: 404 657 0807

<http://www.dnr.state.ga.us/dnr/environ>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Hazardous Site Reuse and Redevelopment Act program (1996, amended 1998 and 2002) offers limited liability relief to purchasers of properties that have had a release of a regulated substance; requires certification of compliance with one of the program's Risk Reduction Standards.

New amendments effective July 1, 2002, expand universe of eligible properties by including sites not listed on the state's hazardous site inventory, and provides additional incentive for reuse of contaminated property by allowing new owner to use the property without remediation of groundwater contamination, so long as the owner does not cause a new release or contribute to the existing release.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Hazardous Waste Trust Fund provides local governments with money for site investigation and remediation at solid waste disposal facilities; no more than \$2 million per site.

< Small issue (less than \$10 million) industrial development bonds issued by local industrial development authorities can be used.

Incentives to Attract Private Investment to Brownfields

New law (HR 1111, passed in 2002 session) authorizes a public referendum (anticipated for 2002 election ballot), required to change Georgia's property tax laws, requesting a new tax scheme for brownfield properties to provide developers with an offset for the costs of remediation. Costs of remediation will be charged against increased property taxes levied on the redeveloped property. Charges cannot reduce the taxes due on the property below the level of taxes paid prior to the redevelopment of the property.

Charges can be carried over for a limited time, expected not to exceed 10 years.

TECHNICAL ELEMENTS

Definition

"Brownfield" is not defined; however, the key element for a property to qualify for the program is a "preexisting release" on the property. That term is defined (at 12-8-92, Hazardous Site Response/State Superfund program) as "any intentional or unintentional act or omission resulting in the spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including without limitation the abandonment or discarding of barrels, containers, and other closed receptacles, of any hazardous waste, hazardous constituent, or hazardous substance; provided, however, that such term shall not include any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons; emissions from the engine exhaust of any motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station; or the normal application of fertilizer."

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MOA

No

Contaminants

Petroleum, asbestos, lead paint, PCBs all OK.

Standards

No formal RBCA or comparable informal process in place; state superfund law provides applicants a choice between generic and site specific residential and non-residential cleanup standards for soil and groundwater.

Institutional Controls

ICs are permitted as part of some clean up standards, but the state does not rely on ICs in lieu of an actual remedy.

IC Benefits/Problems

"To date the program has not encountered significant problems. The major benefits accrue to the buyers and sellers involved in the program."

REUSE BENEFITS

Number of Sites

Two sites have formally entered the program.

Economic Benefits

Not currently tracking economic impacts.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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HAWAII*

Hawaii Department of Health

Hazard Evaluation and Emergency Response Office

919 Ala Moana Boulevard, Room 206

Honolulu, HI 96814

SECONDARY INFO SOURCE: P: 808 586 4249

F: 808 586 7537

BEST INFO SOURCE: <http://www.hawaii.gov/doh/eh/heer/vrp.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Response Program (1997) offers Letter of Completion giving future liability exemption to prospective purchasers and future owners/operators; state oversight costs paid by participants.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

N/A

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

Definition

Hawaii uses the federal EPA definition of brownfields.

MOA

No

Contaminants

Petroleum, asbestos, lead paint, PCBs all OK.

Standards

RBCA-like process in place; applicant chooses from Tier I, II, or III action levels, depending on end use.

Institutional Controls

ICs are allowed, but "not encouraged," depending on the analysis of remedial actions.

IC Benefits/Problems

Benefits are more sites cleaned and reused and a better business climate. Problems are of a program capacity nature; program puts more strain on limited staffing/manager resources.

REUSE BENEFITS

Number of Sites

Nine sites, totaling 110 acres, in the program, with two complete.

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Economic Benefits

Approximately 600 jobs created at one of the completed sites; three businesses created; tax benefits identified, but not tallied.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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IDAHO*

Idaho Division of Environmental Quality

Waste Management and Remediation

1410 North Hilton

Boise, ID 83706

BEST INFO SOURCE: P: 208 373 0285

F: 208 373 0576

<http://www.deq.state.id.us/waste/waste1.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1996) offers COC and CNTS; sites not subject to existing regulations may participate.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

N/A

Incentives to Attract Private Investment to Brownfields

Idaho Land Remediation Act — sites receiving a CNTS may qualify for a seven-year, 50 percent tax break on property appreciation due to remediation.

TECHNICAL ELEMENTS

Definition

Idaho considers a brownfield to be a site known to the state DEQ through the Land Remediation Act; in general, the Act allows any site not covered under an existing program to be considered for cleanup under the Act.

MOA

No

Contaminants

N/A

Standards

N/A

Institutional Controls

N/A

IC Benefits/Problems

N/A

REUSE BENEFITS

Number of Sites

One four-acre site has entered the VCP.

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Economic Benefits

Not currently tracking economic impacts.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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ILLINOIS

Office of Brownfields Assistance
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276

P: 217 785 9407

F: 217 524 1991

BEST INFO SOURCE: <http://www.epa.state.il.us/land/cleanup-programs/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Illinois Site Remediation Program (1989, revised 1996) offers No Further Remediation Letter after cleanup meets the risk-based Tiered Approach to Correction Action (TACO) objectives.

Revisions to regulations allow contaminated soil to be managed on site. Sites to be used as schools are now subject to additional program and public notice requirements.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Brownfields Redevelopment Loan Program offers \$10-million low-interest loans to local governments and private parties, to cover brownfield site investigation, remediation, and demolition costs.

< Brownfields Redevelopment Grant Program offers municipalities grants of up to \$240,000 for brownfield-related activities such as site assessment or preparation of cleanup plans, and corrective action; 70/30 match required.

< Brownfield Cleanup RLF provides \$3.5 million for low-interest loans to clean up former industrial commercial or industrial sites; \$3 million reserved for six target cities, and the balance for other communities around the state.

< Bank Participation Loan Program (in Chicago) offers up to \$250,000 or \$350,000 for commercial and industrial loans (respectively) that are matched by banks at 75 percent of prime rate, for terms from 3 to 15 years.

(see <http://www.epa.state.il.us/land/brownfields/financial-help/chart.html>)

Incentives to Attract Private Investment to Brownfields

< Environmental Remediation Tax Credit provides 25 percent income tax credit for developers who clean up contamination they did not cause – maximum credit of \$40,000 per year and \$150,000 per site; credits begin after the first \$100,000 of development costs (this floor waived for sites in state enterprise zones); credits may be transferred to new owners. Credit is available for costs incurred after December 31, 1997, and on or before December 31, 2001, and can be carried forward and applied to the tax liability of the five taxable years following the excess credit year.

< Property Tax Credit in Cook County (Chicago area) for redevelopment and cleanup costs. Illinois EPA issues approval of tax credit.

(see <http://www.epa.state.il.us/land/brownfields/financial-help/chart.html>)

TECHNICAL ELEMENTS

Definition

Illinois defines a brownfield site or brownfields to be “a parcel of real property, or a portion of the parcel, that has actual or perceived contamination and an active potential for redevelopment.” (Environmental Protection Act, Title 17, Section 58.2)

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MOA

Yes, as of April 1995.

Contaminants

Petroleum and all hazardous substances.

Standards

Formal objectives based on RBCA and U.S. EPA soil screening levels in place; applicant has a choice of cleanup standards.

Institutional Controls

ICs allowed under the Tiered Approach to Corrective Action (TACO) objectives and may include engineered barriers, groundwater restrictions, highway authority agreements, and land-use restrictions.

IC Benefits/Problems

Cheaper and faster cleanups — more sites cleaned and reused.

REUSE BENEFITS

Number of Sites

Since 1989, 1,828 VCP program enrollments and 1,003 completion letters issued. In 2001, 273 sites enrolled; 169 completion letters issued; 632 sites as of August 5, 2002 still are underway in pursuit of completion letters.

Economic Benefits

Not currently tracking economic impacts.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Changed an Illinois law so federal brownfield funding can go into the state brownfield redevelopment fund.

Impacts of Law

< In accordance with Subtitle C, state proposes to establish a new Federal Sites Revitalization Response Program, add brownfield representative staff, perform additional Targeted Brownfields Assessments, continue outreach in partnership with a regional planning agency (including a new derived benefits study), and assure long-term remediation through the monitoring of institutional controls.

< Inclusion of petroleum will help further state efforts to clean up petroleum brownfield sites.

LESSONS AND ADVICE

“Better planning up front, developer willingness to accept deed restrictions for land use, use of engineered barriers, use of institutional controls, and more thorough investigation earlier in the process.”

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INDIANA

Indiana Brownfields Program

Office of Land Quality

Indiana Department of Environmental Management

PO Box 6015

Indianapolis, IN 46206-6015

P: 317 234 0235 or 317 233 2773

F: 317 234 0428

BEST INFO SOURCE:

<http://www.IN.gov/idem/land/brownfields/>

Indiana Voluntary Remediation Program

Office of Land Quality

Indiana Department of Environmental Management

PO Box 6015
Indianapolis, IN 46206-6015
P: 317 234 0966
F: 317 234 0428

BEST INFO SOURCE:

<http://www.IN.gov/idem/land/vrp/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Voluntary Remediation Program (1993) offers liability protection through COC, issued by IDEM, followed by a CNTS from governor's office; any contaminated site may be determined to be eligible.

< Brownfields Program (1997) — mechanism for state to partner with communities to promote cleanup and redevelopment; sites using state loan money for remediation can only get a Comfort or Site Status Letter, unless they enter the VRP for a COC or CNTS. Brownfields Program offers Comfort and Site Status Letters to address liability issues; highest forms of "comfort" or "closure" offered at this time, even for sites remediated with federal or state brownfield funds, unless the sites enter the VRP for a COC or CNTS.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< EPA-capitalized Brownfields Cleanup RLF for \$350,000 (1997), increased in 2000 to \$1 million; available to provide low-interest loan to eligible communities/private sector for cleanup/non-time critical removals per CERCLA; Indiana Development Finance Authority (IDFA) serves as fund manager.

< In 1997, State Environmental Remediation Revolving Loan Fund (ERRLF) established through legislation — \$10 million over three years to eligible cities, towns, or counties (with funds having been reallocated to date); grants for IDEM-approved assessments; loans for IDEM-approved assessments or remediation (including demolition); applicants evaluated for several criteria, including ability to repay, matching funds available, and economic development potential; 60 percent allocated to jurisdictions with fewer than 22,000 people; IDEM/IDFA partnership.

< On July 1, 1999, extra \$5 million was added through legislation to the ERRLF for forgivable loans; 20 percent of the ERRLF loan may be forgiven for projects meeting "community-determined economic development goals," with priority given to former gas station or UST sites, or facilities located within one-half mile of a child care center or school; IDEM/IDFA partnership.

< ERRLF applicants may partner/co-apply with private entities who did not cause or contribute to any contamination. ERRLF loan recipients may re-loan money to a private entity, with 20 percent of the loan forgiven if it meets criteria (noted in the first column); referred to as the third-party model. Changes/clarifications to the ERRLF program/initiative include: (1) allocation of funds to jurisdictions based on populations above or below 22,000 vs. 35,000; (2) Just In Time Funding where \$50,000 is available annually outside the normal grant rounds (but as part of the \$500,000 available per calendar year) to fund site assessments that would enable immediate economic development project needs. A city, town, or county must match these grant dollars one for one and must certify that a company or developer is imminently interested; (3) clarification that funding for remediation costs and retroactive funding (reimbursement) for prior testing are not allowed.

< In March 2000, state Department of Commerce (DOC) began state Urban Enterprise Zone Brownfield Site Assessment Grant program; IDEM oversight provided through draft MOU. Northeast-Midwest Institute *Brownfields State of the States - 2002* 29

< In September 2001, state DOC began CDBG Brownfields Pilot Program with grants available for planning, remediation, and site preparation, and tax credits available for rehabilitation; IDEM oversight provided through draft MOU. Second grant round held in August 2002.

< The new "Brownfields Petroleum Remediation Grant Incentive" (PRGI) is a result of the 2001/2003 state budget transfer of \$9 million from the Excess Liability Fund (ELF) to ERRLF for remediation of petroleum-contamination at brownfield sites. In August 2002, PRGI implemented through IDEM/IDFA partnership. First state grants available for remediation of brownfield sites. Second grant round planned for spring/summer 2003.

Incentives to Attract Private Investment to Brownfields

< Brownfield Revitalization Zone tax abatements — available in locally designated "brownfield zones."

< 2001 legislation provides tax credit of up to \$100,000 for voluntary remediation of a brownfield, effective through December 31, 2003, and capped at \$1 million annually statewide.

TECHNICAL ELEMENTS

Definition

Indiana defines in statute a brownfield as "an abandoned, inactive, or underutilized industrial or commercial property on which expansion or redevelopment is complicated as a result of actual or perceived environmental contamination."

MOA

Yes — as of December 1995.

Contaminants

< In VRP, petroleum and PCBs are OK; no asbestos or lead paint.

< In Brownfields Program, asbestos, lead paint, and PCBs are OK; petroleum only OK for activities not funded by federal EPA programs.

Standards

< RBCA-like process in place.

< State's "Risk Integrated System of Closure" (RISC) non-rule policy, which allows for consistent, risk-based standards among all IDEM cleanup programs, completed its one-year transition period in February 2002, through which time either RISC or VRP standards may be used. The RISC Technical Guide and User's Guide are available.

Institutional Controls

Both programs generally view ICs as acceptable. ICs will be "an inherent part of RISC when determining remediation-type activities." Brownfields Program Comfort/Site Status Letters indicate land-use restrictions.

IC Benefits/Problems

No issues at this time regarding the Brownfields Program; some issues raised regarding the deed restriction element of VRP, but data on this is not complete.

REUSE BENEFITS

Number of Sites

As of July 2002, 410 VRP applicants, with 369 active and completed sites; 224 Brownfields Program sites with 54 Comfort/Site Status Letters issued, 34 assessment sites completed or referred, 94 grants awarded, 13 loans approved.

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Economic Benefits

Although Indiana does not formally track economic impacts, several of these sites have been reused as parks or greenways and the state has developed "property profile" surveys for future use.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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IOWA

Iowa Department of Natural Resources

Wallace State Office Building

Des Moines, IA 50319

P: 515 242 6346

F: 515 281 8895

BEST INFO SOURCE: <http://www.state.ia.us/dnr/organiza/wmad/lqbureau/contam/>

or <http://www.iowasmart.com/brownfields> (Iowa Department of Economic Development Brownfield page)

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Land Recycling program (1997) offers NFA, transferable to new owner. Legislative revisions specify minimum public participation requirements, add consideration of cumulative risk, and add a factor of safety of ten to standards for possible carcinogens. Rule revisions to address the legislative changes and other modifications to soil standards will be made.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Physical Infrastructure Assistance Program offers loans, loan guarantees, or cost shares, adaptable to brownfield projects meeting development criteria.

< Iowa Brownfield Redevelopment Program may cover up to 25 percent of the financial cost towards the acquisition or cleanup of qualified brownfield sites. The program has made nine awards to date, but due to state budget shortfalls the program was not funded for the current fiscal year.

Incentives to Attract Private Investment to Brownfields

< TIF mechanism allows cities or counties to reimburse response action costs, over a six-year period.

< 1997 statute authorized a new land recycling fund to provide financial assistance and incentives.

TECHNICAL ELEMENTS

MOA

Currently negotiating. Legislative revisions should address residual issues.

Contaminants

Any contaminant that has appropriate toxicity information available.

Standards

State uses statewide, background, and site-specific standards. Site-specific standards are risk based.

Institutional Controls

Statutorily-based environmental protection easement (EPE) is required for use with non-residential standards.

IC Benefits/Problems

May be possible to move the point of compliance with standards outside of area with an IC or appeal to a less restrictive standard with an IC. Use of an IC may not be allowed to address free product or "gross contamination."

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REUSE BENEFITS

Number of Sites

29 sites are currently enrolled in the Land Recycling Program. Several other sites are also listed with the state's contaminated sites program. As of July 2002, two sites had completed the program and 27 were underway.

Economic Benefits

The Iowa Brownfield Redevelopment Program is requiring performance reporting by award recipients. First reports are due in June 2003. In addition, the state is planning to implement more comprehensive inventorying of brownfield sites.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

Associated funding should help further develop the state's brownfield program. The liability protections may lessen brownfield-related concerns.

LESSONS AND ADVICE

N/A

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KANSAS

Kansas Department of Health and Environment

Forbes Field, Building 740

Topeka, KS 66620

P: 785 296 1675

F: 785 296 7030

BEST INFO SOURCE: <http://www.kdhe.state.ks.us/remedial/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup and Property Redevelopment Program (1997) — anyone capable of gaining access to a contaminated property for assessment and/or cleanup activities, and adjacent property owners, can receive NFA determination; cleanup levels for soil and water specified in state program cleanup manual.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situation

< U.S. EPA-capitalized Brownfields Cleanup RLF awarded to KDHE; loans will be provided to qualifying municipalities and not-for-profit organizations for remediation.

< Kansas Agricultural Remediation Fund was created in July 2000 to assist in the investigation and remediation of qualifying properties with ag-related contaminants. The program provides direct reimbursement up to \$200,000, and low-interest loans up to \$300,000.

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

MOA

Yes – as of March 2, 2001.

Contaminants

Petroleum, asbestos, lead paint, PCBs all OK.

Standards

RBCA-like process in place; applicant can choose from a range of cleanup options based on a three-tiered system.

Institutional Controls

< State currently uses restrictive covenants, deed notices, and deed restrictions.

< An Environmental Use Control bill was introduced in the 2002 legislature to statutorily define and establish a program for tracking institutional controls. The bill was passed by the House but defeated in the Senate and will be reworked next session.

IC Benefits/Problems

Issues include tracking, funding to track, enforceability, transfer of IC to subsequent land owner.

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REUSE BENEFITS

Number of Sites

Since 1997, 250 sites have entered the program, and 44 sites have received NFA letters.

Economic Benefits

Not currently tracking economic impacts, but KDHE has conducted brownfield assessments of at least two properties to be redeveloped as parks and one as a recreation center.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

“It will help our efforts by providing much needed federal funding for various state efforts.”

LESSONS AND ADVICE

“Develop a tracking system early on to monitor redevelopment at brownfields sites such as jobs created, increased tax revenue, etc. Also work with economic development department early in the process.”

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KENTUCKY

Kentucky Division of Waste Management

14 Reilly Road

Frankfort, KY 40601

SECONDARY SOURCE: P: 502 564 6716

F: 502 564 5096

BEST INFO SOURCE: <http://www.waste.ky.gov/programs/sf/vcpguide.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< In 2001, the Kentucky Legislature passed the Voluntary Environmental Remediation Act (VERA), which provided a formalized process for obtaining a Covenant Not To Sue.

< Volunteers may apply to obtain a CNTS under VERA. Volunteers may also conduct cleanups under a less formal process and obtain a Notice of Completion or an NFA letter, the later being limited to public entities.

< Proposed regulations for voluntary cleanups published August 1, 2002, for public comment.

< The Governor established a Commonwealth Brownfields Task Force to bring together representatives

of chief stakeholders to exchange information and to coordinate efforts to redevelop brownfields.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< VERA clarifies that brownfield redevelopment qualifies for several existing economic development incentives.

< VERA also established a new "Agricultural Warehousing Sites Cleanup Fund" to address a growing number of closed tobacco warehouses.

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

Definition

Kentucky does not have a definition provided by statute or regulations. There is no practical distinction between brownfield cleanups and other voluntary cleanups.

MOA

No

Contaminants

Petroleum and PCBs are OK; asbestos and lead paint OK if not in a building.

Standards

< No formal RBCA or comparable/informal process in place.

< State Superfund statute provides four cleanup options: proving that no action is required; proving that site/release can be managed with institutional controls; removal; or any combination of these three.

KDWM currently is developing the cleanup standards and "tiered remediation options" mandated by that Act and expects to promulgate regulations incorporating those standards by the statutory deadline of June 22, 2002.

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Institutional Controls

ICs frequently are used. Proposed regulations provide generic Preliminary Remediation Goals for both residential and commercial/industrial land-use scenarios. The regulations also provide guidance for conducting site-specific risk assessments.

IC Benefits/Problems

ICs resulted in more and cheaper site cleanups.

REUSE BENEFITS

Number of Sites

Kentucky has identified 953 privately-funded cleanups from 1993-1997. Well over 1,000 sites have completed an informal VCP. One site has entered the new Voluntary Environmental Remediation Program. It is expected that the number will increase once the VERP regulations are finalized.

Economic Benefits

Although Kentucky does not currently track economic impacts, several sites have been reused for parks and recreational facilities. Some of the most notable sites are Papa John's Stadium (a Phoenix Award winner), Louisville Slugger Field, and the Louisville Riverfront Development Project.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

VERP appears to be compatible with the federal program.

Impacts of Law

Increased availability of federal funding for cleanups should help. Program representatives expect to be aided by the federal law's over-filing protection.

LESSONS AND ADVICE

N/A

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LOUISIANA

Louisiana Department of Environmental Quality

PO Box 2178

Baton Rouge, LA 70884-2178

BEST INFO SOURCE: P: 225 765 0333

F: 225 765 0617

<http://www.deq.state.la.us/remediation/ias/vcp.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1996) can offer COC and exemption from liability; eligible sites must qualify as "identifiable area of immovable property." The Louisiana Voluntary Remediation Regulations were adopted in April 2001 to implement the state's voluntary cleanup statute.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

N/A

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

Definition

Louisiana does not have a definition of a brownfield, but its environmental statutes recognize the need to address former commercial and industrial sites that are contaminated with hazardous pollutants and return them to productive use through a voluntary cleanup program.

MOA

LDEQ has submitted a draft MOA to U.S. EPA and currently is awaiting approval from headquarters.

Contaminants

Does not restrict on basis of contaminants; petroleum, asbestos, lead paint, PCBs all OK.

Standards

RBCA-like process in place; applicant can choose the RECAP (Louisiana's RBCA) standard, as appropriate to site and reuse.

Institutional Controls

"Allows and/or requires use restrictions and institutional controls."

IC Benefits/Problems

Facilitating business and job creation; too early to identify any problems.

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REUSE BENEFITS

Number of Sites

18 sites have entered the program, two sites have completed the VRP and approximately 16 sites are pending.

Economic Benefits

"Economic benefits cannot be quantified."

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Not yet.

Impacts of Law

Program representatives believe the new law should help state efforts.

LESSONS AND ADVICE

N/A

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MAINE

Maine Department of Environmental Protection

#17 State House Station

Augusta, ME 04333-0017

P: 207 287 4854

F: 207 287 7826

BEST INFO SOURCE: <http://www.state.me.us/dep/rwm/rem/brown.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Response Action Program (1993) offers COC for all pollutants identified in site assessment and cleanup to the program's satisfaction.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

Pilot contractor service grants to municipalities for site assessments of tax delinquent properties are now

complete. Grants will be distributed to three sites: a job-training center for those in metal-working trades; a boat-building facility; and a site on a city's waterfront, which will likely combine public and private use.

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

MOA

No

Contaminants

Petroleum, PCBs are OK; no asbestos and lead paint.

Standards

Draft cleanup guidelines consider three separate exposure scenarios for soil contact: residential, commercial/industrial, and trespasser. Alternatively, a site-specific goal may be established using the state's risk-assessment guidance document. If these options fail, applicants may follow a RBCA-like process, which always includes institutional controls.

Institutional Controls

ICs are part of most certifications at VCP/brownfield sites.

IC Benefits/Problems

Both cheaper cleanups, and more sites cleaned and reused.

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REUSE BENEFITS

Number of Sites

260 sites have completed investigation and remedial action as of July 31, 2002; 40 sites are underway.

Economic Benefits

Economic impacts not formally tracked, but the state has documented specific sites, such as the Bangor Gas Works site, which increased state tax revenues by \$1.3 million annually. A number of remediated sites are now parks, ballfields, and at least two marinas.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Maine is waiting to see what the final implementation of the legislation looks like before making any changes.

Impacts of Law

Not able to evaluate at this time.

LESSONS AND ADVICE

N/A

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MARYLAND

Maryland Department of the Environment

2500 Broening Highway

Baltimore, MD 21224

BEST INFO SOURCE: P: 410 631 3493

F: 410 631 3472

or *BEST INFO SOURCE:* http://www.mde.state.md.us/Programs/LandPrograms/ERRP_Brownfields/

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1997) offers COC or No Further Requirements letter; sites contaminated after October 1, 1997, listed on the NPL, or under active enforcement are not eligible.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

Brownfields Revitalization Incentive Program fund offers low-interest loans/grants to persons conducting voluntary cleanups; low-interest loans or grants available for conducting environmental site assessments.

Incentives to Attract Private Investment to Brownfields

Brownfields Revitalization Incentive Program — five-year, 50 percent state (and optional 20 percent local, for a total tax credit of 70 percent)) to offset increase in property tax due to remediation; tax credits may be extended to 10 years in designated EZs; incentive available in jurisdictions which agree to contribute 30 percent of the increase to the state's Brownfield Revitalization Incentive Fund.

TECHNICAL ELEMENTS

MOA

Yes — as of February 1997.

Contaminants

PCBs are OK; other contaminants accepted conditionally — petroleum (not exclusively, but along with other contaminants); paint and asbestos (as long as they comply with all other applicable laws and regulations).

Standards

VCP provides a “menu” of cleanup options: uniform risk-based standards, site-specific risk assessment, federal/state soil standards or water quality standards, federal/state MCLs, and other federal/state standards. Site-specific risk assessments follow a RBCA-like process.

Institutional Controls

“Institutional controls are allowed and are included in the No Further Requirements Determination or Certificate of Completion.”

IC Benefits/Problems

ICs “probably have resulted in more cleanups and more properties reused. [ICs] also have probably lowered the cost of cleanups.”

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REUSE BENEFITS

Number of Sites

79 sites totaling approximately 1,573 acres have been accepted into the VCP, and 60 sites totaling approximately 1,317 acres have completed it.

Economic Benefits

An estimated 100 businesses and 3,700 jobs have been created on brownfield sites; another 160 businesses have been located on, created and/or retained on brownfield sites. One site was redeveloped as a golf course.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

None made.

Impacts of Law

The new law is expected to enhance brownfield cleanup efforts in Maryland.

LESSONS AND ADVICE

N/A

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MASSACHUSETTS

Massachusetts Governor's Office for
Brownfields Revitalization
10 Park Plaza, Suite 3720
Boston, MA 02116
BEST SOURCE P: 617 973 8989
F: 617 973 8797

<http://www.massbrownfields.state.ma.us>

Department of Environmental Protection
Bureau of Waste Site Cleanup
One Winter Street, 7th Floor
Boston, MA 02108
P: 617 556 1138
F: 617 292 5530

<http://www.state.ma.us/dep/bwsc/brownfld.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Privatized, voluntary cleanup program since 1993; state-licensed site professionals manage and oversee most cleanups.

< Cleanups are tied to reuse, activity, and use limitations, and land-reuse restrictions.

< Generic liability endpoints apply to cleanups and voluntarily undertaken cleanups by innocent land owner. Site can be transferred prior to completion, provided cleanup continues and is completed.

- < Offers liability exemptions for innocent tenants and down-gradient property owners.
 - < Lenders are exempt unless they cause the contamination or cause the borrower to contaminate.
- The 1998 Brownfields Act authorizes the Commonwealth to enter into Brownfields CNTS. These agreements provide owners and operators with individually-tailored liability relief that goes beyond that provided directly by the Act and offers broader eligibility and increased flexibility to potential developers.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

MassDevelopment, in partnership with the Brownfields Advisory Group, administers the Brownfields Redevelopment Fund, designed to provide flexible financing for site assessments and cleanup actions in economically-distressed areas of the Commonwealth.

< Site Assessment Program provides interest-free financing of up to \$50,000. The borrower or project sponsor must be an innocent owner or operator of the site, or must be an eligible person with site control or evidence of the right to enter the site for purposes of conducting environmental testing.

< Remediation Loan Program offers low-interest financing of up to \$500,000 for cleanup actions. Remediation loans are secured by a mortgage or other substantial collateral, and the borrower must be the owner or tenant of the site. Terms are quite flexible, and determined on a case-by-case basis.

Incentives to Attract Private Investment to Brownfields

< Brownfield Redevelopment Access to Capital (BRAC) — \$15 million for environmental insurance fund based on two state-negotiated policies provided by AIG: one to pay for unanticipated costs associated with planned cleanup, third-party liability, business interruption and cleanup of previously existing unknowns; the second protects lenders from defaults on private loans made for cleanup and redevelopment while environmental conditions remain on site. BRAC subsidizes premiums for both policies by 50 percent. Environmental policy is for a five-year term, and the lender policy is for a 10-year term.

< State Tax Credit for remediation – 25 percent (with reuse restrictions) or 50 percent (without reuse restrictions), for innocent parties who “diligently” pursue site cleanups begun before August 5, 2003, in economically-distressed areas.

< Municipal Tax Abatement — Municipalities can negotiate back taxes on contaminated sites in exchange for commitment by new owner to clean and restore site to tax rolls.

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< Massachusetts Economic Development Incentive Program (EDIP) — menu of tax options including: (1) negotiated prospective municipal property taxes on all value or enhanced value, up to 20 years; (2) exemption from local personal property taxes; (3) 5 percent state-investment tax credit; and (4) 10 percent abandoned-building tax deduction (the latter two geared toward properties in Economic Target Areas).

< Gubernatorial level state Office for Brownfields Revitalization helps with access to brownfield and economic development programs, information on project sequence, municipal assistance, and trouble shooting for all government-related issues.

TECHNICAL ELEMENTS

MOA

No

Contaminants

Petroleum, asbestos, and PCBs are OK; no lead paint.

Standards

Risk-based regulatory program in place; offers a choice of a chemical-specific approach with numerical standards, or a cumulative-risk approach based on site specific information.

Institutional Controls

N/A

IC Benefits/Problems

N/A

REUSE BENEFITS

Number of Sites

As of June 30, 2002, over 650 projects have received funding approval and/or direct project assistance as a result of the Brownfields Act implementation. Approximately 125 projects are pending and partner agencies have provided concerted outreach in over 140 communities. From a universe of 26,951 sites that have been reported to DEP, 15,422 sites cleanups have been completed.

Economic Benefits

Although not all programs track economic benefits from brownfield redevelopment, several have some

information on impacts.

< BRAC reports as of June 2002, 7,399 jobs have been created, 121 businesses have been located on or near sites, and tax revenues have increased by \$796 million.

< Brownfields Redevelopment Fund reports that of the 121 projects entered into the BRAC program, the following have been redeveloped for public use: one marina, one arts center, three open-space projects, and 12 affordable-housing projects.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

DEP is participating in conference calls and workgroups related to the legislation, and has sponsored workshops to educate state and local private officials and the private sector on changes that the legislation will make to existing programs.

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Impacts of Law

The legislation is expected to help efforts in Massachusetts to cleanup and redevelop brownfield sites by providing more resources to complement existing efforts. The new legislation also allows funding to be used for state environmental insurance programs, such as BRAC.

LESSONS AND ADVICE

"The partnerships between state and federal agencies, as well as the public and private sectors, have been critical to making brownfield redevelopment a success in Massachusetts. Massachusetts has been recognized as a leader in its brownfield efforts."

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MICHIGAN

Michigan Department of Environmental Quality

PO Box 30426

Lansing, MI 48909

BEST INFO SOURCE: P: 517 373 8450

F: 517 241 9581

or *BEST INFO SOURCE:* http://www.michigan.gov/deq/0,1607,7-135-3311_4110_4220---,00.html

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Natural Resources Environmental Protection Act (1994, amended in 1995) — completion of a baseline environmental assessment and submitting it to DEQ prior to or within 45 days of purchase provides an exemption to liability for existing contamination; non-labile new owners must use "due care" when redeveloping the property; clean-up standards are land-use based. CNTS also may be sought. Liable and non-labile parties may request approval of a remedial action plan and response activities from DEQ. Liability is based on causation.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Site Reclamation/Site Assessment Grants— \$45 million in bond proceeds; \$35 million for assessment and cleanup at sites where a developer has been identified, and \$10 million for assessment at sites "with redevelopment potential," available until funding exhausted. As of 2002, this fund is not yet exhausted, but it is dependent on bond sales.

< Revitalization RLF — \$30 million (authorized, but re-allocated in 2002 due to statewide budget difficulties); can make loans to cities for site assessment, demolition, and removal actions, with an interest rate of 2.25 percent, repayable over 15 years with five-year deferral of repayment and interest to allow cities to repay loans from tax increments collected by a Brownfield Redevelopment Authority.

< Brownfield Redevelopment Authorities, which have TIF/bonding authority, also can set up a site remediation revolving fund from tax increments captured after remedial actions are paid for. Amendment in 2000 allows functionally-obsolete and blighted properties in urban communities to use TIF for infrastructure, demolition, site preparation, and lead and asbestos abatement. (Authority expires on January 1, 2003, and legislature must reauthorize.)

< Clean Michigan Initiative — \$675-million bond issue approved by voters in November 1998 ballot, included \$255 million for brownfield cleanup; \$60 million for cleanup of sites with acute hazards; \$20 million is designated for grants to local governments and Brownfield Redevelopment Authorities for cleanup of sites with "redevelopment potential" and \$50 million for grants to redevelop waterfront

brownfields. (Bond sales temporarily ceased because of budget problems, thus no grants currently being made from this source.)

Incentives to Attract Private Investment to Brownfields

< 10 percent single business tax credit (\$1 million cap) for innocent party's development costs (not cleanup costs) on a property included in the brownfield plan of a Brownfield Redevelopment Authority; credit carries forward for 10 years. (Expires January 1, 2003; legislature must reauthorize.)

< New brownfield credit enacted in 2000, as part of the Obsolete Property Rehabilitation Act, allows the abatement of up to 100 percent of taxes on real property for up to 12 years when an urban community creates an Obsolete Property Rehabilitation District. (Expires January 1, 2003; legislature must reauthorize.)

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TECHNICAL ELEMENTS

Definition

Michigan's functional definition of "brownfield" is any contaminated property with a potential for redevelopment. In 88 urban areas statewide, this includes blighted and functionally obsolete properties as well as contaminated properties.

MOA

Yes — as of July 1996.

Contaminants

Does not restrict sites from the VCP on the basis of contaminant; petroleum, asbestos, lead paint, PCBs all OK. There are some restrictions on use of grant funds for asbestos and lead paint.

Standards

Risk-based standards in place for soils and groundwater (although not a formal RBCA) in several land-use categories — residential, commercial, and industrial, and "limited" uses with ICs. MDEQ may also approve site-specific criteria.

Institutional Controls

"ICs are accepted and, with respect to cleanup grants to communities, encouraged as cost saving as well as protection action."

IC Benefits/Problems

ICs have decreased cleanup costs and increased the number of properties reused.

REUSE BENEFITS

Number of Sites

< Since 1992, 5,485 Baseline Environmental Assessments have been submitted and 243 brownfield grants and loans have been issued.

< Voluntary cleanups undertaken by liable parties or property owners are not tracked by the DEQ. These numbers are for brownfield grants and loans ONLY: 243 grant/loan projects completed to date; 112 completed; and 131 still in progress.

Economic Benefits

< Since 1992, state has made \$103 million in brownfield grants and loans. On sites where benefit information has been available, the state estimates that its VCP efforts have generated an estimated 13,000 jobs, created an estimated 150-175 businesses now located on redeveloped land, and stimulated \$2.3 billion in private investment, as well as over 1,500 housing units on 29 different sites. The private sector has invested approximately 28 private dollars per every dollar of grant funds.

< Clean Michigan Initiative funds cannot fund projects where marinas or stadiums will be developed. They also do not generally fund parks or open space because the programs require job creation and/or private investment associated with the new use. Some of the projects have included recreational facilities along with private development, but the number is probably less than 10.

< Program officials note that the budget situation combined with expiration of critical redevelopment incentives has temporarily slowed the brownfield programs in Michigan, but hope for activity to resume early in 2003.

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IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

None

Impacts of Law

Federal grants can be used to supplement existing state efforts.

LESSONS AND ADVICE

N/A

MINNESOTA

Minnesota Pollution Control Agency
Major Facilities and Remediation Division
520 Lafayette Road
St. Paul, MN 55155

P: 651 296 6139 or 651 296 7212

F: 651 297 8676 or 651 296 9701

BEST INFO SOURCE: <http://www.pca.state.mn.us/cleanup/brownfields.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Voluntary Investigation and Cleanup Program (1988) offers six levels of assurance ranging, from No Action Letters to COC.

< AgVIC Program (1993) – Minnesota Department of Agriculture offers similar assurances as MPCA's VIC program for sites contaminated with agricultural chemicals.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Contamination Cleanup Grant Program — \$21.47 million for 2002-2003 biennium to DTED for grants to cities for cleanup at sites with development potential; covers up to 75 percent of project costs.

< Dry-cleaners fund reimburses current or former owners and operators for cleanup costs over \$10,000, at dry-cleaning facilities that have entered the state's VIC program.

< Metropolitan Council in Twin Cities region offers brownfield project grants in seven-county area.

Incentives to Attract Private Investment to Brownfields

Hazardous waste subdistrict TIF, values brownfields at zero to maximize increment/ redevelopment finance resources.

TECHNICAL ELEMENTS

Definition

Minnesota uses the EPA definition of brownfields.

MOA

Yes — as of May 1995.

Contaminants

Petroleum contamination is allowed in the VCP if not the sole contaminant. The VCP works with asbestos or lead paint only if there is a release to the environment. PCB sites are handled only if contamination resulted from a release prior to 1978.

Standards

State uses a risk-based approach that considers future use.

Institutional Controls

"ICs are present."

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IC Benefits/Problems

< "Helps redevelopment on lots of properties, cheaper."

< MPCA is currently undertaking a program assessment of the VIC program and is in the process of determining what enhancements should be made.

REUSE BENEFITS

Number of Sites

As of July 2002, over 1,900 projects have entered the VIC program; 1,366 sites are completed and 571 sites currently are underway.

Economic Benefits

< From the completed sites, over 3000 jobs created and a \$3-million increase in tax base is attributable to VIC assistance.

< Recent figures pegged to DTED sites note that 12,560 jobs will be created at DTED sites and 4,180 housing units will be created (865 deemed affordable housing). Tax-base increases are estimated at \$31,486,315. Approximately 5 percent of all brownfield sites have been reused for parks, open space, or recreational facilities. Private leverage is estimated at almost \$1 billion.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Still waiting to see what the new federal changes will be.

Impacts of Law

N/A

LESSONS AND ADVICE

“Strong communication among programs, users, and others is essential to make the program work.”

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MISSISSIPPI

Mississippi Department of Environmental Quality

PO Box 10385

Jackson, MS 39289-0385

P: 601 961 5654

F: 601 961 5300

BEST INFO SOURCE: <http://www.welcome.to/brownfields>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Brownfields Voluntary Cleanup and Redevelopment Act (1998) — Regulations effective August 1, 1999; liability protection and NFA letter available, and protection transferable to future owners, and lending institutions. Risk-based remediation permitted using state Risk Evaluation Procedures.

< Uncontrolled Site Voluntary Evaluation Trust Fund (1997) Program (VEP) allows for expedited review of work plans and reports, NFA letter available, and risk-based remediation permitted using state Risk Evaluation Procedures.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

Promotes use of federal EPA grant resources.

Incentives to Attract Private Investment to Brownfields

Liability protection is offered before actual cleanup.

TECHNICAL ELEMENTS

Definition

Mississippi defines a brownfield property using the CERCLA definition (42 USCS 9601 et seq (1997)); state defines a brownfield site as a brownfield property that has been remediated under a brownfield agreement.

MOA

Not yet; discussions on draft MOA with EPA Region 4 were held in July 2001.

Contaminants

Asbestos, lead paint, PCBs are OK; petroleum generally is OK, although some UST sites may fall under UST program.

Standards

The brownfield program uses a tiered risk-based approach to remediation. The approach is reasonable, flexible, while still protective of human health and the environment.

Institutional Controls

ICs are in state statute, and thus allowable in the brownfield program.

IC Benefits/Problems

State notes that ICs may mean “Cheaper short-term costs; however, continued long-term costs may result in significant total costs.” Agency resources may be stretched to “manage” ICS in the future.

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REUSE BENEFITS

Number of Sites

Since July 2002, 18 sites have entered the Voluntary Evaluation program and three have completed it. The number of sites that have entered the brownfield program has more than doubled during the past year.

Economic Benefits

Not currently tracking economic impacts.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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MISSOURI

Missouri Department of Natural Resources

Hazardous Waste Program

Voluntary Cleanup Section

1738 East Elm

Jefferson City, MO 65101

P: 573 526 8913

F: 573 526 8922

BEST INFO SOURCE: <http://www.dnr.state.mo.us/alpd/hwp/hwpvc.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1994) — COC issued by the state; any interested party can apply with property owner's permission. Includes risk-based cleanup criteria, tied to future land use, and institutional control provisions.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Brownfield Redevelopment Program offers loans and loan guarantees geared toward capital improvements, for parties that have purchased properties abandoned or underutilized for at least three years.

< Grant of 50 percent of cost (up to \$100,000) to investigate site feasibility.

< Public infrastructure grant up to \$1 million.

Incentives to Attract Private Investment to Brownfields

Brownfield Redevelopment Program offers menu of state tax credits for up to the entire amount of remediation costs; tax credits of between \$500-\$1300/year (for up to 10 years) for each new job created; capital investment tax credit of 2 percent; an income exemption of 50 percent; a tax abatement of up to 15 years for local property taxes.

TECHNICAL ELEMENTS

Definition

Missouri defines a brownfield as a site that is contaminated by hazardous substances.

MOA

Yes — as of September 1996.

Contaminants

Petroleum, asbestos, lead paint, and PCBs all OK.

Standards

RBCA-like process in place; applicants can select standards for residential (or unrestricted), commercial, or industrial uses. Cleanup standards are based on current and intended future use of the property.

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Institutional Controls

The VCP does not encourage IC use in lieu of active, permanent remediation, but it does permit various ICs to be used as part of site cleanup when the participant elects to clean a site to a standard other than state's unrestricted use level. The primary IC is a restrictive covenant combined with a monitoring contract; the contract specifies monetary penalties if the restrictive covenant provisions are not adhered to. The restrictive covenant runs with the land, not the owner. Six of 18 state-defined brownfield sites completed to date have elected to use institutional controls to achieve closure.

IC Benefits/Problems

The IC option gives more flexibility to VCP participants who can choose to cleanup to less stringent standards, and thereby save in remediation expenses. State notes that "the most frequent complaint about the restrictive covenant is that it lowers the value of the remediated property and that the penalty provisions in the monitoring contract are too severe."

REUSE BENEFITS

Number of Sites

354 sites have entered the program since 1994 (including 66 in 2001), and 127 have completed it; 150 sites are active.

Economic Benefits

Missouri is not currently tracking economic impacts, but the state notes that benefits must meet or exceed the value of any incentives provided.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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MONTANA

Montana Department of Environmental Quality

PO Box 200901

Helena, MT 59620-0901

BEST INFO SOURCE: P: 406 444 0492

F: 406 444 1901

<http://www.deq.state.mt.us/Rem/hwc/Srs/brownfields.asp>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup and Redevelopment Act (1995) offers closure letters; program can be used by any interested person with the property owner's permission to address all or a portion of a site.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Controlled Allocation of Liability Act and orphan share fund offers reimbursement for expenditures beyond applicant's responsibility from an orphan share fund; level depends on available funding.

< Loans available through state Board of Investments program may apply to brownfield sites.

Incentives to Attract Private Investment to Brownfields

Legislation requiring state to define possible need for tax incentives, for consideration by the 2001 legislature, postponed.

TECHNICAL ELEMENTS

Definition

Montana has no definition of a brownfield in statute or regulation and applies the U.S. EPA definition when necessary.

MOA

No

Contaminants

Petroleum, asbestos, lead paint, all OK, with some conditions.

Standards

Choice of cleanup standards available.

Institutional Controls

ICs "allowed as appropriate."

IC Benefits/Problems

"More sites cleaned and reused, but difficult to ensure that ICs are appropriate and can be maintained."

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REUSE BENEFITS

Number of Sites

As of July 2002, 26 sites have entered the program, 19 sites have completed voluntary cleanups on all or a portion of the site (including no further action VCPs), and one site is currently underway.

Economic Benefits

Although Montana does not currently track economic impacts, of the sites entered in the program, two have been remediated for parks, open space or recreation facilities, and nine sites have greenspace activities as their proposed reuse. One site was donated to the Nature Conservancy and used for river

access.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Not yet.

Impacts of Law

Potentially additional funding for program development and investigation/remediation assistance.

LESSONS AND ADVICE

N/A

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NEBRASKA

Nebraska Department of Environmental Quality

1200 N Street, Suite 400

PO Box 98922

Lincoln, NE 68509

BEST INFO SOURCE: P: 402 471 2214

F: 402 471 2909

<http://www.deq.state.ne.us/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Nebraska's Remedial Action Plan Monitoring Act (RAPMA) (1995) authorizes state to offer NFA letter to volunteers; any site with low or moderate levels of contamination is eligible.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

The RAPMA is available to anyone, but it is primarily targeted to low to moderate environmental priority sites.

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

MOA

No, but state is in the process of drafting an MOA with EPA, and may adjust wording within RAPMA to address requirements for an MOA. This likely will include stronger wording regarding public participation.

Contaminants

Petroleum, asbestos, lead-based paint, and PCBs all OK.

Standards

If cleanup values are not established by statute, such as groundwater MCLs, then RBCA or a RBCA-like process is used. This is generally coordinated through a risk assessor at the NE Health and Human Services Systems.

Institutional Controls

Yes

IC Benefits/Problems

ICs make cleanup cheaper and more readily attainable.

REUSE BENEFITS

Number of Sites

As of July 2002, 21 sites have entered the program, four have completed cleanup and received an NFA letter, and 15 sites are underway.

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Economic Benefits

Does not track economic benefits, but state noted that it plans to do so in the future. State noted that two sites are being used for park and recreational space.

Nebraska emphasized that adjacent RAPMA voluntary cleanup sites near and along Omaha's riverfront will greatly change and improve the area as cleanup and redevelopment continue. Omaha's Convention Center and Arena Complex, Lewis and Clark Landing, National Parks Office and Gallup Educational Headquarters Campus will be the first results of this brownfield effort. More projects are likely to spawn off of this redevelopment.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Work to establish an MOA with EPA for Nebraska's VCP is underway

Impacts of Law

Anticipate an increase in brownfield activities and redevelopment and, as assisted through EPA funding, will generate interest among more sites in RAPMA's NFA letter.

LESSONS AND ADVICE

"Education, early and often, regarding the voluntary cleanup program and its requirements are essential to a successful investigation and cleanup. Don't assume consultants know what they are doing."

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NEVADA

Nevada Division of Environmental Protection

333 West Nye Lane

Carson City, NV 89706-0851

BEST INFO SOURCE: P: 775 687 4670 ext 3024

F: 775 687 6396

<http://ndep.nv.gov/bca/BROWNFLD.HTM>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Incentives for Voluntary Removal program (1999) offers COC; liability relief transferable to new owners.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< U.S. EPA capitalized Brownfield Cleanup RLF in 2001 with coalition partner, Hawthorne, NV, for \$2 million.

< State has targeted \$1 million for all projects within Nevada. New program targets for 2002 (reflecting the new brownfields law) include rural communities, USTfields, mine-scarred lands, and drug labs.

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

Definition

Nevada defines an eligible property in its voluntary cleanup program as real property not listed on the NPL, owned by anyone under current investigation with respect to the property and containing the probable site of a release of a hazardous substance.

MOA

No

Contaminants

Asbestos, lead paint, PCBs are OK; petroleum OK only if commingled with another hazardous substance.

Standards

RBCA process in place.

Institutional Controls

ICs not encouraged at this point; state anticipates more receptivity to ICs in the future, at more complicated brownfield sites having extensive contamination.

IC Benefits/Problems

ICs not encouraged because they are hard to track and state has no authority to enforce.

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REUSE BENEFITS

Number of Sites

One site now in program and in the process of negotiating the remedial agreement. Outreach workshops planned for the next year to educate about and market the program to prospective volunteers. State has several sites close to entering program.

Economic Benefits

Nevada is working with various cities to potentially use funds through the Trust for Public Land. The state also is working with several communities on incorporating a greenspace element in their EPA brownfields assessment grant proposals. Nevada did receive a pilot for Nye County, which also received \$50,000 for a greenspace project.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Will not consider changes until more information on new law's implementation is available.

Impacts of Law

So far, the new law appears to be of tremendous benefit for Nevada, especially with rural development. The state has modified its brownfield program targets to reflect new federal eligible activities, such as mine-scarred lands and petroleum-contaminated sites.

The only concerns raised by the state stem from the unallowed expenses of administrative costs with the Brownfields Cleanup Revolving Loan Fund Pilots.

LESSONS AND ADVICE

“Even though Nevada’s Brownfields Program and VCP Program are just beginning to test the waters within our state, I have found brownfields to be the most rewarding and challenging program to implement. One must maintain a vision, develop a continued flow of optimism, be aggressive, but move softly with a determined step, stay focused on the good things a project will do for the environment and the improvements to its citizen’s well-being. The most important aspect that attracted me to brownfields is the whole concept of empowering local governments, states, and tribes. Empowerment means allowing those affected to stand up, have a voice, make decisions, creating new boxes to bring projects to completion and utilizing our thinking. To effect change requires an incredible amount of dedication, determination, and heart-felt enthusiasm or a passion for brownfields, constant discussions for anyone who will listen, and most of all tenacity.”

“I have found the most frustration with certain mind-sets by governments – whether it is our own state government, federal government, or some nonprofit entities. This really has to do with people who work within these systems and who choose to exist as they have always existed. Brownfields require participation and partnerships to help projects move forward for the benefit of others. Sometimes all it takes [to derail a project] is one person (in a certain position) who refuses to become a partner or a team member or chooses to see things as black and white. Your stakeholder project team needs to be forward thinking and involved to help make things really happen.”

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NEW HAMPSHIRE

New Hampshire Department of Environmental Services

PO Box 95

Concord, NH 03301-0095

BEST INFO SOURCE: P: 603 271 6422

F: 603 271 2456

or *BEST INFO SOURCE:* <http://www.des.state.nh.us/hwr/hwrbbfld.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Brownfields Program (1996) offers NFA letter, COC, and CNTS.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Municipally-owned sites eligible for state clean water revolving fund loans (as of October 1, 1999).

< U.S. EPA-capitalized Brownfield Cleanup RLF provides low-interest loans and some direct financial assistance to brownfields cleanup. Two loans have been made so far. Sites statewide are eligible.

Incentives to Attract Private Investment to Brownfields

< “Qualified holder” provisions of hazardous waste and petroleum statutes provide protection to lenders and municipalities (for tax deeding).

< Brownfield sites are exempt from state hazardous waste generator fees.

< Municipalities can abate taxes at brownfield sites.

< Site investigation and remedial action planning services available to municipalities through Department of Environmental Services Brownfields Program (with EPA grant money used to pay state environmental consulting contractors).

< U.S. EPA USTfields grant being used to address abandoned gas stations and other similar sites with petroleum contamination. State makes grants of services on behalf of municipalities.

TECHNICAL ELEMENTS

Definition:

New Hampshire defines brownfields in statute to be “properties which have been environmentally contaminated, subject to limitations of R.A. 147-F:4, II. These limitations include requiring that the property be in compliance with any corrective actions or compliance orders and the property can not be

eligible for cost reimbursement from the oil discharge and disposal cleanup fund, the fuel oil discharge fund or the motor oil discharge cleanup fund unless it receives substantially less than full reimbursement from these funds." In addition, state uses U.S. EPA definition as its working definition for broader brownfield redevelopment efforts (including those outside the VCP).

MOA

No

Contaminants

Petroleum, asbestos, lead paint, PCBs all OK.

Standards

Risk characterization and management policy includes a three-tiered risk-based approach. Contaminant-specific generic soil and groundwater cleanup standards are provided in table form; alternatives can be developed based upon site-specific information.

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Institutional Controls

"Activity and Use Restrictions" (AUR) are used when the risk characterization depends upon the restriction of site activities and uses to achieve or maintain protection of human health and/or environment. After completion of active remedial measures, a groundwater management permit (an IC itself) is typically issued to monitor groundwater quality until it meets standards.

IC Benefits/Problems

When properly applied, AURs are protective and provide for cost-effective risk management. Use of AURs has helped make site redevelopment feasible at some sites. "Few problems have been encountered; however, there is some concern about the adequacy of notice that occurs with deed recordation."

REUSE BENEFITS

Number of Sites

Since program inception, 24 sites have enrolled in program and 11 received CNTS; three new entrants and two CNTS this past year. As of July 2002, 12 sites have completed the VCP and six sites are underway.

Economic Benefits

Currently reviewing economic impacts. To date, about 750 jobs created or retained; 13 businesses created and five retained; one town office and a local chamber of commerce have located on brownfield sites; in excess of \$35 million in new development has been leveraged. Two properties are underway for redevelopment as public parks.

New Hampshire state and local governments have most certainly seen increased business and property tax revenues, but these have not been quantified. A good example – the former Whitney Screw site project in Nashua, New Hampshire, won an Environmental Merit Award in 2002. It used the Brownfields Covenant Program, Brownfields Cleanup RLF program, and state petroleum reimbursement funds to leverage private redevelopment investments in excess of \$2 million.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

No.

Impacts of Law

The new law will help New Hampshire's brownfield cleanup efforts.

LESSONS AND ADVICE

"The most successful approach for New Hampshire has been to integrate brownfield redevelopment efforts with all other existing state and federal forms of assistance and 'cobble' together a package for each site that will ensure its attractiveness to private investors. To that end, it is important to foster good working relationships with both government partners and private developers."

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NEW JERSEY

New Jersey Department of Environmental Protection

401 East State Street, 6th Floor

P.O. Box 028

Trenton, NJ 08625

P: 609 984 3122

F: 609 777 1914

BEST INFO SOURCE: <http://www.state.nj.us/dep/srp/brownfields/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Industrial Sites Recovery Act (1993; amended 1998), replaced Environmental Cleanup and Responsibility Act, offers NFA letter; PRPs can participate; 1998 amendment authorized CNTS, applicable to subsequent owners.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Hazardous Discharge Site Remediation Fund — \$75 million low-interest loan/grant program; loans and grants up to \$1 million to private entities for remediation activities; \$2 million in grants and loans available to local governments for orphan sites and sites obtained through tax sale certificates or by voluntary conveyance for redevelopment purposes.

< Provides low-interest loans for water related brownfield activities from NJ's Infrastructure Trust fund.

Incentives to Attract Private Investment to Brownfields

< Qualifying Environmental Opportunity Zones, designated by municipalities, supported by incrementally increasing real property tax abatements (to offset cleanup costs) for up to 15 years as needed.

< 25 percent matching grants to qualified persons for innovative technology cleanups.

< 25 percent matching grants for unrestricted or limited-restricted reuse cleanups.

< Tax rebates from the state, through redevelopment agreements with developers, allow recovery of up to 75 percent of cleanup costs.

TECHNICAL ELEMENTS

Definition

New Jersey defines a brownfield 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."

MOA

No

Contaminants

Petroleum, asbestos, lead paint, and PCBs all OK.

Standards

State allows three cleanup levels: unrestricted use remedial actions, limited restricted use remedial actions, and restricted use remedial actions; natural attenuation allowed in some circumstances. In any situation, contamination source must be removed.

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Institutional Controls

N/A

IC Benefits/Problems

N/A

REUSE BENEFITS

Number of Sites

< In 2001, 2,444 voluntary cleanup memoranda of agreement were signed and 1,774 no further action letters were issued. In 2000, 2,301 voluntary cleanup memoranda of agreement were signed, 1,995 no further action letters were issued, and over 100 redevelopment agreements for cleanup cost recovery were requested by private developers.

< As of June 2001, the NJDEP financing programs have approved over 500 projects totaling more than \$41 million.

Economic Benefits

N/A

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A.

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NEW MEXICO

New Mexico Environment Department
Ground Water Quality Bureau
1190 St. Francis Drive, Room –2300
Santa Fe, NM 87502
P: 505 827 2754
F: 505 827 2965

BEST INFO SOURCE: <http://www.nmenv.state.nm.us/gwb/VRP.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Remediation Act (1997) — regulations effective July 15, 1999; offers CNTS to prospective purchasers; participants can get COC; removes lender liability; enforcement shield offered to participants.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Municipally-owned brownfields eligible for low interest loans from Clean Water State Revolving Fund.

< U.S. EPA-capitalized Brownfields Cleanup RLF makes low-interest loans available to developers and municipalities for site cleanup activities

< Money available to NMED to conduct Phase I and II assessments at municipally-owned sites.

Incentives to Attract Private Investment to Brownfields

< Liability protection for lenders.

TECHNICAL ELEMENTS

Definition

New Mexico does not define a brownfield in statute or regulations; MOA used U.S. EPA definition.

MOA

Yes — as of December 1999.

Contaminants

Does not restrict on basis of contaminants; petroleum, asbestos, lead paint, and PCBs all OK.

Standards

RBCA-like process in place; applicants choose from statewide soil guidelines, background concentrations, or a site-specific RBCA-style process. State has developed a “look-up” table for soil contaminants.

Institutional Controls

“ICs are a commonly sought after remedy, but are difficult for the state to enforce.” The state currently is working on legislation to establish enforceable institutional controls. The VCP does permit conditional closure of sites with ICs.

IC Benefits/Problems

Key benefit is identifying a practical cleanup option for some sites, with more flexibility in finding a remedial solution. But “because New Mexico in general is so highly dependent on its groundwater resource, ICs must be approached carefully.”

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REUSE BENEFITS

Number of Sites

As of July 2002, 27 sites have applied to the program, 10 sites have closed, and 15 are currently active.

Economic Benefits

“Open space is a popular option considered by municipalities interested in brownfield reuse.” Although New Mexico’s VCP does not currently track economic impacts, program officials estimate that approximately seven businesses have been located on, created and/or retained operations on brownfield sites and that new businesses have moved into the state, which would indicate an increase in tax revenues. At least three small communities are currently working on redeveloping former rail yards as open space.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

None made.

Impacts of Law

VCP officials reported that if the new legislation allows the state to use federal funds at sites contaminated with hydrocarbons, that it will help quite a bit. New Mexico has a significant legacy of oil and gas

exploration and a number of small, defunct refineries. These types of sites have been excluded from assistance with federal brownfield funding in the past.

LESSONS AND ADVICE

“We work with many small, rural communities that have not benefitted from the recent economic boom that impacted much of the nation. It is difficult to get them interested in moving forward with projects, because they have difficulty envisioning the path forward and the ultimate goals of brownfield redevelopment. It is difficult to attract developers and dollars to such isolated communities. We have one small community (Deming, New Mexico, pop. 13,000) that has taken on a major cleanup and redevelopment of a mill tailings site that was plaguing their town with blowing dust and potential contamination. New Mexico’s VCP has provided assistance where we could; however, it is the ingenuity and forward thinking of Deming’s leadership that has gotten them far along on this project. The cleanup should be completed in 2002 and they plan a major industrial park on the site. New Mexico’s VCP has been able to use this project as an inspiring example to show other small towns what can be done if they tackle these problems head on and actively look for solutions. We hope other small New Mexico towns will follow in Deming’s footsteps.”

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NEW YORK

NY State Department of Environmental Conservation

625 Broadway, 12th Floor

Albany, NY12233-7012

P: 518 402 9711

F: 518 402 9722

BEST INFO SOURCE: <http://www.dec.state.ny.us/website/der/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Voluntary Cleanup Program (1994) offers an assignable release and CNTS (transferrable to future non-PRP owners); covers any site over which NYSDEC has enforcement jurisdiction (except Class 1 NYS Registry sites; NPL sites; and most TSDFs). PRPs excluded on class 2 NYS Registry sites; petroleum sites; and sites where owners are subject to a cleanup/enforcement action. Acceptable cleanup is determined by present or intended use of property.

< Environmental Restoration Project (Brownfields) Program (1996) gives liability release and indemnification to municipalities and non-PRP successors, including future owners, lenders, or lessees.

< Proposed state Superfund reform legislation would codify the Voluntary Cleanup Program; provide tax incentives; expand the types of sites eligible for Superfund cleanups; and adopt liability reforms to protect innocent parties.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Clean Water/Clean Air Bond Act — \$200 million earmarked for Environmental Restoration Project grants to investigate and/or remediate brownfields; non-responsible municipalities can use grants to cover up to 75 percent of investigation and remediation costs at sites which they own or co-own with not-for-profit organizations.

< Clean Water State Revolving Fund offers interest-free short-term loans, and low-interest long-term loans for water-related projects.

< Proposed legislative changes to the Environmental Restoration Projects program would increase the State’s share of eligible costs from 75 percent to 90 percent; provide for the state to pay 100 percent of state-mandated off-site remediation; eliminate the requirement that the municipality own the property prior to participation for investigations; allow the municipality to recoup its full cost prior to repaying the state; eliminate the profit sharing requirement; allow the municipality to use federal or other state funds to pay their share; allow the state to waive all or any portion of its costs from nonresponsible parties; and enhance public participation.

Incentives to Attract Private Investment to Brownfields

< Empire Zones – designated areas that offer special incentives to encourage economic development, business investment and job creation.

< “Build Now-NY” pilot program to assist businesses in finding “shovel ready” sites of at least 15 acres in

size, with access to transportation, water, and sewer systems, and work forces.

TECHNICAL ELEMENTS

Definition

New York does not define a brownfield in statute or regulation but uses the following working definition: “an abandoned, idled, or underused property where expansion or redevelopment is complicated by real or perceived environmental contamination.”

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MOA

No

Contaminants

< In the brownfield program — petroleum, asbestos, and PCBs are OK; no lead paint.

< In the VCP — petroleum, asbestos, lead paint, and PCBs all OK.

Standards

< Brownfield program does not have a formal RBCA or comparable/informal process in place.

< The VCP features a RBCA-like process.

Institutional Controls

Institutional controls are allowed in both programs, if they are protective of public health and the environment.

IC Benefits/Problems

Cheaper cleanups, less time required to do them.

REUSE BENEFITS

Number of Sites

< Environmental Restoration (Brownfields) Program – 83 sites have entered the program, and 17 have completed it. Of the 83 sites, 21 are proposed for open space uses and five for community-oriented facilities.

< Voluntary Cleanup Program – 338 sites have entered the program and 83 have completed it with signed agreements.

Economic Benefits

Not currently tracking economic impacts at individual sites.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Not at this time.

Impacts of Law

Not able to determine at this time.

LESSONS AND ADVICE

N/A

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NORTH CAROLINA

North Carolina Department of Environment and Natural Resources

Special Remediation Branch/Superfund Section

401 Oberlin Road, Raleigh, NC 27605

Phone: 919 733 2801 ext. 353 or 287, Fax: 919-733-4811

BEST INFO SOURCE: <http://www.ncbrownfields.org>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

North Carolina’s brownfield statute is a redevelopment initiative that treats non-responsible parties differently than the manner in which the VCP treats polluting parties. VCP operates separately from the Brownfields Program.

< Brownfields Program (1997) is administered by the Special Remediation Branch of the Superfund Section. Site polluters are not eligible for the brownfields program. The brownfields agreement provides the assurance that DENR will not enforce against prospective developer (PD) for cleanup beyond what is required in the agreement, as long as PD complies with its terms.

< Program requirements: PD must certify that it did not cause or contribute to site contamination. The property must be abandoned, idled, or underused and must have real or possible contamination that has inhibited site redevelopment. It cannot be an NPL site. Proposed project must be a bona fide

redevelopment with identified public benefits commensurate with the liability protection provided by the brownfields agreement.

< Voluntary Cleanup Program (1987) is administered by the Inactive Hazardous Sites Branch of the Superfund Section. Site polluters are eligible for the VCP. VCP can offer NFA letter.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

None

Incentives to Attract Private Investment to Brownfields

2000 legislation authorized sliding scale of property tax abatements for increased value of sites being redeveloped under a brownfields agreement (90 percent for year one, down to 10 percent in year five), effective July 1, 2001.

TECHNICAL ELEMENTS

MOA

No

Contaminants

Sites with *exclusively* petroleum hydrocarbon contamination from USTs are ineligible for the brownfields program. Otherwise, all soil and groundwater contaminants are OK.

Standards

Site cleanup under the brownfields program is required only when necessary to make the site safe for the intended reuse. Site-specific risk-based cleanup standards are used.

Institutional Controls

The North Carolina brownfield process assumes that land-use restrictions (LURs) will be an integral part of nearly all brownfields agreements. LURs run with the land. LURs are used less often in VCP.

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IC Benefits/Problems

Potential IC enforcement problems were eliminated with specific statutory language that provides IC enforcement mechanism; this is making the use of ICs an effective approach at brownfield sites.

REUSE BENEFITS

Number of Sites

As of July 2002, 20 sites have completed the brownfields process and 35 sites are currently in various stages of the process. Redevelopment projects include manufacturing, residential, and commercial uses. About two-thirds of the projects are in urban areas, with the remainder in rural settings.

Economic Benefits

Based on information provided by 8 of the 12 developers whose projects are either in the public comment phase or completed, redevelopment under the program has resulted in private investment commitments exceeding \$140 million. The NC Brownfields Program has several projects in its inventory slated for redevelopment as recreational facilities, but none are completed.

North Carolina has seen the dollar impacts of brownfield cleanup, such as increased tax revenue, but there is no formal tracking system in place. The state has asked developers in the program to estimate the private investment anticipated for their projects, and estimates provided (for only 14 projects) indicate that the program's expenditure of approximately \$150,000 to provide technical oversight and guidance for necessary site assessment and cleanup activities paid for by the developer has resulted in committed private brownfield redevelopment investment in excess of \$210 million

A state staffing innovation also is leading to benefits. To meet staffing needs, the state added a brownfield staff person who works exclusively to advance brownfield redevelopment in Charlotte, NC. The position is funded by the City of Charlotte under a cooperative agreement with the state DENR.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

None yet; changes may be made to VCP after EPA promulgates its implementation guidance for the new federal law.

Impacts of Law

The new federal law will help the brownfields program by providing an opportunity to secure funding needed to expand program resources, enabling it to be more responsive to and effective in meeting the growing demand for brownfields program services.

LESSONS AND ADVICE

N/A

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NORTH DAKOTA

North Dakota Department of Health
Division of Waste Management
PO Box 5520
Bismarck, ND 58506-5520
BEST INFO SOURCE: P: 701 328 5166
F: 701 328 5200

<http://www.health.state.nd.us/ndhd/envIRON/wm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

No program in place.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

N/A

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

MOA

No

Contaminants

Petroleum, asbestos, lead paint, PCBs addressed through non-VCP actions.

Standards

Cleanup standards are site specific, in the absence of a program.

Institutional Controls

Various ICs allowed, based on individual sites, future use, location, etc.

IC Benefits/Problems

Quicker and cheaper cleanups if cleanup standards are based on future industrial use versus residential cleanup standards.

REUSE BENEFITS

Number of Sites:

As of July 2002, two to three sites have been redeveloped.

Economic Benefits

One known site was redeveloped into a park/open space.

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IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

No

Impacts of Law

Unknown at this time.

LESSONS AND ADVICE

N/A

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OHIO*

Voluntary Action Program

3 Ohio EPA/DERR
PO Box 1049
Columbus, OH 43216-1049
P: 614 644 2924
F: 614 728 1791

BEST INFO SOURCE: <http://www.epa.state.oh.us/derr/volunt.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Action Program (1994) — private-licensed site professional, working with each site, develops NFA letter that is offered by the state; PRPs are eligible.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

- < Urban Redevelopment Loan Program makes loans up to \$5 million to municipalities or nonprofit economic development organizations for real estate activities leading to developable parcels in distressed areas, including site remediation.
- < Water Pollution Control Loan Fund issues low-interest loans for water-related brownfield activities, up to \$3 million per project, for terms up to 20 years.
- < Ohio Water Development Authority extends loans to public or private entities for "remediation of property."
- < Competitive Economic Development Program provides grants to small cities (less than 50,000) and small counties for business expansion and retention purposes; cities, in turn, may loan up to \$500,000 to businesses for brownfield remediation, for projects that will create or retain jobs.

Incentives to Attract Private Investment to Brownfields

- < Tax abatements for up to 10 years for the increase in property tax due to remediation
- < Grant-subsidized technical assistance to volunteers, to support assessment and cleanup under the Voluntary Action Program.

TECHNICAL ELEMENTS

Definition

Ohio defines a brownfield as "former/current industrial or commercial property with real or perceived contamination."

MOA

No

Contaminants

Sites contaminated with petroleum not from USTs are allowed entry into the VAP. In general, sites contaminated with PCBs after 1978, and which exceed 50ppm, are excluded from the program without prior remediation/compliance. Sites containing asbestos and lead-based paint are eligible for the VAP.

Standards

Ohio EPA has developed industrial, commercial, and residential risk-based standards. VAP standards also can be met via property-specific risk assessments or cleaning to background levels.

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Institutional Controls

N/A

IC Benefits/Problems

N/A

REUSE BENEFITS

Number of Sites

85 sites have entered program, totaling 1,420 acres.

Economic Benefits

Approximately 7,100 jobs have been created.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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OKLAHOMA

Oklahoma Department of Environmental Quality
707 North Robinson
PO Box 1677

Oklahoma City, OK 73101-1677

BEST INFO SOURCE: P: 405 702 5127

F: 405 702 5101

<http://www.deq.state.ok.us/lpdnew/brownfindex.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

< Oklahoma Brownfields Voluntary Redevelopment Act (1997) offers risk-based Certificates of No Action Necessary and COCs; any “abandoned, idled, or underused industrial or commercial facility complicated by environmental contamination” is eligible; PRP s are eligible; UST projects are encouraged to pursue closure under the Oklahoma Corporation Commission Petroleum Storage Tank Indemnity Fund.

< Applicants decide after site characterization whether to pursue a formal brownfield certification or an informal voluntary cleanup.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Brownfield projects in urban areas that have or have applied for a stormwater discharge permit may be eligible to tap the Clean Water State Revolving Fund (administered by the Oklahoma Water Resources Board).

< U.S. EPA-capitalized Brownfield Cleanup RLF.

Incentives to Attract Private Investment to Brownfields

< Oklahoma Sales Tax Code exempts sales tax on machinery, fuel, chemicals, and equipment used in cleanup projects.

< Oklahoma Quality Jobs Act provides quarterly incentive payments for 10 years to firms who locate on a minimum 10-acre site that qualifies as an NPL site, a Superfund removal site, an official Superfund deferral site, or a state voluntary cleanup/brownfield site.

TECHNICAL ELEMENTS

Definition

Oklahoma defines a brownfield as “an abandoned, idled, or underused industrial or commercial facility or other real property at which expansion or redevelopment of the real property is complicated by environmental contamination caused by regulated substances.”

MOA

Yes — as of April 1999.

Contaminants

Petroleum, asbestos, lead paint, PCBs may participate in the brownfield program, but state VCP will refer applicants to other agencies.

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Standards

RBCA-type process and standards in place; VCP features a risk-based system based on the proposed use of the site. DEQ uses a three-tiered approach: (1) sampling data is compared to screening levels; (2) if data is higher than screening levels, state will generate default levels using EPA RAGS-based methodology; or (3) applicants may choose to do a full risk assessment and make a case based on those levels (which the state may or may not accept).

Institutional Controls

ICs allowed if they “adequately protect the public.”

IC Benefits/Problems

Key benefit is that “there is more awareness among the real estate professionals that a Phase II environmental assessment showing contamination is no longer a ‘deal breaker.’” More communities feel able to acquire and clean up properties because they feel they can manage the liability issues.

REUSE BENEFITS

Number of Sites

As of July 2002, 250 sites in the VCP database. Of these four have Brownfield COCs, four have Brownfield Certificates of No Action Necessary, four have received NFA letters, 20 are conducting post construction groundwater monitoring, and 15 were referred to other divisions and/or withdrew from the VCP.

Economic Benefits

Although Oklahoma is not currently tracking economic impacts, one site has been redeveloped into a park/open space.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

No

Impacts of Law

Program officials report that it is too soon to tell.

LESSONS AND ADVICE

N/A

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OREGON

Oregon Department of Environmental Quality
811 S.W. 6th Avenue
Portland, OR 97204
P: 503 229 6834
F: 503 229 6954

BEST INFO SOURCE: <http://www.deq.state.or.us/wmc/cleanup/brn0.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

- < Voluntary Cleanup Program (1991) offers NFA letter; liability release available through Prospective Purchaser Agreement.
- < 1995 change provides for an "Independent Cleanup Pathway" with less oversight and quicker review.
- < Regional brownfield advocates aid applicants through process.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

- < Capital Access Program offers loan portfolio insurance for environmental actions and brownfield redevelopment projects.
- < Credit Enhancement Fund allows loan guarantees for environmental actions and brownfield redevelopment projects as an allowable use, providing loan or credit guarantees to specific businesses.
- < Brownfield Redevelopment Fund can finance, with grants or loans environmental actions (if certain criteria are met); feasibility studies or site remediation not eligible for BRF support.
- < Special Public Works Fund is available to small local and tribal governments for environmental evaluations on municipal property.
- < Brownfield assessment grants from DEQ may be used at publically-controlled sites.
- < City of Portland (through the Portland Development Commission) has its own brownfield RLF.

Incentives to Attract Private Investment to Brownfields

- < Technical assistance through DEQ workgroup identifies resources — including federal, state, and private funding, and financing available through Oregon Economic and Community Development Department.
- < While not labeled as brownfield elements, pending rule changes will affect UST and dry-cleaner cleanups. These changes may result in more cleanups and changes in use.

TECHNICAL ELEMENTS

Definition

Oregon defines brownfields in statute ORS 285A.185, but uses the following working definition: "a vacant or underutilized commercial or industrial property where environmental, economic and social obstacles hinder use and redevelopment."

MOA

No

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Contaminants

Petroleum, lead paint, PCBs can be addressed through state brownfield program; so can CERCLA/declined contaminants.

Standards

Applicant has a choice of approach (i.e., removal or institutional controls), but the same 1x10⁻⁶ standard must always be met. Applicants can use standard or site-specific RBCA-style assessment approaches. Currently working on new sediment standards and TPH standards.

Institutional Controls

Oregon has a range of ICs. These include statewide land-use planning requirements, including the use of Urban Growth Boundaries.

IC Benefits/Problems

The shorthand of "industrial standards" may not accommodate the various mixed-use brownfield projects.

REUSE BENEFITS

Number of Sites

Currently there are 291 sites in VCP with 12 on the waiting list; for calendar year 2002 there have been 38 NFA letters, four removals, five RODs, and two consent orders.

Economic Benefits

State is not currently tracking economic impacts. Also, while greenspace uses from former brownfields are not tracked specifically, a number of sites have been remediated to include some form of public benefit (e.g., a new branch library, a community art center, etc.) that may not be the focal point of the project).

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

No changes made directly as a result of the new law.

Impacts of Law

Oregon VCP officials anticipate that the new law help their brownfield efforts. The state expects to secure more grants and is optimistic that the petroleum grants may help a number of smaller communities.

LESSONS AND ADVICE

“One consistent key is to have a brownfield champion that will stick with the project. The state VCP now has regional brownfield coordinators and this technical assistance is getting more publicly-owned sites into VCP.”

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PENNSYLVANIA

Pennsylvania Department of Environmental Protection

Land Recycling and Cleanup Program

PO Box 8471, 400 Market St

Rachel Carson State Office Building

Harrisburg, PA 17105-8471

P: 717 783 7816

F: 717 787 0884

BEST INFO SOURCE: <http://www.dep.state.pa.us/dep/deputate/airwaste/wm/landrecy/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Land Recycling Program (1995) offers clients release from liability for approved cleanups and PRPs may participate. The program identifies risk-based standards for cleanup, simplifies the approval process, and limits future liability when standards are attained.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Industrial Sites Reuse Program provides loans and grants to municipalities and private entities for site assessment and remediation; maximum of \$200,000 for site assessment, or \$1 million for remediation per year; all require a 25 percent match; loans carry a 2 percent rate for terms up to five years (for assessments) or 15 years (for remediation).

< Infrastructure Development Program provides public and private developers with grants and loans for site remediation, clearance, and new construction, up to \$1.25 million per project at 3 percent interest for 15 years.

< Brownfield Inventory Grant (BIG) program grants up to \$50,000 to cities and development authorities to carry out brownfield inventories.

Incentives to Attract Private Investment to Brownfields

< Key Sites Initiative for municipalities and economic development agencies, uses state-funded contractors to conduct site assessments and prepare cost estimates and remediation plans to promote reuse of abandoned industrial properties.

< Keystone Opportunity Zones — in newly designated KOZs, all taxes maybe forgiven for up to 12 years.

< Job Creation Tax Credit Program created a tax credit of \$1000 per new job for firms that increase employment by 25 jobs or 20 percent within three years from start date (with program).

< PA SiteFinder – web site for marketing previously-used commercial and industrial properties available for redevelopment in Pennsylvania; a person can list a site for sale or lease and also search for one to purchase or lease. PA SiteFinder can be searched by property location, acreage, building square foot, or cost. Once a potential site is identified, additional information can be retrieved including county, municipality, property size, zoning, buildings and conditions, and utility access.

TECHNICAL ELEMENTS

Definition

Pennsylvania defines brownfields as “abandoned, idle, or under-used industrial or commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.”
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MOA

No

Contaminants

Petroleum, asbestos, lead paint, PCBs all OK.

Standards

No formal RBCA or comparable/informal process in place; applicant has a choice of background, statewide health, or site-specific standards. “Special industrial area” provisions may apply to VCP cleanups at sites used for industrial purposes prior to enactment of Act 2, in 1995.

Institutional Controls

ICs may be part of site specific responses, but they are not permitted for attainment of background or statewide health standard cleanups.

IC Benefits/Problems

“ICs have expedited remediations, improved cost-effectiveness, and stimulated creative solutions. We have not experienced community concern or skepticism.”

REUSE BENEFITS

Number of Sites

As of July 2002, 1,097 sites have completed the program and over 500 sites are underway.

Economic Benefits

< Although economic benefits from redeveloped sites are not officially tracked by Pennsylvania’s VCP, officials estimate that 30,000 jobs have been created and approximately 1,097 business located on redeveloped brownfields. A wide variety of industrial and commercial, along with residential projects, schools, recreational facilities (a golf course, athletic fields, trails), and open space are being developed on brownfields, and green infrastructure is encouraged.

< DEP has entered into several multi-site agreements. One, with Penn Fuel Gas, included the remediation of a former manufactured gas plant and rail yard and the development of two ballfields for the Shippensburg Little League. A portion of this site also has been dedicated for green space and a wetland project.

< A number of the redeveloped sites have been located in Keystone Opportunity Zones (KOZ); benefits have resulted, but it is difficult to quantify what type of “dollar” impact this may have on the state and local communities.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

None.

Impacts of Law

N/A

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LESSONS AND ADVICE

“Pennsylvania has continued to excel in redevelopment by providing additional incentives or programs that complement the implementation of the Land Recycling Program. One of those applications of which we are most proud is our online resource for assisting users to market, find, redevelop, and finance their brownfield transactions – PA SiteFinder (www.pasitefinder.com). PA SiteFinder has been recognized by the National Association of Environmental Professionals with its National Environmental Excellence Award and by the International Association of Business Communicators as a “outstanding example of communications excellence.” The Pennsylvania Department of Environmental Protection’s Land Recycling Program created PA SiteFinder as a “one-stop-shop” for brownfield buyers and sellers. PA SiteFinder compiles the necessary information and resources so you can recycle real estate into a sound investment. To date, over 360 sites have been listed on PA SiteFinder, with over 40 sites having been leased or sold from this listing. PA SiteFinder entertains over 7,000 user sessions per month. With new enhancements on the horizon, we only envision PA SiteFinder getting stronger and playing a more important role in brownfield development in Pennsylvania.”

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PUERTO RICO*

Puerto Rico Environmental Quality Board (EQB)

Emergency Response and Superfund Program
PO Box 11444
Santurce, Puerto Rico 00910
BEST INFO SOURCE: P: 787 767 8181 ext 2229-32
F:787 766 0150
<http://www.jca-pr.org/Portal.asp?leng=english>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Property Redevelopment and Voluntary Cleanup Program (2000); EQB authorized to provide liability clarification and relief for prospective purchasers and lenders, through letters, certificates, and/or agreements.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

New program, none yet in place. Statute authorizes EQB to create a Steering Committee to explore possible program approaches.

Incentives to Attract Private Investment to Brownfields

None yet in place; Steering Committee will explore alternatives.

TECHNICAL ELEMENTS

MOA

No

Contaminants

N/A

Standards

Not yet defined; EQB authorized to set standard for voluntary party cleanups.

Institutional Controls

N/A

IC Benefits/Problems

N/A

REUSE BENEFITS

Number of Sites

Program just underway; no results yet.

Economic Benefits

N/A

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IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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RHODE ISLAND

Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
BEST INFO SOURCE: P: 401 222 2797
F: 401 222 3812

<http://www.brownfields.state.ri.us/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Industrial Property Remediation and Reuse Program (1995) offers Letters of Compliance to responsible

parties, and CNTS (which is transferable) to volunteers, prospective purchasers, and lenders; PRPs are not eligible for CNTS.

The General Assembly passed brownfields legislation H-7489 SubA on June 4, 2002, to make technical corrections to the existing brownfields law (see also "Impacts of New Federal Brownfields Law" below).

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< U.S. EPA-capitalized Brownfields Cleanup RLF provides low-interest loans for site cleanup.

< RIDEM has funding for site assessment work for municipalities and nonprofit associations, through U.S. EPA's targeted brownfield assessment program.

Incentives to Attract Private Investment to Brownfields

< Rhode Island Mill Building and Economic Revitalization Act offers a 10 percent tax credit on the cost of substantial rehabilitation for certified sites.

< Incentives are available to lenders that provide financing to mill developers.

TECHNICAL ELEMENTS

Definition

Rhode Island does not define a brownfield in statute or regulations, but RIDEM uses the following definition: "vacant or under-utilized properties with contamination or suspicion of contamination which hinders redevelopment. These are properties where voluntary parties perform cleanup action and redevelopment, typically in accordance with a settlement agreement and covenant not to sue."

MOA

Yes — as of February 1997. The MOA expired during February 2002 and was renewed in its entirety for one year.

Contaminants

Petroleum and PCBs are included under the Site Remediation Regulations. Lead-based paint from industrial/commercial properties also are covered under the regulations, but only in cases where they are in the environment and not still on a structure. Lead-based paint contamination at residential properties falls under the jurisdiction of the Department of Health.

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Standards

Standards based on risk and potential reuse. RIDEM has developed two new policies for 2002. One deals with "Marginal Risk" sites and accelerates its review schedule. The second deals with elevated arsenic levels in soils. It is intended that the Remediation Regulations will be updated and the new Industrial/Commercial Direct Exposure Criteria for Arsenic will become 7.0 mg/kg instead of the current 3.8 mg/kg.

Institutional Controls

State encourages Environmental Land Usage Restrictions (ELURs) on industrial/commercial properties. Monitoring wells and annual ELUR-IC monitoring usually are required.

IC Benefits/Problems

More sites are being cleaned and reused. Community concerns are being addressed by mandatory public notice requirements at various points in investigation and remedy selection. In addition, a 14-day public comment period is required prior to any settlement agreement and CNTS.

REUSE BENEFITS

Number of Sites

As of July 2002, 426 sites have completed the VCP program, and 450 sites are currently underway; 79 sites have entered into Settlement Agreements and CNTS – totaling 810 acres.

Economic Benefits

An estimated 958 jobs have been created; 79 businesses have been created or retained on brownfield sites; based on the 79 sites with agreements in place, new value of remediated properties is \$71.8 million; they have generated about \$2.1 million in sales and property taxes, and \$3.7 million in income tax revenues. At least six sites have been redeveloped for open space and recreational uses, and 13 sites are being developed into schools.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

The General Assembly passed Brownfields Legislation H-7489 SubA on June 4, 2002, which added additional language to reflect the new federal brownfields law. It requires RIDEM to generate a list of sites that have been remediated within the last year and a list of sites that will be addressed in the upcoming year, and requires reports to the General Assembly on the issues of environmental insurance and the licensing of environmental professionals.

State is waiting for the new U.S. EPA guidelines to come out to see how the VCP program and the RLF.

Impacts of Law

RIDEM believes that the new legislation will help its efforts in the VCP program because they currently have a MOA with U.S. EPA and the potential for funding on site specific issues is greatly needed due to current state budget constraints.

LESSONS AND ADVICE

N/A

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SOUTH CAROLINA

South Carolina Department of Health and Environmental Control

2600 Bull Street

Columbia, SC 29201

BEST INFO SOURCE: P: 803 896 4082

F: 803 896 4292

or *BEST INFO SOURCE:* <http://www.scdhec.net/lwm/html/site.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program statute is now in place (S.C. Code Ann § 44-56-710, et seq. [May 1, 2002]).

Previously, an informal Voluntary Cleanup Program was operated under state's Hazardous Waste Management Act (since 1988, expanded 1995). A Certificate of Completion is offered to entrants who successfully complete the requirements of the Voluntary Cleanup Contract. All non-NPL sites are eligible.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

Brownfields cleanup RLF – \$4.25 million for low-interest loans to clean up brownfield sites around the state.

Incentives to Attract Private Investment to Brownfields

Legislature passed financial incentives in 2002 as amendments to state tax code.

< Dry Cleaning Restoration Trust Fund to clean up operating dry-cleaning sites.

< If non-PRP spends at least \$1 million for cleanup conducted pursuant to VCP program, the investment threshold requirement is met and the site is eligible for fees in lieu of property taxes.

< \$1000 credit for each new full-time job created for cleanup performed at a brownfield site by a non-PRP through a voluntary cleanup contract, in addition to the current credits.

< Five-year property tax exemption for property and improvements at brownfield sites at which a cleanup has been performed by a non-PRP through a voluntary cleanup contract with county concurrence.

< Corporate income tax credit for expenses paid and accrued by a non-PRP performing a voluntary cleanup – lesser of 50 percent or \$50,000 in a taxable year (unused credit up to \$100,000 may be carried forward for five years). An additional credit of 10 percent of cleanup costs (not to exceed \$50,000) is allowed in the year that the cleanup is certified.

TECHNICAL ELEMENTS

Definition

South Carolina uses the following working definition, "brownfields are industrial or commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination."

MOA

No

Contaminants

Under South Carolina's brownfields/VCP law, asbestos, PCBs, and lead-based paint can be addressed if there is an environmental exposure. Petroleum is addressed through UST program or Bureau of Water.

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Standards

No formal RBCA or comparable/informal process in place; state generally uses EPA Region 3 Risk-Based Concentration Tables and EPA Region IX Preliminary Remediation Goals as screening levels. Applicants can choose from risk-based concentrations, background concentrations, and site-specific assessment standards.

Institutional Controls

ICs — land-use restrictions and/or ongoing groundwater monitoring — generally required as part of site cleanup in state voluntary cleanup contracts (VCCs). "If contamination in excess of residential standards exists after work required under our VCCs is done, the party entering into the VCC must restrict future land use to industrial purposes only." South Carolina enters into a restrictive covenant with the property owner, which must be filed on the deed. Annual reporting is required on sites with restrictive covenants.

IC Benefits/Problems

IC allows for reuse of property without cleanup to unrestricted use, but with cleanup for current use with a restrictive covenant. "As a whole, this process has been beneficial to our state and its communities."

REUSE BENEFITS

Number of Sites

As of July 2002, total of 18 sites (comprising 760 acres) have entered the program (four in 2002), and six sites (totaling 422.72 acres) have received certificates of completion. 16 sites are underway.

Economic Benefits

South Carolina is in process of compiling economic benefit information, but the state has noted increases to tax base and development/retention of businesses. Two housing developments have been built, and three sites will be developed for reuse as recreational space. So far, most projects have been business redevelopments. Only three sites planned for greenspace.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Not yet.

Impacts of Law

Unsure; still evaluating potential impacts.

LESSONS AND ADVICE

N/A

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SOUTH DAKOTA

South Dakota Department of Environment and Natural Resources
Ground Water Quality Program

Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3181

BEST INFO SOURCE: P: 605 773 3296

F: 605 773 6035

<http://www.state.sd.us/denr/DES/Ground/Brownfields/Brownfields.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

The state has negotiated site-specific agreements.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situation

N/A

Incentives to Attract Private Investment to Brownfields

The state is proceeding with a Targeted Brownfields Assessment Program.

TECHNICAL ELEMENTS

MOA

No

Contaminants

N/A

Standards

The state will use existing groundwater and soil standards.

Institutional Controls

Allows ICs on all spills or release cases both in the assessment and remediation phase of the project.

IC Benefits/Problems

Lack mechanisms to track long-term institutional controls.

REUSE BENEFITS

Number of Sites

As of July 2002, South Dakota currently has three brownfield projects.

Economic Benefits

Projects have not progressed far enough to provide data that would reveal economic benefits. However, each project has a "greenspace," park, or recreational aspect to its proposed redevelopment plan.

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IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

Brownfield program representatives are encouraged that the new federal law will benefit the state. The state plans to spend more time and resources promoting brownfield reuse.

LESSONS AND ADVICE

N/A.

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TENNESSEE

Tennessee Department of Environment and Conservation

401 Church Street

Nashville, TN 37214

P: 615 532 0912

F: 615 741 1115

BEST INFO SOURCE: <http://www.state.tn.us/environment/dsf/voap.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Oversight and Assistance Program (1994, amended 1995, 2001) offers NFA letter indicating that obligations under consent orders have been completed. New statute allows for "interim" NFA letters and liability relief under all state environmental statutes. Program allows use of state's apportioned liability statute at appropriate sites, as well as Third-Party Contribution Protection.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Dry Cleaning Environmental Response Program trust fund can be used to clean up eligible active and abandoned dry-cleaning sites.

< Any local government having jurisdiction over any part of a brownfield project is authorized to use tax increment financing.

< Grants and/or loans from any federal funds available to the department and any state funds used as a match to obtain those federal funds may be used by municipalities, counties, and/or other governmental instrumentalities to assess and clean up the project sites.

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

Definition

New statute (August 2001) lays out provisions and conditions.

MOA

No

Contaminants

Petroleum, asbestos, PCBs OK; lead paint OK if other hazardous substances are present; statute covers hazardous substances, solid waste, or any other pollutant.

Standards

Region 9 PRGs are used for initial screening. No formal RBCA or comparable/informal process in place, but risk based cleanups can be done via a Site-Specific Risk Assessment, with standards based on risk. Applicant can also request or develop a standard based on future use.

Institutional Controls

New statute allows for enforceable land-use restrictions.

IC Benefits/Problems

None noted to date.

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REUSE BENEFITS

Number of Sites

As of July 2002, 109 sites have entered program and 34 have received NFA letters.

Economic Benefits

Not currently tracking economic impacts.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Not yet. However, funding requirements may necessitate changes.

Impact of Law

Program officials believe the new law will help Tennessee's brownfield efforts.

LESSONS AND ADVICE

N/A

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TEXAS

Texas Natural Resource Conservation Commission

PO Box 13087, MC-221

Austin, TX 78711

P: 512 239 2498

F: 512 239 1212

BEST INFO SOURCE: <http://www.tnrcc.state.tx.us/permitting/remed/vcp>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1995) offers COC that provides a liability release to all non-responsible parties, including prospective purchasers and future lenders.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

N/A

Incentives to Attract Private Investment to Brownfields

Four-year property tax abatements are available to COC recipients, on a sliding scale (100 percent the first year, then 75 percent, 50 percent, 25 percent).

TECHNICAL ELEMENTS

Definition

Texas does not have a formalized definition of a brownfield.

MOA

Yes — as of May 1996.

Contaminants

Petroleum, PCBs OK; asbestos and lead paint OK conditionally.

Standards

Formal RBCA process in place; VCP provides the applicant with a choice of standards.

Institutional Controls

ICs "must be placed on a property record for a site which uses commercial/industrial risk-based standards, and for any property which relies upon the use of a physical control (e.g., cap or remediation system) to prevent exposure."

IC Benefits/Problems

"Institutional controls have always been an effective way to prevent exposure at many contaminated properties in Texas."

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REUSE BENEFITS

Number of Sites

As of July 2002, 1,407 sites have entered VCP since its adoption (119 this past year) and 685 sites have received COCs (95 last year).

Economic Benefits

Based on a VCP survey of sites receiving certificates (as of July, 2002), 160 respondents report 12,175 jobs created; \$379 million net increase in appraised property value; \$486 million in real estate sales at these sites. 97 percent of those surveyed said their property transaction would not have occurred without the VCP. Several parks and golf courses have been constructed, as well as two major league stadiums. Several nonprofit community centers have also been built on brownfield sites.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

No.

Impacts of Law

Still evaluating and further awaiting guidance from U.S. EPA.

LESSONS AND ADVICE

N/A

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UTAH

Utah Department of Environmental Quality
Division of Environmental Response and Remediation

168 North 1950 West, 1st Floor

Salt Lake City, UT 84116

BEST INFO SOURCE: P: 801 536 4100

F: 801 536 4242

OR BEST INFO SOURCE: http://www.deq.state.ut.us/EQOAS/news_media/fact%20sheets/DERR.htm

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Release Cleanup Program (1997) offers COC.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

N/A

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

Definition

Utah does not define a brownfield in statute or regulation but applies the U.S. EPA definition where EPA pilots have been awarded.

MOA

No

Contaminants

Does not restrict on basis of contaminants; petroleum, asbestos, lead paint, and PCBs all OK.

Standards

No formal RBCA or comparable/informal process in place. Applicant has a choice of cleanup standards, including background values, generic risk-based levels, site-specific risk-based levels not relying on ICs, site-specific risk-based levels which rely on ICs, and others based on consultation with DEQ. A RBCA process is in place for petroleum contamination (under the LUST Program).

Institutional Controls

ICs may be allowed as part of a site cleanup strategy; their use is reviewed and decided on a site-specific basis.

IC Benefits/Problems

"One benefit is that we may issue a COC while groundwater monitoring is ongoing at a site, with the caveat that monitoring is performed as outlined in a Site Management Plan and that monitoring results continued to show stabilization or reduction of contamination over time. Problems with ICs are that they generally do not work over time. Programs and processes are forgotten and the state has no ability to enforce except through the COC."

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REUSE BENEFITS

Number of Sites

In total, 32 applications have been received: 10 sites have completed program and 16 sites are active. Of the remaining six sites: one withdrew, one needed no action, one applicant rejected, one applicant ineligible, one site terminated, and one site deferred until completion of a targeted brownfield assessment is performed by the state.

Economic Benefits

Not currently tracking economic impacts, although COCs are informally credited with facilitating property transactions.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

UDEQ currently is awaiting U.S. EPA guidance; it is difficult to predict impacts until the guidance is completed.

Impacts of Law

It is possible that the new law may help the Utah VCP grow.

LESSONS AND ADVICE

“From the state’s standpoint, it is important to ensure that the site is properly and thoroughly characterized so the appropriate risk assessment, risk management and cleanup decisions can be made.”

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VERMONT

Vermont Department of Environmental Conservation

103 South Main Street

Waterbury, VT 05671-0404

BEST INFO SOURCE: P: 802 241 3888

F: 802 241 3296

<http://www.anr.state.vt.us/dec/wmd.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Redevelopment of Contaminated Properties Program (1995) offers COC covering contamination identified in site plan; 1998 amendment expanded liability protection to current owners.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Tax incentives for rehabilitation of existing properties in designated “downtown” areas; not specific to brownfields, but contaminated properties are eligible.

< New legislation introduced in 2002 establishes a Brownfields Revitalization Fund for purposes associated with grants and loans; however, no appropriations or capitalizations were specified in the legislation

Incentives to Attract Private Investment to Brownfields

Program that caps prospective purchases share of cleanup at 130 percent of estimate in state-approved plan, reauthorized until 2006 without pilot. Program enhancements under consideration for the next legislative session.

TECHNICAL ELEMENTS

Definition

Vermont defines a brownfield as “actual or threatened release of a hazardous material at a site which is vacant, abandoned, substantially underutilized or to be acquired by a municipality.”

MOA

No

Contaminants

Asbestos, lead paint, and PCBs OK; petroleum OK if not eligible under the Petroleum Cleanup Fund.

Standards

No formal RBCA or comparable/informal process in place. State uses EPA RBCs as screening values, and allows for site-specific or risk-based evaluations of alternative standards.

Institutional Controls

“Specifically provided for in the statute.”

IC Benefits/Problems

“Not enough experience/data yet.”

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REUSE BENEFITS

Number of Sites

Six sites have entered the program; one is complete, four are underway, and one was abandoned/withdrawn.

Economic Benefits

Vermont does not currently track economic impacts. However, one former manufacturing plant has been remediated for use as a fire station.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Anticipates receipt of federal dollars for capitalization of new state Revitalization Fund.

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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VIRGINIA

Virginia Department of Environmental Quality

Division of Waste Program Coordination

629 East Main St, Fourth Floor

PO Box 10009

Richmond, VA 23240-0009

P: 804 698 4236

F: 804 698 4234

BEST INFO SOURCE: <http://www.deq.state.va.us/brownfieldweb/vrp>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Remediation Program (1997) offers "certification of satisfactory completion of remediation."

Revised VRP regulations went into effect July 1, 2002; major "assurance" components include amnesty from civil penalties, and limitation on liability.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

New grant and loan funds authorized in 2002 statute.

Incentives to Attract Private Investment to Brownfields

Defines "environmental restoration sites" holding COCs as a separate class of property and allows local governments to adopt an ordinance partially or fully exempting that class from taxation.

TECHNICAL ELEMENTS

MOA

Yes – signed January 11, 2002.

Contaminants

Petroleum, asbestos, lead paint and PCBs all OK if not regulated under another program.

Standards

RBCA-like process in place; applicants have a choice of remediation standards — Tier I (background), Tier II ("look-up" values adopted/modified from EPA standards), or Tier III (risk-based, including ICs).

Institutional Controls

ICs allowed.

IC Benefits/Problems

"Quicker cleanup."

REUSE BENEFITS

Number of Sites

As of July 2002, 150 sites have entered the VRP, 61 sites have completed the VRP program and 89 sites are currently underway.

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Economic Benefits

Not currently tracking economic impacts, although most sites are being redeveloped as commercial sites.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Virginia's new brownfield law became effective on July 1, 2002, and mirrors the new federal law in many respects.

Impacts of Law

Officials believe the new law will help Virginia's brownfield program.

LESSONS AND ADVICE

N/A

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WASHINGTON

WA Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452
BEST INFO SOURCE: P: 425 649 7202
F: 425 649 7098

<http://www.ecy.wa.gov/programs/tcp/vcp/Vcpmain.htm>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Cleanup Program (1997), replaced Independent Remedial Action Program, offers NFA letter for some sites, and CNTS for sites with heavy level of state oversight (latter rarely done, consent decree necessary). Regulatory changes were implemented August 15, 2001.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

Remedial Action Grant Program — up to \$5 million per project can be awarded (although money is tight right now for grants); program targeted only to local governments, not private parties.

Incentives to Attract Private Investment to Brownfields

Some grants available for public/private partnerships (remedial action grants), USTfield grants (in limited cases), U.S. EPA-capitalized Brownfield Cleanup RLF available through state Department of Community, Trade, and Economic Development.

TECHNICAL ELEMENTS

Definition

Washington defines brownfields as “properties that are abandoned or underused because of environmental contamination from past industrial or commercial practices,” but this definition is in neither statute nor regulation.

MOA

No

Contaminants

Does not restrict on basis of contaminants; petroleum, asbestos, lead paint, and PCBs all OK.

Standards

Applicant has a choice of cleanup standards, including risk-based standards, although they are not based on RBCA. They are in state law and regulation.

Institutional Controls

ICs allowed as part of remedy selection, within the parameters of the state's cleanup regulations.

IC Benefits/Problems

“More sites cleaned and reused” without achieving cleanup standards (while still protective of human health and the environment), although state notes that restrictive covenants may attach stigma to the property.

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REUSE BENEFITS

Number of Sites

A total of 910 sites have entered the program (including 180 in the past year), and 392 have completed it (341 last year).

Economic Benefit

Not currently tracking economic impacts, although some reuse for parks and recreational facilities has occurred. Redeveloped sites have been used for greenspace “to a moderate degree.”

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Not enough information on the federal changes to think about changes yet.

Impacts of Law

Unknown, although there appears to be more funding coming, so hopefully that will help.

LESSONS AND ADVICE

“Washington's VCP is very successful and popular. So popular that we don't have the resources to keep up with all the requests to review cleanups that we get. Our VCP is popular because it is effective and flexible; you can get a letter from the Department of Ecology for many things, including completed cleanups, partial cleanups, and plan review.”

WEST VIRGINIA*

West Virginia Department of Environmental

Protection

Office of Environmental Remediation

1356 Hansford Street

Charleston, WV 25301

BEST INFO SOURCE: P: 304 558 2508

F: 304 558 0256

<http://www.dep.state.wv.us/item.cfm?ssid=289&ss1id=529>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Brownfields Program (1997) offers Certificate of Completion that provides liability relief.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

< Low-interest loans for site assessment and cleanup, about 50 percent of loan (rest comes from bank) at a 5 percent rate.

< RLF targeted for remediation (authorized but not yet funded).

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

MOA

No

Contaminants

N/A

Standards

N/A

Institutional Controls

N/A

IC Benefits/Problems

N/A

REUSE BENEFITS

Number of Sites

N/A

Economic Benefits

Not currently tracking economic impacts.

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IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

N/A

Impacts of Law

N/A

LESSONS AND ADVICE

N/A

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WISCONSIN

Wisconsin Department of Natural Resources

Remediation and Redevelopment

101 South Webster, P.O. Box 7921

Madison, WI 53707

BEST INFO SOURCE: P: 608 261 4927

F: 608 267 7646

or *BEST INFO SOURCE:*

<http://www.dnr.state.wi.us/org/aw/rr/>

Wisconsin Department of Commerce
5th Floor
201 West Washington Avenue
Madison, WI 53707
P: 608-561-7714
F: 608-266-8969
<http://www.commerce.state.wi.us/cd/cd-bfi.html>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Party Liability Exemption (VPLE) (1994; amended 1997 and 1999) offers COC and exemption from liability that is transferable to new owners. Any party, including RPs, are eligible. Any type of contamination site is eligible including LUST, hazardous waste, spills, etc. After WDNR approves environmental investigation and cleanup of an entire property the voluntary party receives a COC and is protected from future liability. In 2001, parties can use natural attenuation to get COC if they pay for environmental insurance through state program. Wisconsin also offers other specific liability exemptions:

- < Lenders and representatives — five situations in which lenders are exempt, including if a lender forecloses on a contaminated property.
- < Local governments — municipalities acquiring properties through means such as tax delinquency, blight elimination, or eminent domain are exempt from liability.
- < Property owners whose contamination comes from off-site sources are exempt from liability.

DNR was given authority to issue a variety of assurance letters to clarify liability in various situations.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

- < Brownfield Grant Program — \$14 million (2001-2003 biennium) for public or private use, for investigation, cleanup and redevelopment; 20 percent to 50 percent match required.
- < Land Recycling Loan Program— \$20 million for no-interest loans to municipalities, for site assessment and cleanup; 0.5 percent service fee.
- < Site Assessment Grant Program — \$3.4 million (2001-2003 biennium) for grants to local governments for site assessment, investigation, demolition, and tank removal; requires 20 percent match.
- < Brownfields Green Space and Public Facilities Grant program - \$1 million in 2003 in grants to local governments for environmental remediation of brownfields that will be reused as green space, recreation areas or used by a local government.
- < Blight Elimination and Brownfield Redevelopment (BEBR) grants — uses \$2.5 million in stateadministered CDBG funds for small cities (less than 50,000 people) for assessing or remediating sites in a blighted area; covers up to \$100,000 for assessment, and \$500,000 for cleanup.
- < Dry Cleaner Environmental Response Fund — funded through industry tax, will reimburse up to \$500,000 per facility to clean up solvent discharges.
- < Environmental Fund — \$10-12 million (2001-2003 biennium) available for state-funded cleanups at priority contamination sites including some brownfields.
- < Sustainable Urban Development Zone (SUDZ) pilot program — provides funds to communities to address area-wide groundwater contamination problems.

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Incentives to Attract Private Investment to Brownfields

- < Development Zone Tax Credits, 50 percent of remediation costs in designated zones.
- < Business Improvement Districts (BIDs) use special tax assessments in designated districts to raise revenues for Phase I and II assessments, public improvements, redevelopment staff, and cleanup costs.
- < Environmental Remediation Tax Increment Financing — districts can be created by local governments to recoup investigation and remediation costs, with increment based on value-added of the clean site; eligible costs expanded in 1999 to include underground tanks, and container and asbestos removal.
- < Counties (and Milwaukee) can cancel delinquent taxes if owner agrees to clean up contaminated property.
- < Counties (and Milwaukee) can transfer tax-delinquent brownfield property to a new owner if the new owner agrees to complete cleanup.

TECHNICAL ELEMENTS

Definition

Wisconsin defines brownfields as “abandoned, idled, or under-used industrial or commercial facilities or sites, the expansion or redevelopment of which is adversely affected by actual or perceived environmental contamination.”

MOA

Yes – as of October 1995.

Contaminants

Petroleum, asbestos, lead paint, PCBs all OK.

Standards

Wisconsin has performance based cleanup standards (NR 700 rule series) that apply to all cleanup sites including VPLE sites. RBCA-like process is in place; applicants have a choice of cleanup standards for soil contamination — numeric values in regulation, site-specific cleanup standards, or risk-based performance standards. Groundwater must meet enforcement standards or demonstrate it will meet standards.

Institutional Controls

Wisconsin's regulations allow for/require the use of ICs to obtain site closure in some cases. Types of ICs used include deed restrictions for soil performance standards, groundwater use restrictions for sites closed using natural attenuation, and calculations of site-specific soil cleanup standards based on the type of land use.

IC Benefits/Problems

Flexible cleanup standards and closure options allow consideration of redevelopment as part of remedy and more cost-effective remedies.

REUSE BENEFITS

Number of Sites

Approximately 14,000 sites have received close-out letters from DNR (including those for traditional spill cleanups); 115 active sites are in the VPLE program and 30 sites have received COCs. In the first two years of the program, Site Assessment Grants were awarded to 103 brownfield sites in 72 different communities on more than 330 acres of land.

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Economic Benefits

Economic impact information tracked only for the Brownfield Grant program. 56 brownfield projects have received \$22.2 million in brownfield grants, which will create an estimated 3,950 jobs and an estimated \$356 million in increased property value on 687 acres.

In addition, several properties have been reused as parks on these types of projects. Wisconsin has created a new grant program (see above) that specifically pays for the cleanup of sites being used for parks or public facilities that will begin awarding funding in 2003.

IMPACTS OF NEW FEDERAL BROWNFIELDS LAW

Changes to Accommodate Law

Staff at the Wisconsin DNR are participating in efforts with U.S. EPA to interpret and implement the federal brownfields legislation. No specific known changes to our laws are anticipated at this time.

Impacts of Law

Not sure at this time.

LESSONS AND ADVICE

“The Wisconsin Brownfields Study Group has been a success tool that we have used to build support for our programs and to assist the state agencies to improve their programs to be more effective. This advisory group made up of stakeholders has been critical voice to recommend new programs and expanded funding in the state budget process for the state brownfield programs.”

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WYOMING

Wyoming Department of Environmental Quality
Herschler Building
122 West 25th Street
Cheyenne, WY 82002

BEST INFO SOURCE: P: 307 777 7752

F: 307 777 5973

<http://deq.state.wy.us/>

PROGRAM DESCRIPTION

Voluntary Cleanup Programs and Assurances Provided

Voluntary Remediation of Contaminated Sites program (2000) provides four types of assurances: remedy agreements, CNTS, COCs, and NFA letters. A series of 14 guidance documents (fact sheets) was developed as part of program initiation activities.

FINANCIAL ELEMENTS

Financing Programs Targeted to Brownfield Situations

N/A

Incentives to Attract Private Investment to Brownfields

N/A

TECHNICAL ELEMENTS

MOA

On March 14, 2002, the Wyoming DEQ and EPA Region 8 signed the final Resource Conservation and Recovery Act Memorandum of Understanding and the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) Memorandum of Agreement.

Contaminants

Wide variety of contaminants and types of sites are eligible for participation.

Standards

Soil cleanup level look up table for unrestricted use has been developed. Framework also under development for establishing standards for restricted cleanup. All sites are required to meet drinking water standards for hazardous constituents in groundwater, and to maintain class of use for nonhazardous constituents. DEQ may set alternate standards if it is not technically practicable to meet the primary standards.

Institutional Controls

Soils are cleaned up to meet either an unrestricted use standard, or an equally protective standard based on restricted uses, if the owner agrees to restrict future uses of the site and obtain a "use control area" (UCA) designation from a local government.

IC Benefits/Problems

To be determined.

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REUSE BENEFITS

Number of Sites

Five sites completed the VCP, and 18 are still in progress.

Economic Benefits

N/A

IMPACTS OF NEW FEDERAL BROWNFIELD'S LAW

Changes to Accommodate Law

Not yet.

Impacts of Law

N/A

LESSONS AND ADVICE

N/A