NATIONAL GOVERNORS ASSOCIATION

Where do we GROW from here?

New Mission for Brownfields

Attacking Sprawl By Revitalizing Older Communities

Since their initial meeting in 1908 to discuss interstate water problems, the governors have worked through the National Governors Association to deal collectively with issues of public policy and governance. The association's ongoing mission is to support the work of the governors by providing a bipartisan forum to help shape and implement national policy and to solve state problems.

The members of the National Governors Association (NGA) are the Governors of the fifty states, the territories of American Samoa, Guam, and the Virgin Islands, and the commonwealths of the Northern Mariana Islands and Puerto Rico. The association has a nine-member Executive Committee and three standing committees—on Economic Development and Commerce, Human Resources, and Natural Resources. Through NGA's committees, the Governors examine and develop policy and address key state and national issues. Special task forces often are created to focus gubernatorial attention on federal legislation or on state-level issues.

The association works closely with the Administration and Congress on state-federal policy issues through its offices in the Hall of the States in Washington, D.C. The association serves as a vehicle for sharing knowledge of innovative programs among the states and provides technical assistance and consultant services to governors on a wide range of management and policy issues.

The Center for Best Practices is a vehicle for sharing knowledge about innovative state activities, exploring the impact of federal initiatives on state government, and providing technical assistance to states. The Center works in a number of policy fields, including agriculture and rural development, economic development, education, energy and environment, health, social services, technology, trade, transportation, and workforce development.

Designed by: zilart!

The responsibility for the accuracy of the analysis and for the judgments expressed lies with the authors; this document does not constitute policy positions of the National Governors Association or individual governors.
For more information on other publications by the NGA Center for Best Practices, visit the Center's Web site at <www.nga.org/Center>.

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Foreword

Where Do We Grow From Here? – Governors' Strategies for Growth and Quality of Life is the theme of my initiative for the National Governors Association. An important part of this effort is the work of the NGA Center for Best Practices in examining a number of important issues and opportunities facing governors in their quest for smarter growth management.

Governors have found there is much they can learn from each other—what works in one state may have applications in another. As governors across the country experiment with a wide spectrum of strategies to address growth, development and quality of life, it is especially important to share information on best practices.

The NGA Center is producing five special reports on these topics: brownfields, transportation, land conservation, federal barriers and opportunities, and new community designs.

Although the primary goal is to provide information of use to governors and their policy advisors, I am confident that these reports will also help the public better understand the many complex issues associated with the rapid rate of growth in the nation and how states are boldly taking new initiatives to safeguard future economic growth and a high quality of life.

Maryland Governor Parris N. Glendening
Chairman, National Governors Association

New Mission for Brownfields

Attacking Sprawl By Revitalizing Older Communities

Executive Summary

Brownfields occur in older communities where former industrial or commercial operations pose environmental issues that have stymied attempts to reuse the land. Brownfields cleanup projects can play a central role in urban and rural revitalization and offer alternatives to new, greenfields developments. The new mission means leveling the playing field, making brownfields projects competitive with greenfields projects that contribute to scattered, suburban sprawl. By emphasizing urban redevelopment, brownfields projects help preserve farmland, rural communities, and open spaces.

For many years, brownfields programs focused on cleanup of older industrial sites without consideration of the broader growth goals of the community or region. Today, however, brownfields are being seen as key components of state growth management initiatives. There is a compelling economic case for state spending on brownfields. A dollar of state spending produces about 10 times to 100 times more dollars in economic benefits. Expanding the mission of brownfields justifies greater state spending.

State brownfields programs have been very successful, but the new challenge is to improve performance through greater integration into state, regional, and local growth and land use planning. Five states leading the way are Maryland, Massachusetts, Michigan, New Jersey, and Pennsylvania; and the special tools used by them are described in this report. Success in these states is being driven by several factors.

- Having the governor provide clear and public support for the importance of brownfields in advancing the state's quality of life and economy.
- Viewing brownfields redevelopment from an area-wide perspective rather than on a project-by-project basis and integrating brownfields cleanup and redevelopment objectives into state growth planning.
- Broadening state brownfields programs to include involvement of state planning agencies and other appropriate state and local government agencies. It is imperative to have strong involvement of state organizations besides environmental regulatory agencies.
- Working to eliminate all remaining barriers to brownfields redevelopment and improving the full package of incentives, assistance, and liability reduction offered to developers. State actions to address liability concerns are working, but the federal liability under the Superfund statute still biases some decisions in favor of greenfields developments and sprawl.
- Considering the redevelopment of brownfields sites in the full context of "smart" community design. This includes mixed use, pedestrian-friendly design, urban parks, and close collaboration with community stakeholders.
- Ensuring the protection of public health while shifting emphasis to the broader economic development value of brownfields sites.

It is an ideal time for states to consider these successful approaches. State brownfields programs have been operating for less than a decade. In that short period, programs have successfully facilitated reuse of more than 40,000 sites—but this is less than 10 percent of the estimated 450,000 to 600,000 brownfields in the nation. With so many more sites to address and so many potential economic benefits to obtain, the advantages of the using the lessons learned from the five states highlighted here are clear.

Perhaps the most important lesson for states concerned about suburban sprawl and loss of open spaces is that by leveling the playing field between brownfields and greenfields development, urban revitalization efforts can become more successful in shifting more growth back into older communities.

"The cornerstone of any urban revitalization strategy must be an aggressive brownfield redevelopment program. We have made brownfields attractive by reforming the cleanup laws and offering tax incentives and low-interest loans to our communities. More than anything, our success comes from making brownfield redevelopment a top economic and environmental priority in the state of Michigan."

Michigan Governor **John Engler**

The Changing Role of Brownfields

There is a historic transition from seeing brownfields projects merely as environmental cleanups to seeing them as an important part of state growth management initiatives. It is not merely individual cleanups that are important, but, increasingly, how the land and buildings at many brownfields sites will be used after cleanup and how such use will impact communities and regions. It is important to note that not all brownfields require cleanup. In fact, a significant percentage of brownfields are found, after site assessment, to not require cleanup at all. This historic shift for brownfields is stimulating interest by more diverse groups, many with ambitious goals for projects. This has the potential to provide more funding and the removal of obstacles for successful brownfields projects. Because states have always driven the brownfields movement, this paper addresses this key question: *What are states doing to better integrate their brownfields efforts more effectively into broader smart-growth-type efforts?*

The 2000 State-of-the-State Addresses showed that more than half of the nation's governors are pursuing strategies to promote economic development while protecting the environment, safeguarding public health, and improving the quality of life. These new growth strategies preserve open space while drawing development towards areas with existing infrastructure. Brownfields projects can play a central role in urban and rural revitalization and offer alternatives to new, greenfields developments. Natural areas and green spaces are less likely to succumb to suburban sprawl and development when brownfields properties and their existing infrastructure are available and ready to meet development needs.

The impacts from conventional growth, including traffic congestion, a variety of environmental impacts, and loss of open spaces, have sparked public concerns. "Smart growth" focuses on reducing public costs and increasing private returns, saving natural resources, creating better access to goods and services, redeveloping within existing infrastructure, and preserving a sense of place. Redeveloping brownfields properties contributes to each of these goals, making it an important aspect of any community's plan for smart growth. Brownfields development also does not interfere with new greenfields development. One analysis concluded that brownfields redevelopment appears to be the "politically smartest smart growth policy" because it is a "much less threatening way for federal and state governments to provide alternatives to sprawl." [1]

Special Benefits of Brownfields Projects

Economics

Brownfields represent an enormous potential economic development resource, one that can lead to new jobs, healthier neighborhoods, increased local tax revenues, and less of costly suburban sprawl. Some people call them "engines of the New Economy." **Successful brownfields projects can improve the quality of life for a community, which, in turn, increases that community's economic competitiveness and helps it attract new business and workers**. Most brownfields are located in former industrial areas, so cleanup and redevelopment can contribute enormously to the revitalization of older urban centers, and even some older suburbs and rural areas that have not maintained their vibrancy and economic investment. According to a recent survey of the U.S. Conference of Mayors, 187 of 231 cities responded that cleaning up existing brownfields sites could generate as many as 540,000 new jobs if the land were returned to production. At least 175 cities estimated brownfields redevelopment could generate up to $2.4 billion in local tax revenue.[2] "Bringing jobs back to the center of town and away from greenfields may also mean that jobs and services in the local economy are more accessible because of the availability of other modes of transportation."[3]

Brownfields redevelopment also supports states' economic development goals for the private sector. By cleaning up these derelict sites, states preserve, even enhance, a region's quality of life by improving recreational opportunities, environmental quality, community amenities, and employment opportunities. When a company considers relocation, redeveloping a brownfields site can offer many advantages. Brownfields may give businesses the opportunity to take advantage of access to transportation, an available workforce, and an infrastructure that meets their needs. The key policy challenge is to make brownfields more competitive with greenfields sites.

> Because most abandoned sites are located in the nation's inner cities, remediation and redevelopment can contribute enormously to the revitalization of impoverished urban centers, creating hundreds of new jobs, hundreds of thousands of dollars in earned wages, and millions of dollars in new tax revenue. …Brownfield redevelopment also helps to prevent urban sprawl and to protect farmland and undeveloped land. By bringing abandoned commercial or industrial sites in the cities back into production, localities are helping to preserve unused land in the suburbs and rural areas–referred to as "greenfields"–that otherwise would be dug out and paved over for usage. …In many ways, the states have succeeded where the federal government has failed.
>
> **Dana Joel Gattuso**
> *Revitalizing Urban America — Cleaning Up The Brownfields*
> (Competitive Enterprise Institute)
> July 2000.

Infill Alternatives to New Greenfields Developments

Assessment and cleanup of brownfields sites are only part of the process. Equally important—especially to the affected community—is the physical form of any new development placed on a brownfields site.

Because of their locations, brownfields promote the infill and mixed-use development concepts of "smart growth." Infill development is a planning tool designed to revitalize existing communities by promoting the development of new homes, commercial buildings, and public facilities on unused or underutilized lands in existing urban centers. A community can be revitalized by effective use of infill and redevelopment. This revitalization can promote downtown businesses, provide adequate and affordable housing on existing infrastructure, and reduce consumption of resource lands and environmentally sensitive lands. In New Jersey alone, this kind of development will reduce fiscal deficits attributable to growth by $160 million annually in municipalities, counties, and school districts.[4]

Mixed-use development means locating stores, offices, schools, and recreation spaces within walking distance of each other in compact neighborhoods with pedestrian-oriented streets. Although large brownfields with 100 or more acres promote large-scale mixed-use projects, small brownfields can often play a key role in promoting area-wide mixed-use redevelopment. Many traditional building codes or zoning rules prohibit co-location of residential and commercial buildings. This prohibition is based on the traditional concept of functional and architectural incompatibility. Design standards, in tandem with mixed-use zoning, can help overcome incompatibility and create opportunities for mixed-use redevelopment options.[5] States can use incentives and technical assistance to help local governments take this approach.

A sign that brownfields have entered a new era is the increasing number of mixed-use projects on sites that are clearly tied to efforts to curb suburban sprawl and to foster urban revitalization. A recent study confirmed the increasing popularity of mixed-use development on brownfields. It found that of 240 sites 45.4 percent were mixed-use projects compared to 22.1 percent for industrial uses, 7.5 percent for offices, 6.7 percent for cultural/recreational, 5.8 percent for retail, and 4.6 percent for residential.[6] According to this same study, of the 109 mixed-use projects, 67 included office space, 60 included retail space, 54 included cultural or recreational space, 49 included residential space, 45 included some type of public space, and only 37 included some type of industrial use.

"Virtually every community in the country, no matter what the size, is grappling with the challenge of problems associated with recycling older, mostly industrial and commercial properties. The presence of these properties fuels urban sprawl, luring investment and job development farther from city centers and inner suburbs. …The federal attention directed at brownfields assessment, cleanup, and redevelopment over the past five years reflects a growing realization that yesterday's eyesore is today's opportunity."

Timothy Fields, Jr.,
Assistant Administrator,
U.S. Environmental Protection Agency

Four important examples of successful large mixed-use projects follow.

- **The Atlantic Steel Project, Atlanta, Georgia**. From its inception, this project was designed to curb rapid sprawl in the Atlanta region and apply ...smart growth... principles. The redevelopment of the 138-acre brownfields was also envisioned to save 1,200 acres of regional green space that might otherwise be developed. The site was also to serve as a key transportation control measure, helping to address the region's noncompliance with Clean Air Act conformity requirements. The former steel site is to have a mix of residential and business uses, with an auto and transit bridge over the adjacent highway connecting the site to the nearby fixed-rail transit stop. There will be 3,000 residential units, 6 million square feet of high-tech and office space, 1.5 million square feet of retail and entertainment space, and 1,000 hotel rooms. Key to the project's success has been collaboration among private-sector and governmental entities.

- **The River's Edge Project, Traverse City, Michigan**. This mixed-use, urban infill project is on about eight acres in the downtown area at the site of a former foundry that had been vacant for nearly two decades. The project was originally conceived as an alternative to rapid suburban sprawl and uses New Urbanism design principles. River's Edge illustrates the key role state government can play. First, county and city agencies received funding from the state's Coastal Management Program to conduct environmental and market assessments that would identify cleanup needs and appropriate future uses. A 1995 state law that granted liability protection for parties not responsible for site contamination encouraged private purchase of the site. The developer conducted a baseline environmental assessment that satisfied state requirements. A $1.6-

million reclamation grant from the state covered all remedial activities. The developer also benefited from the state's 10-percent single business tax credit for expenses incurred for demolition and construction on the site, up to $1 million, because the county established a brownfields redevelopment authority. The plan calls for a mixed-use community with street-level retail shops, second-floor office space, and high-rise residential units. Much of the parking is hidden below buildings to promote space for strolling and other outdoors activities. Residents can walk, bike or ride public transportation to work, shopping, dining, entertainment, and beaches. The site will ultimately be built out to more than 300,000 square feet with a value of nearly $100 million. The developer has been praised for its community relations, which included meetings with neighborhood groups and regular communication with relevant stakeholders.

- **Lily Tulip Plant Redevelopment Project, Holmdel, New Jersey**. After standing empty for a decade, a private developer saw the opportunity to clean up this abandoned factory site and build a mixed-use center. The developer used a provision in New Jersey law that allows developers to recoup up to 75 percent of the remediation costs once the project generates tax revenue that exceeds the cleanup cost. The developer committed to spend $2 million for cleanup and another $3 million for road improvements. The site will include an office building, a retail center with 20 stores and restaurants, 158 units of adult housing, 110 assisted living units, and a 130-bed nursing home. The pedestrian-friendly design includes landscaped buffers and walkways through the retail area that will connect to the residential and office sites.

- **Washington's Landing, Pittsburgh, Pennsylvania.** This is one of the most impressive mixed-use projects on brownfields. The 42-acre island in the Allegheny River was used for many intensive industrial purposes for more than 100 years. Intensive government investment in land development, infrastructure, and cleanup was necessary to revitalize the site. Collaboration among federal, state, and local authorities, including nearly $11 million from several state agencies, was key. The total public and private investment in the development efforts approached $100 million. The result has been a hugely successful mixed-use rebirth of what once was a terrible blight. Every type of land use is represented, including more than 100 residential homes, a number of commercial buildings housing company offices (including high-tech New Economy enterprises), a state agency, several light industrial manufacturing operations, and a restaurant. There is also a public park, a complete greenway for walking, running, and cycling on the circumference of the island, and a number of recreation facilities, including a rowing club, tennis courts, and a marina. A converted railroad bridge serves as a walkway to the downtown area. Interestingly, the tennis courts were built over an encapsulated waste area.

Another dimension to infill uses of brownfields sites is the construction of public schools. In New Jersey, Perth Amboy's redevelopment plan called Focus 2000 includes the redevelopment of several brownfields sites. On one, a new $17-million elementary school will be built, including a multi-purpose field and play areas. On another, a new $30-million Middlesex County Vocational and Technical High School campus will be built. In both cases, financing came from the state's Hazardous Discharge Site Remediation Fund Program.

Creation of Green Spaces from Brownfields

A growing interest in providing parks or green space in urban centers has sparked the redevelopment of brownfields into parks and recreational areas. City centers can and should be sites for historical and architectural preservation, cultural and educational opportunities, as well as economic development and revitalization. Though many brownfields are small, oddly shaped, and not located in places promoting economic redevelopment projects, they can be ideal for creating community parks or open green spaces that greatly enhance a local community. For example, as much as 20 percent of brownfields may be former gasoline stations that are relatively small sites and may not be useful for commercially viable projects, but may be ideal for public spaces.

Many brownfields across the country are being redeveloped into baseball and soccer fields, golf courses, and trails or greenways. As state growth initiatives draw population into urban areas, the creation of urban parks and other green spaces will become more important to promote a high quality of life.

- **Lowell, Massachusetts.** Historically known for its textile manufacturing, Lowell leveraged funding to clean up three former textile mills and an ash dumping ground and developed them into a recreational area. Plagued by economic depression, population decline, and high poverty and unemployment rates, Lowell redeveloped these neglected sites to restore and renew the community. The former ash dump has become the new, 6,000-seat Edward J. LeLacheur Ballpark that opened in June 1998 and provides 100 part-time jobs and 10 full-time jobs during the operating season. The three former textile mills were redeveloped into the 8,000-seat Paul E. Tsongas Arena. It opened in January 1998 and created 341 full- and part-time jobs. Lowell's collaboration with several private-sector and governmental entities has been vital to the project's success.

"Rail trails" or greenways are one of the most successful recreational reuses of brownfields. Abandoned railroad corridors, when redeveloped, create multi-purpose public paths. There are over 10,000 miles of public rail trails across the nation that were used more than 100 million times in 1999. These rail trails provide an outlet for biking, running, walking, horseback riding, and cross-country skiing. They often link neighborhoods to workplaces, providing alternative ways to get to work. Rail trails have also provided economic benefits for state and local economies. The Rails-to-Trails Conservancy estimates that trail users have generated as much as $1.25 million annually for towns through which a trail passes.[7]

Improving Community Health

When redeveloping commercial and industrial sites, developers must first clean up any potential or actual risks to human health and the environment. State programs often reduce the liability risks to developers without compromising public health. Significantly, many brownfields are found, after site assessment, to require no cleanup prior to reuse.

Redeveloping brownfields into parks and recreational areas improves public health in two ways. First, the cleanup removes the public health threat from contaminated waste; second, redeveloping the site into a recreational area provides area residents with sports and exercise opportunities. Community health is also promoted because many brownfields sites are places of illegal dumping of wastes and often the refining and selling of illegal drugs—clearly public health hazards.

When brownfields projects include mixed-use development, the creation of communities that encourage walking to shopping, entertainment, and jobs also reduces air pollution from cars. Pedestrian-friendly designs also reduce accidents involving walkers and cars. Naturally, individual fitness improves as more people walk to various activities.

Factors Affecting Continued Brownfields Success

To be successful, brownfields development must create jobs and new economic benefits, protect public health, and contribute to the reduction of sprawl. Specific elements must all come together for this success to occur. The key components are liability or financial risk reduction, the role of the developer and other stakeholders, and long-term site use plans. Many state laws allow developers and businesses to purchase and redevelop contaminated sites in industrial areas without the risk or cost typically associated with environmentally impaired sites, but in a strict legal sense the federal liability remains. Raising the performance of state brownfields programs means placing more importance on measuring their performance.

Federal Liability Concerns

The risk of federal liability for brownfields developers indirectly encourages expensive sprawl and greenfields development. The specter of liability under the federal Superfund law discourages current owners from investigating soil and groundwater conditions or transferring properties, chilling developers from acquiring potentially contaminated properties, and deterring municipalities from acquiring abandoned properties. Although state actions have alleviated some liability concerns, the risks and costs associated with the redevelopment of potentially contaminated properties at an estimated 450,000 to 600,000 brownfields sites—primarily in urban areas—still drive development away from cities and into the greenfields of non-urban areas, thereby contributing to sprawl.[8] Although some greenfields may pose some environmental issues, developers rarely face the kind of regulatory requirements presented by brownfields. The presumption for greenfields is that they are "clean," but that has to be proven for brownfields, which itself has a cost.

Some states have attempted to address the federal liability issue because the Superfund law has yet to be amended. "Because federal liability laws supercede state laws, several states entered into a Memorandum of Agreement (MOA) with EPA to help alleviate this problem. The MOA states that ...EPA recognizes the efforts of the states to clean up brownfields sites and 'generally…does not anticipate taking removal or remedial action at sites involved in the Voluntary Cleanup Program unless EPA determines that there may be an imminent and substantial endangerment to public health, welfare, or the environment.' While not legally binding, the MOA nonetheless represents an understanding of mutual consent that the EPA will not interfere with state efforts."[9] Still, for states without such agreements and, perhaps, even for those with them, the federal liability issue remains a concern for private-sector investors and developers.

Developers and Other Stakeholders

Making brownfields more competitive with greenfields locations for new development projects means recognizing the increasing importance of state planning and growth management programs. Other stakeholders, such as community leaders, local government officials, local business groups, economic development organizations, and companies, become more important when projects on brownfields sites are linked to larger-scale growth management and planning initiatives. Local economic development groups, both public and private, often play an important role in aggregating properties, including brownfields, to create sufficient space for a project. Private-sector developers are vital to the success of commercial brownfields redevelopment projects.

A recent study found that private developers worked on 76.4 percent of brownfields projects.[10] Developers perform many critical functions beginning with a vision to turn a contaminated, underused, blighted property into a new, positive part of the local or regional economic and social infrastructure. The best developers have visions that extend beyond the single site or project to what makes a better neighborhood, a better community, and a better quality of life. Applying smart-growth principles to urban revitalization efforts, the developer's vision must be consistent with innovative designs for infill developments that account for mixed use, green infrastructure, pedestrian-friendly use, and preservation of historic buildings and community heritage. From the vision comes the more specific plans for obtaining the necessary financing for land acquisition and construction, which for brownfields sites is complicated by the real and perceived uncertainties associated with cleanup and longer-term issues. The developer's plan must also attract the various end users of the site, such as residents, tenants and companies. This, too, is linked to environmental factors associated with cleanup.

One difficult issue is affordable housing in urban areas. A number of factors make it increasingly problematic for private developers to build affordable housing units on brownfields, including:

- the increasing land value of brownfields resulting from successful efforts to reduce development risks and the generally strong economy;
- the higher cost of cleanup resulting from requirements to meet the most stringent remediation standards because of residential exposure scenarios;
- the lower potential profit as compared to mixed-use and other types of brownfields development; and
- the strong demand for high-cost rental and purchase homes in many urban centers.

The net result is that *affordable* housing is not being built on brownfields at a significant level by private developers, even though many brownfields projects include housing. Public support is needed, especially in light of strong views in many low-income urban cores about gentrification displacing long-time residents and about conflicts between urban revitalization and environmental justice goals.

THE CAN COMPANY PROJECT, BALTIMORE, MARYLAND

One of the most successful and visionary brownfields developers is the firm of Streuver Brothers, Eccles & Rouse in Baltimore. Their American Can Company project has received rave reviews. The site is now called "The Can Company" and includes a number of retail businesses, company offices, and the Emerging Technology Center. The latter is designed especially for the needs of high-growth information technology companies. It was developed by the Maryland Economic Development Corporation (MEDC) in partnership with the University of Maryland, Johns Hopkins University, and Morgan State University. The developer has been one of the first to recognize the value of "cool space" in renovated older industrial buildings within urban cores that is now prized by New Economy high-tech firms. The developer took the former manufacturing facility that had sat idle from 1986 to 1996, retained its four buildings totaling 300,000 square feet, and created a remarkable mixed-use facility that has invigorated the local community. MEDC contributed $3 million in financing, but private investment has been $24 million and job creation upon completion is expected at more than 700.

Long-Term Site Use

If development, developers, and integration into broader growth and land-use planning efforts are becoming more important, then so are constraints on brownfields land use because of residual contamination. The traditional emphasis on facilitating brownfields cleanups and minimizing cleanup costs has often resulted in standards that permit some level of site contaminants to remain. How much residual or post-cleanup contamination is acceptable is a risk management decision based on intended future land use, human exposures, and likely health or environmental risks. According to the Environmental Law Institute, at least 41 states require that remediation levels be determined, in large part, by considering future land use; at least 44 states have adopted some form of risk assessment for determining how clean is clean; and 47 states require some form of public participation. The key to community acceptance of brownfields projects is public participation at the earliest stages. When local residents are involved in decisionmaking, developers and public officials reduce uncertainties and possible delays.

Only when the original cleanup is complete enough to allow unrestricted use of the property is there no long-term issue of stewardship or responsibility. Engineering and physical controls are often used for the cleanup, such as soil or more complex caps placed over contaminated soil and fences to prevent access to the site. The fundamental function of all controls is to prevent exposure to residual site contaminants through direct physical contact or other means, based on a certain land use. But some restrictions on other types of land use are usually necessary. When there are restrictions, institutional or land use controls are needed. The successful long-term implementation of these controls becomes an issue.

Generally, there are two approaches to implementing restrictions on future use: government controls, such as permits and zoning; and private controls, such as deed restrictions, restrictive covenants, and easements.

Developers must pay close attention to restrictions that already exist on brownfields sites because of a completed cleanup or that may exist after a future cleanup. Clearly, the greatest reduction of uncertainty and the greatest increase in flexibility for development comes when there are no land use restrictions or controls. This means a site can be used for any form of residential use with the maximum possible human exposure conditions. The greater the economic value of development or urban revitalization, the greater the economic benefits from using cleanup approaches that eliminate future property restrictions. This is true for relatively large mixed-use projects, including residential space. In these cases, the increased costs of cleanup are more easily justified because of the greater

capital investment in the project and the need to remove long-term uncertainties about the effectiveness of institutional or land use controls. However, for many projects, particularly on smaller brownfields, minimizing cleanup costs is critical and using effective engineering and land-use controls is appropriate.

Measuring Brownfields Program Performance

Over the past decade, states have cleaned up more than 40,000 brownfields sites under various state programs, but many more brownfields remain. In doing so, states have successfully rejuvenated impoverished urban centers, created hundreds of thousands of new jobs, generated millions of dollars in tax revenue, and preserved millions of acres of greenfields. Many states, as well as EPA, are trying to track the performance or effectiveness of brownfields programs through measures of numbers of jobs created and leveraged dollars. However, it is sometimes difficult to track this information because many programs are too new and their sizes and staffs vary. In late August 2000, EPA announced its brownfields program, which primarily helps redevelop idle commercial and industrial sites, has generated more than 1,400 cleanup jobs, 5,000 redevelopment jobs, and more than $2.3 billion in leveraged economic impacts.

Federal Support of Brownfields

A recent General Accounting Office (GAO) report on the linkage between growth and federal efforts shed some light on the connection between brownfields and the sprawl issue. First, GAO recognized, "by using federal funding for assessing and cleaning up brownfield sites, local governments can encourage the reuse of brownfields sites and provide developers with alternatives to undeveloped sites on the edges of metropolitan areas." The reference to only local governments and not states is largely because federal funding for brownfields has been directed at local governments rather than state programs. Second, GAO's survey of local governments found that those communities concerned about sprawl rated funding for cleaning up brownfields as more helpful than all other types of federal funding provided for a variety of growth-related efforts, such as transportation. Third, local governments reported their state government had more influence than the federal government on growth and development.

Federal funding for brownfields has been useful to many communities. However, GAO also evaluated the Administration's Brownfields National Partnership Action Agenda initiative involving more than 20 agencies. U.S. Department of Housing and Urban Development (HUD), EPA, and the Economic Development Administration accounted for $409 million or 99 percent of the total assistance provided in fiscal 1997 and fiscal 1998, which did not include use of HUD's Community Development Block Grant program. GAO concluded that "the Administration cannot tell if the initiative is meeting the economic goals because most agencies are not tracking these results or collecting data specific to brownfields that would allow them to do so."

Sources: GAO, "Community Development – Local Growth Issues – Federal Opportunities and Challenges," September 2000; and GAO, "Environmental Protection—Agencies Have Made Progress in Implementing the Federal Brownfield Partnership Initiative," April 1999.

In states, program effectiveness is measured not only by jobs created and dollars leveraged, but also by number of housing units created, tax revenues added to the local economies, businesses created, and number of sites that have entered into that state's program.

State	*Number of Projects*	*Number of Jobs Created*	*Tax Revenue*	*Number of Housing Units*
California	365	21,000	$475 million	5,200
Florida	2,844	Not available	$41 million + (new capital investment)	Not available
Maryland	33 (607 acres)	Not available	Not available	Not available
Michigan	2,944	7,968	$1.1 billion (private investment)	1,400
Minnesota	45 (500 acres)	7,700	$13 million	Not available
Pennsylvania	654 (9,000 acres)	17,000	Not available	Not available
Rhode Island	45 (376 acres)	965	Approx. $5 million (sales and property taxes for 21 sites)	Not available

Source: *Brownfield News*[11]

Although there have been successful attempts to measure the performance of brownfields programs, there are inherent difficulties in estimating the full range of economic and other benefits. Often, brownfields projects provide a key component to a larger-scale change in land use that might not otherwise be possible. For example, the Kapkowski Road Improvement project in Elizabeth, New Jersey, facilitated the construction of the Jersey Gardens Mall built on a 166-acre landfill site, itself a brownfields success story credited with creating 5,000 jobs for area residents. The road improvement project passed through several brownfields sites and provided direct access to the New Jersey Turnpike and improved access from the southeast section of the city to the mall. The project may promote the development of about 1,000 acres of underutilized property and will enhance residential and recreational development in that portion of the city.

Performance measurement is also difficult when a brownfields project produces new green space where direct and indirect economic benefits may not be easily estimated. For example, the Nine Mile Run project on a 238-acre brownfields site in Pittsburgh, Pennsylvania, will result in 713 units of new housing and an addition of 100 acres of land to the city's Frick Park. Tangible benefits of the latter are much more difficult to estimate than those of the former. Similarly, when brownfields are used for public buildings, economic benefits are difficult to quantify.

Regardless of the difficulties, states should obtain the best performance data to sustain and develop their brownfields programs. This means, for example, building data collection into brownfields programs and projects, emphasizing data that verify positive economic and growth impacts. It also means periodically assessing whether data demonstrate to citizens, local governments, and private-sector interests that the brownfields efforts are assisting larger growth, economic development and quality of life goals. The Massachusetts program described below has done an outstanding job in collecting useful performance data.

"As communities struggle with curbing sprawl and preserving their green space, the good news is that many are making a lot of progress in reusing land or cleaning it up and returning it to productive use. …We are seeing just the tip of the iceberg in a movement that can put a significant amount of land back to good use and preserve other land from development. …Overall, communities and developers appear more comfortable in handling these issues involved with brownfields development. The opportunities appear lucrative for businesses and promise to bring back prosperity to many communities. States are working hard to make these things happen."

Bob Hallenback
Senior Vice President,
ECS Company,
September 2000

Private-sector concerns about federal and state liability have driven state policymakers to be innovative as the redevelopment of brownfields becomes a priority in the fight against uncontrolled and haphazard development. State-level creativity and innovation in meeting a host of brownfields needs has been the hallmark of this issue. States are finding that the benefits are worth their investment.

The most effective and innovative state brownfields programs include voluntary cleanups, liability relief, remediation requirements, public participation, and financial incentives. The newest strategy to getting to the next level of brownfields program performance is greater incorporation into state or regional growth and land-use planning. The National Governors Association found five states leading the way in using this strategy: Maryland, Massachusetts, Michigan, New Jersey, and Pennsylvania. Interestingly, a recent study looking at brownfields programs from a more conventional perspective concluded that four of these states, Massachusetts, Michigan, New Jersey, and Pennsylvania, "lead redevelopment trends."[12]

New Jersey's Brownfields Redevelopment Task Force

A March 2000 study conducted in New Jersey by the National Center for Neighborhood and Brownfields Redevelopment, *Brownfields Redevelopment as a Tool for Smart Growth: Analysis of Nine New Jersey Municipalities,* revealed astounding state-level benefit estimates. Municipality data were extrapolated to the regional and state level. The study calculated that redevelopment of brownfields sites over 3 years to 5 years could create from 19,000 to over 66,000 permanent jobs statewide. This represents anywhere between 8 percent to just over 25 percent of all new jobs projected statewide over the same period. New housing could be provided for 15,500 people to 71,000 people, allowing the redevelopment of brownfields for residential uses to potentially house from 7 percent to up to 33 percent of New Jersey's projected population increase between now and 2006. The annual revenue to the municipalities during this period was estimated to be $12 million to $21 million.

The brownfields program of the New Jersey Office of State Planning began in July 1997 with the formation of an interagency brownfields team and development of a work plan. On January 6, 1998, Governor Christine T. Whitman signed into law the Brownfields and Contaminated Site Remediation Act, which, among other provisions, established a Brownfields Redevelopment Task Force staffed by the Office of State Planning. This office also staffs the State Planning Commission, which is responsible for adopting and revising the development and redevelopment plan. The 11-member task force consists of five representatives from state agencies and six public members. The six public members are appointed by the governor with the advice and consent of the Senate.

The task force chair is selected by the governor, and its five state members are from the following agencies:

- Department of Community Affairs, Office of State Planning;
- Department of Community Affairs, New Jersey Redevelopment Authority;
- New Jersey Commerce and Economic Growth Commission;
- Department of Transportation; and
- Site Remediation Program, Department of Environmental Protection.

Governor Whitman appointed the commissioner of the Department of Community Affairs to chair the task force. Its major responsibilities are to:

- coordinate state policy on brownfields redevelopment, including incentives, regulatory programs, provision of infrastructure, and redevelopment planning assistance to local governments;
- inventory, prioritize, and actively market brownfields sites to potential developers;
- evaluate how current public incentives are doing in encouraging the remediation of and redevelopment of brownfields; and
- recommend ways to better promote brownfields redevelopment.

On June 5, 2000, the task force adopted an action plan to guide its future activities and its staff. The plan provides a clear direction that can be replicated by other states, including an aggressive approach to marketing brownfields to the public and ways to help agencies work together to advance the brownfields agenda.

"Our brownfields and Urban Site Acquisition programs are making it easier to convert urban eyesores into productive properties. More and more people will take advantage of these programs in the coming years as our million-acre commitment to land preservation encourages development where the infrastructure is already in place."

New Jersey Governor **Christine T. Whitman**

Elements of New Jersey's brownfields program are administered by the state agencies best able to provide their specialized expertise. The New Jersey Smart Growth Planning Grant Program assists in identifying brownfields sites by providing $3 million in state funds, made available from the New Jersey Department of Community Affairs, for local planning assistance. These grants provide financial support for New Jersey's municipalities and counties to develop plans that will lead to more livable communities. The 1998 Site Redevelopment Act provides funding to reimburse developers up to 75 percent of remediation and cleanup costs.

The strength of New Jersey's program rests in the comprehensive way Governor Whitman has incorporated brownfields into her "smart growth" vision. The State Development and Redevelopment Plan, which Governor Whitman calls the "blueprint for growth," emphasizes the reuse of brownfields to take advantage of existing infrastructure while promoting development in cities and towns. The state's *Urban Tool Kit* provides a catalog of programs and resources for sparking interest in revitalization of cities, neighborhoods, and downtowns and includes 20 other programs that complement the brownfields effort.

In addition, Governor Whitman recently signed the fiscal 2001 budget, which included a new $15-million Brownfields Redevelopment Grant program to be administered by the New Jersey Redevelopment Authority. Municipalities will be awarded grants for the acquisition and remediation of brownfields where elements of the project—redevelopment plan, interested developer, community support—are in place except for necessary funding. Previously, grants were only available to towns for investigation of site contamination, not for acquisition or remediation.

In September 2000, Governor Whitman announced additional improvements, including seven additional staff members in the environmental regulatory agency who will concentrate exclusively on expediting permits for redevelopment projects. The governor also directed her administration to place comprehensive information about brownfields on the state's Internet site. Though the state plan impact assessment found New Jersey's population and housing would grow whether or not the plan was followed, if it was implemented, sprawl would be reduced, saving 68,000 acres of farmland and 122,000 acres overall. Moreover, the state would spend $1.5 billion fewer dollars on water and sewer infrastructure and build 830 fewer miles of roads and still accommodate the same growth in people and jobs.[13]

Lesson for other states:

New Jersey has successfully integrated brownfields into the state's smart growth vision, plans, policies, and programs through strong gubernatorial leadership and effective engagement of state agencies and private-sector interests through its multi-agency and multi-stakeholder task force.

Pennsylvania's Green Opportunities for Brownfields Initiative

"Cleaning up contaminated sites and making them productive again improves the livability of our neighborhoods, communities and region. It means jobs for Pennsylvanians, a stronger tax base for communities and outdoor recreational opportunities for this region."

Pennsylvania Governor **Tom Ridge**

On January 9, 1999, Governor Tom Ridge signed an Executive Order (1999-1) establishing a new policy for sound land use practices in the Commonwealth of Pennsylvania. The order promotes:

- development in areas that have previously been developed or in locally designated growth areas;
- sound planned growth at all levels of government;
- regional cooperation among local governments;
- a network of greenways to improve the quality of life and livability in Pennsylvania's neighborhoods and communities; and
- the preservation of farmland and open space.

Pennsylvanians have an unprecedented opportunity to recycle abandoned and old industrial sites into productive properties that not only strengthen the economic viability of their cities and towns, but also provide new areas for parks and green space. Governor Ridge's Green Opportunities for Brownfields Initiative joins the state's land recycling goals with its conservation planning, watershed restoration, greenway and recreation initiatives. The initiative is a collaboration of the Department of Environmental Protection, the Department of Conservation and Natural Resources, the Department of Community and Economic Development, and the Natural Lands Trust.

Green Opportunities for Brownfields is minimizing suburban sprawl by encouraging redevelopment of areas previously developed and by accommodating new development that might otherwise occur in farmlands and open spaces. The goals of the initiative are to:

- continue to accelerate land recycling by encouraging mixed-use development that incorporates a variety of land uses and housing choices;

- recognize the importance of open space networks, recreational areas and greenways in urbanized areas as essential components of sustainable community development;
- demonstrate the application of conservation design practices to industrial, commercial, and mixed-use development;
- facilitate non-traditional partnerships between redevelopment agencies and recreational/open space planners; and
- expand the Land Recycling Program to promote open space in mixed-use projects.

Lesson for other states:

Pennsylvania has successfully integrated a successful brownfields program into broader state growth management policies and programs by means of an Executive Order and a collaboration among state and private organizations.

Massachusetts' Partnership With the Private Sector

In 1996, Massachusetts Governor Argeo Paul Cellucci issued the Executive Order, "Planning for Growth." The order calls on state agencies to improve interagency coordination, streamline regulations, and consider local and regional growth plans in their decisionmaking. The order also requires the state to provide incentives and technical assistance for local planning and to help local governments implement their plans.

Governor Cellucci signed the Brownfields Act into law on August 5, 1998, establishing new incentives to encourage parties to clean up and redevelop contaminated property in Massachusetts. The law provides liability relief and financial incentives to attract new developers for these properties while ensuring the state's environmental standards are met.

The Governor's Office for Brownfields Revitalization (OBR), established in June 1999, coordinates all the brownfields activities at the state level. OBR was established to coordinate access programs for companies, developers, and municipalities to help reduce costs and risks, and to assure adequate financing.

In an unprecedented move, Massachusetts convened several organizations to participate in an initiative to encourage redevelopment. The initiative includes the state's Brownfields Redevelopment Access to Capital Program (BRAC), which is designed to support private financing for the remediation and redevelopment of contaminated property.

Two agencies instrumental in the program's creation—the Massachusetts Office of Economic Development and the Department of Environmental Protection—selected the Massachusetts Business Development Corporation (MBDC) to implement this state-subsidized program. MBDC is a private corporation that provides financing and financial services to growing companies throughout Massachusetts.

"As this state continues to move from the old to the New Economy, reusing old industrial sites will be critical. Our brownfields program represents a tremendous opportunity to turn these ugly eyesores into sights for sore eyes in those areas of the state that need creative ways to reach their full potential."

Massachusetts Governor **Argeo Paul Cellucci**

BRAC provides environmental insurance for the developer via American International Group, and secures creditor coverage for the lender. The environmental insurance is state-of-the-art, prenegotiated, state-sponsored, and subsidized. It is designed to handle cleanup and cost overruns and liability arising from newly discovered, preexisting environmental contamination. Additionally, the lender can be protected from loss due to a default related to environmental issues. The environmental coverage includes the following.

- Cleanup costs that exceed the planned cost for the approved cleanup plan. Deductible typically equals 15 percent of cleanup costs for cost cap coverage (negotiable).
- Cleanup costs for unknown pollution conditions discovered during cleanup within planned cleanup and property boundaries. Deductible applies.
- Cleanup costs for unknown conditions discovered outside of planned cleanup but within property boundaries.
- Third-party coverage for cleanup costs, property damage, and personal injury resulting from preexisting yet unknown conditions beyond insured's property boundaries. Deductible applies.
- Legal defense coverage for claims arising from pollution being discovered outside the planned cleanup area. Deductible applies.
- Five-year term.

Performance data on the Massachusetts brownfields effort show that, as of July 2000:

- public spending of $2.9 million has leveraged private-sector spending of $88 million for cleanups and $1.8 billion in total investments;
- more than 175 projects have been supported and are projected to create or retain more than 30,000 jobs;
- twenty-seven municipalities have received project support from the governor's office; and
- although 76 percent of sites' reuse has been for commercial or industrial purposes, other uses have included mixed residential and commercial (9 percent), residential (9 percent), open space (4 percent), and public use (2 percent).

Lesson for other states:

Massachusetts has demonstrated the value of statewide leadership out of the governor's office and the benefits of using innovative partnerships with private-sector groups to help reduce financial risk barriers for brownfields projects.

Michigan's Brownfields Renaissance

Prior to 1995, Michigan's environmental cleanup and urban redevelopment efforts were constrained by strict liability laws and conservative remediation standards. Michigan's law mirrored those throughout the nation. A liability scheme similar to the federal system repelled redevelopment initiatives.

Deceptively termed as a "polluter pay" law, it was designed to go after parties with "deep pockets" regardless of actual liability. In effect, any current or previous owner anywhere in the chain of ownership for a contaminated property could be considered responsible for cleanup actions regardless of who caused the contamination.

This was a major deterrent to brownfields redevelopment. Contaminated sites sat idle for decades, adding to the decay of urban neighborhoods. Developers avoided liability concerns by moving out of urban cores and into suburban green spaces.

Governor John Engler recognized that fundamental reform was needed. He launched a bold restructuring of the state's cleanup law, working in bipartisan fashion with state legislators and mayors of Michigan's largest communities. Today this vigorous brownfields redevelopment program is central to Michigan's environmental, economic, and land-use strategies.

Michigan's amended law is designed to assist in returning contaminated property to productive use, and it places fairness in the liability scheme by only holding those parties that caused the contamination responsible for the cleanup.

New, flexible, and clear cleanup standards based on reasonable risk assumptions give developers the option to propose solutions to contamination based on future use of the property and affected resources. Moreover, new owners do not have to completely remediate all on-site contamination before putting brownfields properties back into productive use. They now need only to perform "due care" activities. These are response actions necessary to ensure their use of the property does not allow an unacceptable exposure to contamination, does not worsen the contamination, and protects against the foreseeable actions of third parties such as trespassers.

Equally important is the revamped law's underlying concept of accountability. It requires current owners and operators who caused contamination and know of the problem to diligently pursue response actions. In short, if you caused the contamination, you clean it up. Remarkably, the pace of Michigan's environmental cleanups has accelerated dramatically while costs have been slashed by half. Michigan's program has become a national model, ranking first in the nation in a study by Consumers Renaissance Development Corporation.

Policy reforms were the first step in giving communities the tools to revitalize brownfields. Governor Engler then followed up with a series of programmatic initiatives that put the new law into practice.

In 1998, Governor Engler expanded his urban redevelopment programs with the Clean Michigan Initiative (CMI), a $675-million environmental bond overwhelmingly approved by voters. More than $300 million of the overall bond is dedicated to environmental cleanup and urban renewal. Other bond commitments include waterfront redevelopment, clean water projects, contaminated sediment cleanup, lead hazard control, and pollution prevention programs.

> "The cornerstone of any urban revitalization strategy must be an aggressive brownfield redevelopment program. We have made brownfields attractive by reforming the cleanup laws and offering tax incentives and low-interest loans to our communities. More than anything, our success comes from making brownfield redevelopment a top economic and environmental priority in the state of Michigan."
>
> Michigan Governor **John Engler**

Brownfields properties cleaned up by the Michigan Department of Environmental Quality (MDEQ) go through a selection process that starts with a nomination of a site by a local unit of government and concludes with state appropriation, demolition and cleanup. The state aggressively pursues any liable party for reimbursement.

In addition to CMI funding, Michigan offers Brownfield Redevelopment Authorities. These authorities create a specialized institutional structure to promote local planning and implementation of brownfields redevelopment. The Brownfields Redevelopment and Financing Act provides authorities with a number of fiduciary powers. Authorities also may create revolving funds to finance projects. In addition, they are legally permitted to capture

increases in state and local (including school) taxes that result from brownfields redevelopment to fund environmental cleanup activities. The existence of an authority also allows a developer/taxpayer a credit on Michigan's Single Business Tax (limited to 10 percent of capital investment or an absolute cap of $1 million).

In June 2000, the legislature approved several of Governor Engler's proposals to expand the state's brownfields program. These include improvements to make it easier to prepare brownfields for redevelopment and a program that gives developers tax credits and provides low-interest loans. The new provisions include broadened use of state and local tax increment financing dollars for demolition, road construction, site preparation, lead and asbestos abatement, and even relocation of public structures. Developers now can invest in blighted areas and reuse old buildings that are not necessarily contaminated. The new law increases the maximum Single Business Tax credit for developers from $1 million to $30 million.

In addition to an exceptionally high level of state funding assistance for brownfields site assessment and cleanup (that has leveraged more than 10 times as much money from private-sector investment), Michigan has benefited from the creation of the Consumers Renaissance Development Corporation (CRDC). The nonprofit organization was formed in 1996 with assistance from the Michigan Economic Development Corporation, MDEQ, Michigan Municipal League, and Consumers Energy. CRDC promotes brownfields redevelopment in the state. In 1997, it conducted a pilot commercial redevelopment project on a 32-acre site in Quincy, Michigan. The project proved that brownfields redevelopment can be done in a similar timeframe and be economically competitive with developing a greenfields. CRDC worked as a facilitator and advisor, helping to negotiate an agreement that satisfied the diverse interests of the many involved public and private entities.

Lesson for other states:

Michigan's leadership in enacting commonsense statutory reforms, coupled with its financial support for innovative redevelopment programs, has produced enormous benefits in environmental quality, private-sector spending, economic development, urban revitalization, and tax revenues.

Maryland's Brownfields and Revitalization Incentive Program

In its 1997 session, the Maryland General Assembly strengthened the state's response to the continuing and damaging effects of suburban sprawl by enacting Governor Parris N. Glendening's Smart Growth and Neighborhood Conservation Initiative. The initiative builds on the 1992 Economic Growth, Resource Protection, and Planning Act (also called the "Growth Act") and other Maryland efforts to direct growth to areas with existing infrastructure and away from sensitive areas.

The centerpiece of this new legislative package is the Priority Funding Areas (PFAs) legislation. The legislation limits most state infrastructure funding, economic development, housing, and other program monies to smart growth areas, which the legislature and local governments designate. PFAs are locations where the state and local governments want to target their efforts to encourage and support economic development and new growth.

Counties may designate areas as PFAs if they meet the guidelines for intended use, availability of plans for sewer and water systems, and permitted residential density. In addition, counties may designate areas planned for new residential communities that will be served by water and sewer systems and meet density standards.

Other bills in the 1997 legislative package facilitate the reuse of brownfields and provide tax credits to businesses that create jobs in a PFA. The Voluntary Cleanup Legislation created the "Inculpable Person" category that gave certain liability releases after cleanup was completed. The Brownfields Revitalization Incentive Program was

established within the Department of Business and Economic Development. The program provides grants and low-interest loans to fund brownfields redevelopment. Candidate sites may either be located in a densely populated urban center and be substantially underutilized, or be in existing neighborhoods and industrial areas, preventing unnecessary sprawl and providing new economic development opportunities. The five-year program offers several benefits.

- A 50-percent state and local tax credit to offset the increase in property tax due to remediation on the site. A jurisdiction must enact legislation to participate in the tax credit program.
- Tax credits may be extended to 10 years in designated enterprise zones.
- Participating jurisdictions agree to contribute 30 percent of the increase to the state's Brownfields Revitalization Incentive Fund. These funds may be used to provide redevelopment incentives only for jurisdictions that provide tax credits.

In the 2000 legislative session, the legislature approved reforms to the program that allowed the Department of Business and Economic Development to fund Phase I and II Environmental Assessments by either Inculpable Persons or Responsible Persons in the form of below-market rate loans or grants. Expanding the eligibility for assistance for initial environmental assessments removed an obstacle that had prevented some developers from engaging in the possible cleanup and redevelopment of brownfields sites.

The Maryland Department of Business and Economic Development offers two new financing programs for brownfields redevelopments.

- *The Smart Growth Economic Development Fund*. This provides financial assistance to economically distressed counties that submit an approved local strategic plan for economic development. Funds can be used for financing the costs of acquisition, improvement, and rehabilitation of land for industrial sites and parks and other needed infrastructure projects located within a PFA.
- *Maryland Economic Development Assistance Fund*. This provides loans to businesses engaged in eligible industries locating or expanding in a PFA.

The state reports that there have been 63 successful projects. For 7 of those sites, 3,730 jobs were created and $346 million in private capital investment was made.

"The American Can Company project in the Canton section of East Baltimore has become a poster child for smart growth. It is in a Priority Funding Area where sewer, water and other infrastructure and services already exist. It was one of our first brownfield cleanup sites. And they were able to take advantage of our Heritage and Job Creation Tax Credits. This site was abandoned for years and the area around it suffered. Now, it is home to 40 separate businesses, including hi-tech companies, restaurants, cafés, and bookstores and 700 jobs. As a result of this project and other development nearby, Canton can boast that it is the only neighborhood in Baltimore City where the percentage of home ownership is now rising!"

Maryland Governor
Parris N. Glendening

Lesson for other states:

Maryland has improved its brownfields program by integrating it into its broad smart growth initiative and shown the benefits of targeting its support for brownfields projects in areas designated for growth and development.

Conclusions

An evolution is underway in brownfields redevelopment. Initially conceived as a public health and environmental protection strategy, the cleanup and reuse of abandoned industrial lands promises to become a central component of state growth planning.

Perhaps the most important lesson for states concerned about suburban sprawl and loss of open spaces is that, by leveling the playing field between brownfields and greenfields development, urban revitalization efforts can become more successful in shifting more growth back into older communities.

As states and localities seek to draw development into city and town centers close to existing infrastructure, governors are renewing their commitment to eliminating all barriers to brownfields development. Increasingly, states are linking brownfields development with state growth planning through these approaches.

- Having the governor provide clear and public support for the importance of brownfields in advancing the state's quality of life and economy.
- Viewing brownfields redevelopment in a collective way rather than on a project-by-project basis and integrating brownfields cleanup and redevelopment objectives into state growth planning.
- Broadening state brownfields programs to include involvement of state planning agencies and other appropriate state and local government agencies. It is imperative to have strong involvement of state organizations besides environmental regulatory agencies.
- Working to eliminate all remaining barriers to brownfields redevelopment and improving the full package of incentives, assistance, and liability reduction offered to developers. State actions to address liability concerns are working, but the federal liability under the Superfund statute still biases some decisions in favor of greenfields developments and sprawl.
- Considering the redevelopment of brownfields sites in the full context of "smart" community design. This includes mixed use, pedestrian-friendly design, urban parks, and close collaboration with community stakeholders.
- Ensuring the protection of public health while shifting emphasis to the broader economic development value of brownfields sites.

It is an ideal time for states to consider these successful approaches. State brownfields programs have been operating for less than a decade. In that short period, programs have successfully facilitated reuse of more than 40,000 sites—but this is less than 10 percent of the estimated 450,000 to 600,000 brownfields in the nation. With so many more sites to address and so many potential economic benefits to obtain, the advantages of the using the lessons learned from the five states highlighted here are clear.

Ultimately, the success of brownfields redevelopment as a means to smart growth lies in the partnerships and forward thinking among those who claim a stake in successful brownfields redevelopment—state policymakers, public agencies, private developers, local governments, and communities.

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