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***Environmental
Financial Advisory Board***

**FINANCING STRATEGIES
FOR
BROWNFIELDS REDEVELOPMENT**

This report has not been reviewed for approval by the U.S. Environmental Protection Agency; and hence, the views and opinions expressed in the report do not necessarily represent those of the Agency or any other agencies in the Federal Government.

March 1996

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EXECUTIVE SUMMARY

EPA's Brownfields Initiative seeks to empower stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely cleanup, and reuse "brownfields" in a sustainable way. Brownfields are abandoned, idled, or under-used industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination. The initiative is designed, in part, to free the market mechanisms of redevelopment to facilitate environmental cleanup and protection.

The Environmental Financial Advisory Board (EFAB) is focusing on the financial issues associated with this effort to revitalize "brownfields". EFAB seeks to encourage and facilitate investment in brownfields. The Board intends that its work support and complement the Brownfields Initiative underway at EPA. This report is designed to assist the many parties involved in brownfields redevelopment -- communities, developers, federal and State agencies, capital providers, community groups, and others.

The report examines financing strategies that can help revitalize brownfields. First, it lays out a seven-stage process for brownfields redevelopment encompassing -- site identification, initial site assessment, economic assessment, detailed site assessment (if needed), project development and financing, cleanup planning and execution, and redevelopment of property. It then depicts the economic redevelopment potential of brownfields by classifying sites as viable, threshold, and non-viable, and suggests governments may wish to leverage limited public resources and attract private investment by targeting threshold and non-viable sites. The report also presents a wide variety of financing strategies currently being used in brownfields redevelopment, including -- equity participation, fees, taxes, debt finance, grants, informational/advisory services, liability assurances, financial assurances, and legislative reforms. The report matches the financing strategies, where possible, to the stages in the redevelopment process. Finally, it provides seventeen real-life examples of how financing strategies have been applied in practice.

EFAB finds that there are many financing strategies available to facilitate brownfields redevelopment. Clearly, different strategies may be appropriate at different stages in the redevelopment process, and a combination of strategies may be needed to meet the financing demands of any single brownfields project. The Board further notes that successful implementation of financing strategies requires collective and cooperative action on the part of all parties involved in brownfields redevelopment. An understanding and sharing of information on brownfields financing strategies among all parties involved are keys to successful projects.

I. INTRODUCTION

In communities across the nation, there are numerous abandoned, idled, or under-used industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination. These sites, known as "brownfields", are often avoided by developers, businesses, and the capital providers (lenders and investors) because of uncertainties regarding contamination. The magnitude of the problem is considerable. For example, the City of Chicago has identified over 2,000 brownfields in its metropolitan area alone. Although no one knows exactly how many brownfields exist, estimates for the number of sites nationwide range from tens of thousands to over 500,000.

Developers are reluctant to risk the potential costs associated with hazardous waste assessment and cleanup, for which owners can be liable even if they were not involved in the original contamination of the property. Lenders are often unwilling to participate in brownfields revitalization projects due to potential liability, risks to collateral, and the risk of bankruptcy of the project sponsors. The result is increasing development of greenfield areas which had not previously experienced such activity, urban sprawl, and continuing economic and environmental decline in former industrial or commercial areas.

This report examines financing strategies used in brownfields revitalization projects, and looks at how these strategies can overcome the reluctance by lenders, developers, and community members to participate in these projects. **Part II** of the report first presents brownfields redevelopment as a process, and outlines its principal stages -- site identification, initial site assessment, economic assessment, detailed site assessment (if needed), project development and financing, cleanup planning and execution, and redevelopment of property. **Part II** also evaluates brownfields by their redevelopment potential to help target limited resources, and provides information on matching financing strategies to the seven stages of brownfields redevelopment.

Part III presents many of the financing strategies currently being used by state and local governments in brownfields redevelopment projects. Two main types of financing strategies are discussed -- direct strategies, which provide funding directly for assessment, cleanup, and redevelopment, and indirect strategies, which enable or facilitate financing. Direct strategies include equity participation, fees, taxes, debt, and grants. Indirect strategies include legislative reforms, financial assurances, informational/advisory services, and liability assurances.

In presenting the financing strategies, **Part III** provides brief, real-life examples of their application in brownfields and related redevelopment projects. The examples are designed to assist local governments, developers, capital providers, State and federal agencies, nonprofit organizations, community groups, and others involved in brownfields redevelopment. All parties interested in using the financing strategies described in these examples should determine their legal status under applicable State and local laws.

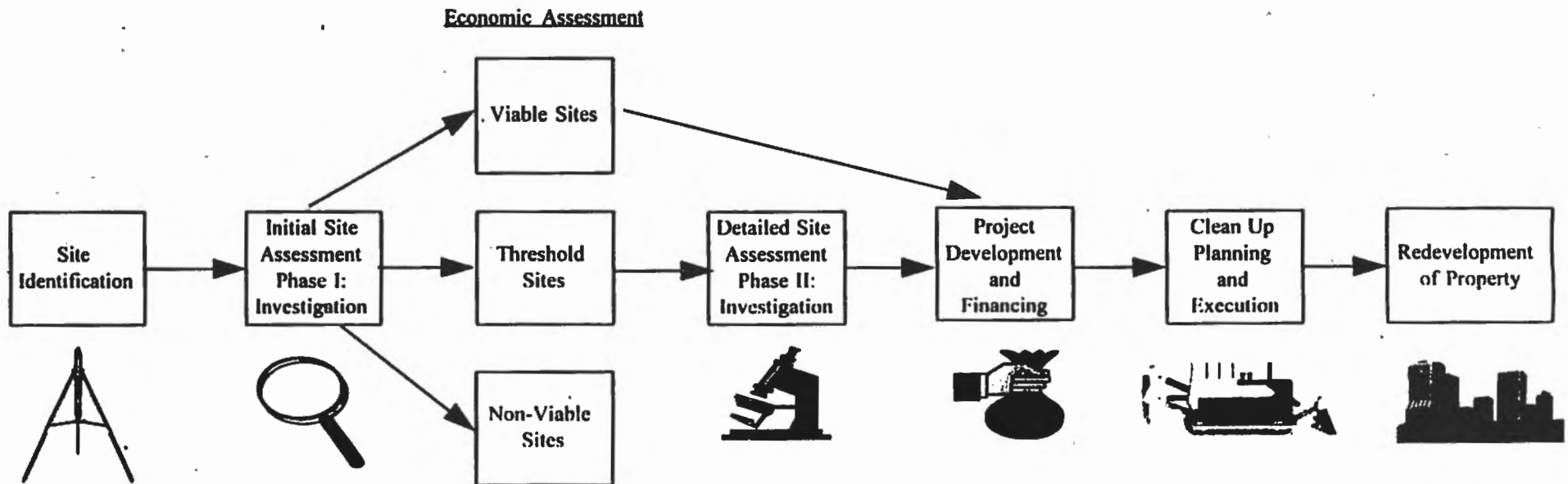
II. THE BROWNFIELDS REDEVELOPMENT PROCESS

The brownfields redevelopment process can be divided into seven basic stages. These stages may be undertaken by private and/or public sponsors serving as developers. The stages in the redevelopment process and the particular activities associated with each stage create different financing needs. In addition to matching financing strategies to the type of brownfields site, developers need to consider what stage(s) of the redevelopment process must be funded. The seven basic stages of the brownfields redevelopment process and the associated activities include:

- **Site Identification.** Development and maintenance of a registry of sites, helping developers find ones that meet their needs, and advertisement and marketing of abandoned sites;
- **Initial Site Assessment (Phase I Investigation).** Review of public records, physical surroundings, and other readily-available data regarding the site;
- **Economic Assessment.** Evaluation of site characteristics, advantages, and limitations, and comparison to the initial site assessment to determine whether a site is currently viable, potentially viable, or non-viable for redevelopment;
- **Detailed Site Assessment (Phase II Investigation, if required).** Environmental engineering investigation, sampling, and chemical analysis of the site;
- **Project Development and Financing.** Selection and financing of a cleanup and redevelopment project(s) for the site;
- **Cleanup Planning and Execution.** Selection and implementation of a cleanup approach; and
- **Redevelopment of Property.** Construction or alteration of the property to suit the new use for which it is being redeveloped.

Exhibit 2.1 on the next page illustrates these seven basic stages of the brownfields redevelopment process.

Exhibit 2.1 Stages of the Brownfields Redevelopment Process



Site Identification

State and local governments can assist with site identification by developing and maintaining an inventory or registry of sites, helping developers identify sites with desirable characteristics, undertaking advertising and marketing activities to promote site assessment, cleanup, and redevelopment. In the private sector, developers can look for potential sites by using these public resources. These are primarily low initial capital cost activities that need a continuous low level of financing to operate and maintain.

Initial Site Assessment (Phase I Investigation)

Initial site assessment activities can often be performed at relatively moderate cost. There are a number of ways to identify suspected contamination that rely on existing records, historical data, and other readily-available sources:

- Examine historical data to review historical uses and applicable federal and state reports of hazardous substances on the property;
- Research the chain of title/zoning history -- who were past owners of the land, what activities were licensed;
- Examine similar characteristics for neighboring properties;
- Check for prior environmental audits and assessments (OSHA safety reports, etc.);
- Review insurance policies to determine covered activities that might have involved potentially-hazardous chemicals; and
- Check local revenue departments to see if hazardous substances fees/taxes have been paid (indicating potential use of hazardous chemicals on the site).

Economic Assessment

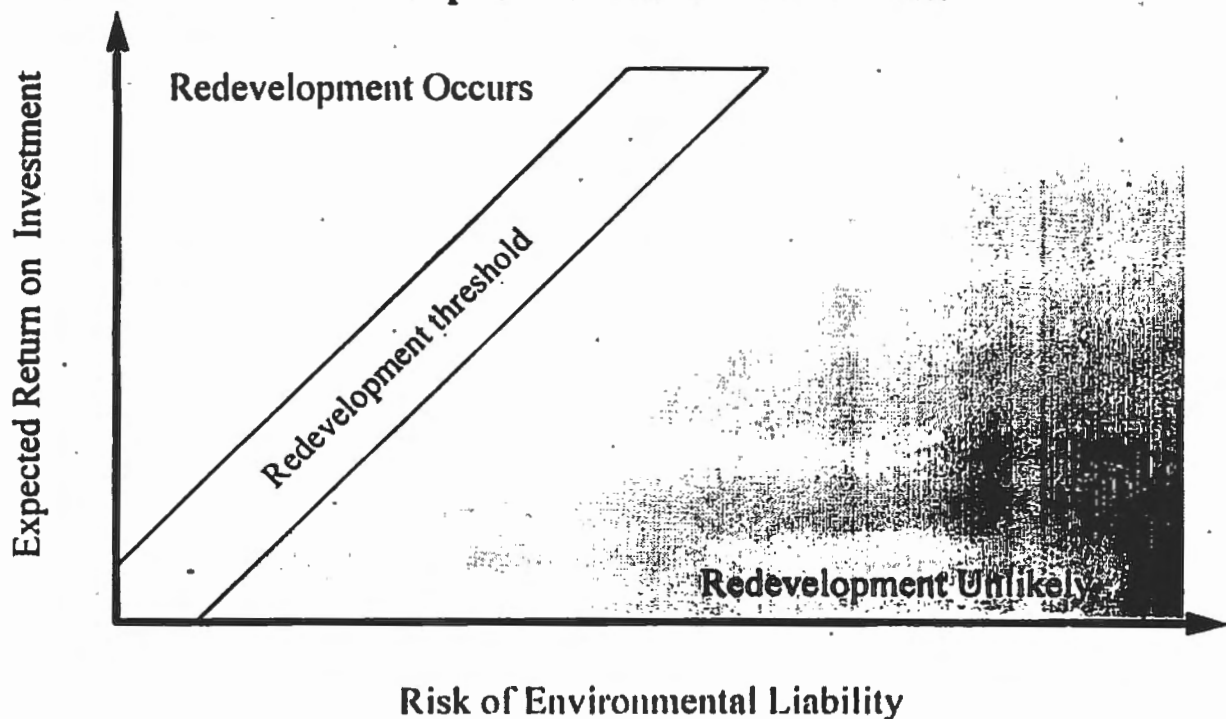
A key distinction must be made between sites that are in desirable locations and have the potential to attract buyers and developers, and sites that have no interested buyers and few potential uses. If there is no potential economic return to outweigh the cost of restoring a site to a useful state, no financing strategy will induce its redevelopment until and unless this condition changes. To determine what the redevelopment potential of a site is, an economic assessment must be performed.

As with any investment, the expected return on a brownfields project must be commensurate with its associated risk.¹ It is important, therefore, to first determine as accurately as possible the relationship between risk and return for the individual project. This relationship can be graphically depicted as a point on the risk/return field in which

a project lies (see Exhibit 2.2 below). Brownfield sites exist across the entire range of the economic development spectrum. For the purpose of developing financing strategies, however, the sites can be divided into three basic categories outlined below:

- **Viable Sites.** Sites that are already economically viable, and where the private market is already working towards redevelopment without public assistance. These sites either have very low potential for environmental liability, or such high potential rates of return that the advantages outweigh the risks from the project sponsors' (developers and investors) perspective.
- **Threshold Sites.** Sites that are only marginally viable, and will not be redeveloped without some public assistance. These sites may have either fewer economic advantages than the viable sites, or they may have greater potential for environmental liability.
- **Non-Viable Sites.** Sites with significant potential for environmental liability, and/or whose economic advantages are minimal at best. These sites require substantial public assistance to redevelop (in the form of subsidies), or should be left alone, if possible.

Exhibit 2.2
Redevelopment Threshold:
Redevelopment Potential of Brownfield Sites



Match Goals to Sites

Decisions to invest in any of these three kinds of brownfield sites depend on the goals of the particular investor. To better leverage public investment, state and local governments should consider directing public resources to brownfields where the private sector is unwilling or unable to finance projects -- threshold and non-viable sites. They should also consider strategies, where appropriate, that mix their public investment with private monies. One goal of any public investment strategy should be to move threshold sites into the viable category, and nonviable sites into the threshold and viable categories so that private investment can be attracted to them.

Strategies For Viable Sites

Typically, viable sites should need less or no direct investment of public capital. However, private owners and developers interested in a viable site may still require assistance in dealing with the regulatory and liability difficulties associated with brownfields assessment, cleanup and redevelopment. Strategies that may be appropriate for viable sites include:

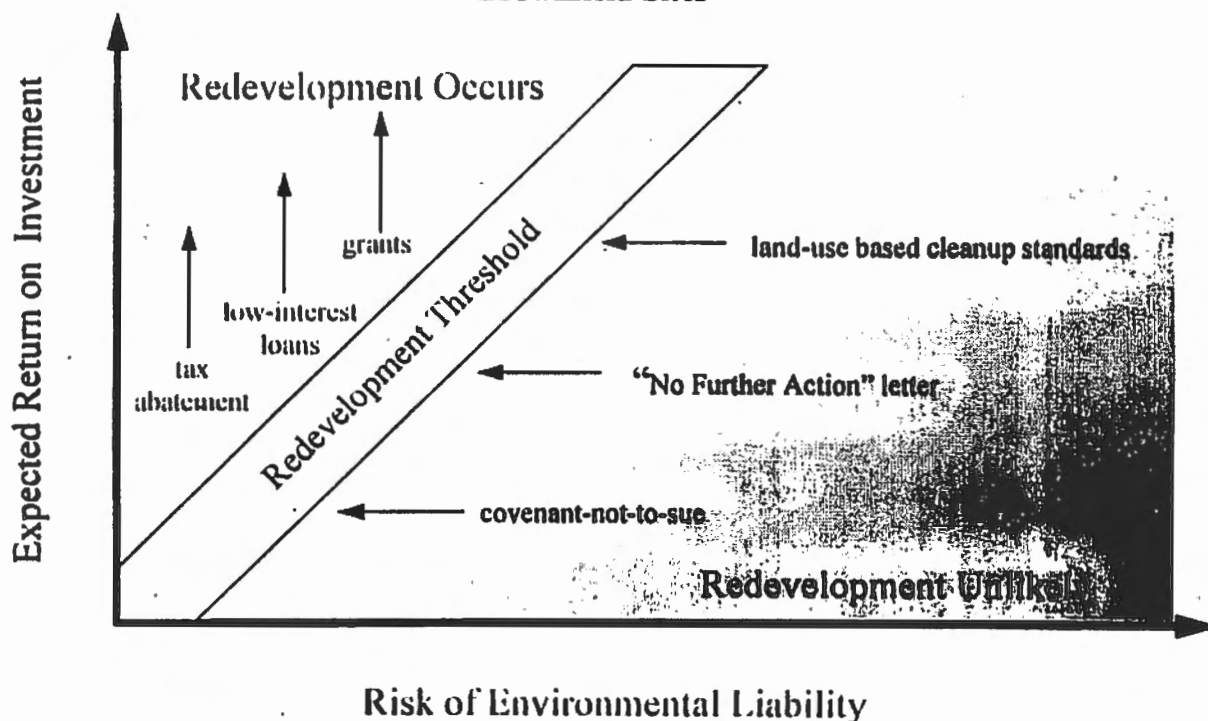
- timely review and comment of assessment and/or cleanup plans and proposals by regulators;
- land use-based cleanup standards, reflecting the intended use of the property;
- liability clarification (apportionments and/or likelihoods) so that risk can be quantified, and then managed or sold; or
- liability release (such as a covenant-not-to-sue or certificate of completion) after the cleanup is completed.

These strategies facilitate private sector investment in brownfield assessment, cleanup and redevelopment projects while conserving public resources for sites that would not otherwise be commercially viable.

Strategies for Threshold Sites

Threshold sites may possess significant potential for assessment, cleanup and redevelopment but need some public assistance to increase the rate of return on the possible investment or to limit the potential for environmental liability before developers will consider investing in them. Financing strategies can be selected to target either need, as illustrated in Exhibit 2.3 at the top of the next page (adapted from a graphic that appeared in the Economic Development Quarterly).²

Exhibit 2.3
Redevelopment Threshold:
Increasing the Redevelopment Potential of
Brownfield Sites



Strategies for Non-Viable Sites

Non-viable sites may require significant investments of public capital to make an otherwise unattractive site economically viable. These sites are unlikely to attract private capital under most circumstances. These sites may be suitable candidates for existing programs such as Superfund, that are targeted towards sites with significant contamination.

Superfund monies can be used to fund assessment and cleanup on brownfield sites. Under CERCLA Section 104, EPA has the authority to take response actions addressing releases and threatened releases of hazardous substances, pollutants, and contaminants. These responses are not limited to "Superfund" sites, but may be undertaken at any site at which an actual or threatened release is present. EPA's national brownfield demonstration pilots are examples of where Superfund monies are being spent on such sites.

Unless a severe health and/or environmental risk exists, local governments may wish to target brownfield assessment, cleanup and redevelopment efforts to viable and threshold sites before addressing non-viable sites. Since many other reports have discussed the problems associated with Superfund and other seriously-contaminated sites, this report focuses primarily on strategies for viable and threshold sites (which are usually, but not always, less contaminated).

Detailed Site Assessment (Phase II Investigation)

At this stage, a site is assessed to determine the level and extent of environmental contamination. The costs can vary widely depending on the severity of the problem, and the intensity of the site investigation required under state law. If the initial site assessment shows that there is potential contamination, a more-expensive, detailed assessment is then performed. This involves:

- Environmental engineering;
- Sampling; and
- Chemical analysis.

In some cases, the private sector may be unwilling to pay for this stage of the process, because if a site is found to be too contaminated, the project may never be developed due to the cost of the cleanup. This suggests that additional financing tools may be required at this point. (This can be seen in Exhibit 3.1 on page 10.)

Project Development and Financing

At this stage, feasibility studies may be required and the project's financing must be arranged. Activities at this stage include:

- Financial feasibility studies for the project ; and
- Development of a financing plan for cleanup and for redevelopment.

This stage might include meetings with lenders, insurers, proposed project partners, and affected neighboring communities (their representatives and citizen groups).

Cleanup Planning and Execution

This stage can involve high capital costs, because of

- Site remediation;
- Associated public notice requirements; and
- Preparation of reports for regulators.

Redevelopment of Property

Depending on the type of project selected, this stage can involve construction, clearance, and reuse of the property. Activities at this stage include:

- Site clearance/demolition (after remediation); and
- Construction of facilities.

III. BROWNFIELDS FINANCING STRATEGIES

Brownfields project sponsors use many different financing strategies to implement the seven-stage brownfields redevelopment process. However, there are only two basic types of financing strategies, and these are:

- **Direct strategies** -- that generate funds that may be used for cleanup and development; and
- **Indirect strategies** -- that enable or facilitate financing redevelopment.

Many project sponsors use a combination of these two types of financing strategies in redeveloping a specific brownfields site. Exhibit 3.1 on page 10 shows some of the strategies that may be useful at particular stages of the redevelopment process. Selection of suitable strategies will often depend on a particular barrier to finance. For example, sometimes the barrier will be lack of information about suitable sites. In this case, a land registration fee financing a central land registry, or other informational/advisory service, may be needed. In other cases, an inability to obtain capital market financing may be the barrier, and loan guarantees or equity participation may be needed from the public sector.

Exhibit 3.2 on page 11 illustrates a broader range financing strategies used in the redevelopment process. This section of the report describes these strategies and provides brief examples of how some of them have been applied in practice.

DIRECT STRATEGIES

Direct financing strategies provide resources for assessment, cleanup, and redevelopment of brownfields to project sponsors who can be communities, States, private developers, nonprofits, or a combination of these. Typically, these strategies increase the rate of return on a project by reducing the cost of capital or providing equity participation.

Equity Participation

Many communities consider equity participation an excellent tool to stimulate projects. This can take the form of lease arrangements, reclamation banks, or city ownership and development of property on its own behalf. The important aspect of equity participation is that the public sponsor assumes part of the risk of the project. For many communities, this is a worthwhile risk because the assessed, cleaned up, and redeveloped property will provide a source of tax revenue. In addition, although state and local governments only enjoy a statutory liability exemption when acquiring property involuntarily, federal regulators have historically been more reluctant to pursue legal action against public agencies than against private landowners, thus lowering the effective risk.

Exhibit 3.1 Financing Strategies for Stages of the Brownfields Redevelopment Process

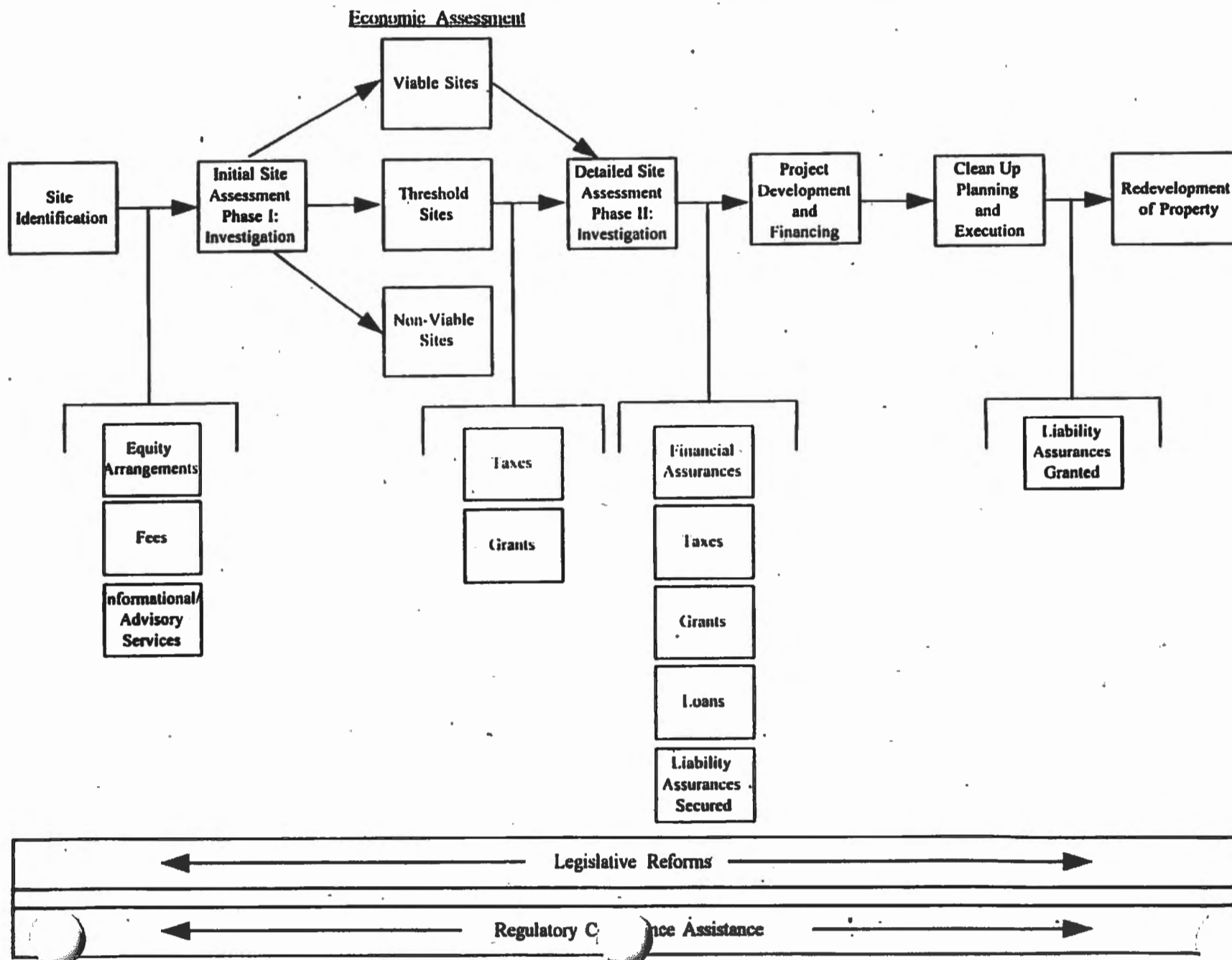
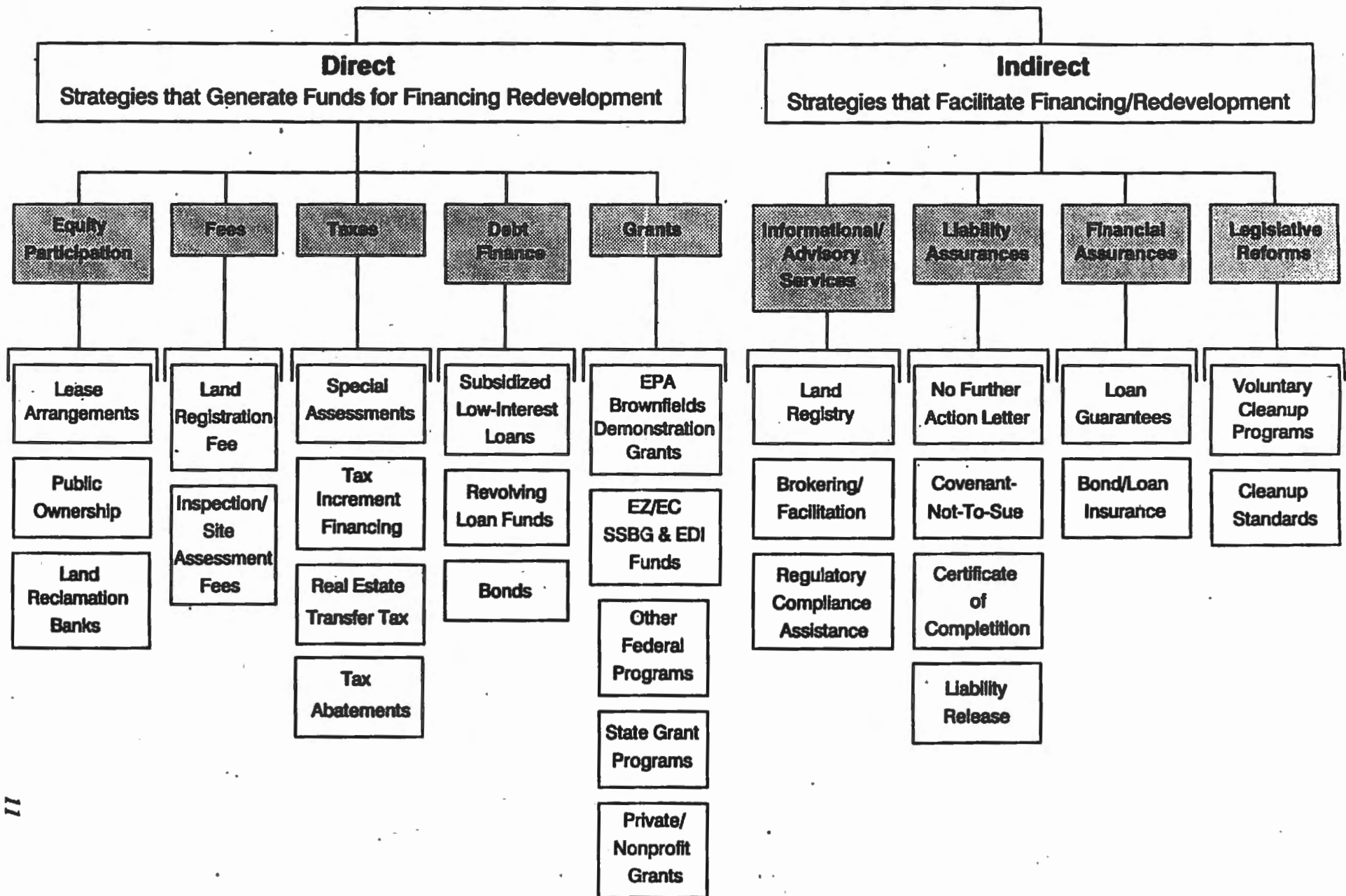


Exhibit 3.2 Brownfields Financing Strategies



Lease Arrangements

Some communities find that brownfield projects can be stimulated by using a public agency to buy sites (or take title to abandoned property), assess and cleanup contamination, and lease to private developers. The lease shields the developer from environmental liability as an owner (but not as a transporter or generator of hazardous waste), and gives the community a source of revenue. In some cases, the local government finds a lessor before starting the project. In others, it pursues the project before identifying tenants.

Lease Arrangements -- Uniroyal Tire Factory, Commerce, California

In 1984, the Commerce Redevelopment Agency purchased the 35-acre Uniroyal Tire Factory complex for \$14 million. The agency spent \$3 million on investigation and remediation of the contaminated soils on the site (some of which was later recovered in a settlement with the company responsible for the contamination), and sought a private developer who would be interested in leasing the redeveloped land. Ultimately, a factory outlet mall, offices, and a hotel were built on the site, and the project is expected to produce approximately \$592 million in lease income over 65 years, plus \$7.5 million in property taxes that the redevelopment agency intends to devote to other redevelopment activities.

Public Ownership

A second option that has been pursued is to assess, cleanup, and redevelop the project as a publicly-owned parcel. After the local government has assembled the property and begun the first stages of cleanup, it can either sell the property to the private sector or retain ownership on its own behalf.

Public Ownership -- Chrysler Corporation Jefferson North Assembly Plant, Detroit, Michigan.

In 1990, due to strong demand for Jeep Cherokees, the Chrysler Corporation sought a site for a new plant. The company planned to invest \$1 billion and create 3,000 jobs. One location considered was a 283-acre tract owned by the City of Detroit with a mix of land uses, including industry, scrap yards, old gas stations, and abandoned lots. The site had access to rail transportation, was centrally located, and was close to a well-trained work force. The City of Detroit, which strongly supported the project, acquired the property, and worked with the State of Michigan and Chrysler to negotiate a \$25 million cleanup plan to contain and stabilize the contamination.² Chrysler purchased the parcel upon conclusion of the cleanup, and opened the plant in January, 1992.

Land Reclamation Banks

Some communities use land reclamation banks. Such banks take title to potentially contaminated property (via property tax foreclosure, eminent domain, or purchase). They assess and clean it up, redevelop, and sell to prospective developers. Some communities use the proceeds from the lease or sale of the property to finance future projects.

Land Reclamation Banks -- Minneapolis Light Industry Land Acquisition Program

The City of Minneapolis spends about \$5 million per year to acquire, assess, cleanup, and redevelop potentially contaminated industrial sites. The funds are generated by a tax-increment financing plan and used for both purchase and site remediation. The City assumes all liability for cleanup and resells the land to private purchasers after redevelopment.

Fees

A fee is generally a charge for services rendered. Fees establish direct links between the demand for services and the cost of providing them. In the case of brownfields, however, property owners may not be able or willing to pay fees to cover the substantial capital costs of cleanup. Nor is the fee mechanism typically appropriate for cleanup activities, which require significant capital investments. They may, however, be able to pay for land registration and inspection fees that could finance a central land registry and assessment of sites that would lead developers to an appropriate site.

Land Registration Fee

Developers could pay fees to use a city land registry that would maintain listings and descriptions of brownfields and other sites available for development, and their levels of environmental contamination.

Inspection/Site Assessment Fees

Developers might be willing to pay for assistance with assessment and remediation of potential development sites. In some cases, voluntary cleanup programs already run on a fee-for-service basis, with state environmental agencies assisting property owners with site investigations, selection of remediation options, and coordination with federal regulatory agencies. In such instances, the private party usually reimburses the state for its costs in reviewing the private party's proposed actions against statutory and administrative requirements and providing guidance on those requirements.

**Inspection/Site Assessment Fees --
Minnesota Voluntary Investigation and Cleanup Program**

The Minnesota Voluntary Investigation and Cleanup Program is run on a fee-for-service basis. By obtaining approval from the Minnesota Pollution Control Agency (MPCA) for site investigations and response action plans, potential developers can determine the most appropriate cleanup action and can easily calculate the cost of cleanup measures needed to satisfy statutory requirements. Property owners may request assistance from the MPCA in anticipation of future property transactions, to obtain financing for current redevelopment plans, or simply to avoid the high transaction costs associated with Superfund cleanups. Historically the cost for these review services has ranged from \$65 to \$85 per hour.

Taxes

Most taxes are charged against either personal or corporate income, property, or sales of a commodity. Typically, brownfields may be located in areas where traditional sources of tax revenue -- such as property and income taxes -- generate little revenue. As a result, non-traditional taxes and real estate-based taxes that do not depend directly on current property value may be most appropriate.

Special Assessments

Special assessments are a charge levied against beneficiaries of a service or improvement. In the case of a brownfield, an entire business district or neighborhood could be considered the beneficiary of assessment, cleanup, redevelopment. In some cases, special assessments are charged differentially, with those receiving the greatest benefit paying a larger proportion of the cost. For example, property owners that were closest to a brownfields site might pay a larger share of the cleanup costs because they would experience greater increases in their property values after the cleanup. Alternatively, special assessments can be charged at a flat rate per individual or business.

Tax Increment Financing

Tax increment financing is a particular kind of special assessment that generates revenue from the incremental change in property values caused by the improvements being financed. For example, a number of governments have issued bonds backed by the anticipated increase in property values after a brownfields cleanup has been completed. This type of financing is generally used for a specifically-defined geographic area and often for a well-defined period of time such as ten years. However, if improvements do not yield the expected benefits, bonds may have to be repaid by other means.

Tax Increment Financing -- Downtown Wichita, Kansas

In 1990, a serious contamination problem was discovered in downtown Wichita, Kansas, threatening more than 500 companies with liability, and preventing economic development in the area. The city accepted liability for the contamination and negotiated a cleanup plan with EPA, which they planned to finance with an innovative tax-increment financing plan. The city reduced the property values in the affected area to reflect the decrease in values due to contamination. Then, the city issued bonds backed by the anticipated increase in the property values following a cleanup. This mechanism effectively dedicated future property taxes from the area to the cleanup.

Real Estate Transfer Tax

Real estate transfer taxes are charged to a buyer or seller of real property at the time of transfer based on a percentage of the assessed value of property transferred, a flat deed registration fee, or a combination of both. This financing tool is used by both state and local governments to fund land-related initiatives, including natural lands acquisition. Although no state or local government has, to our knowledge, dedicated this tax to a brownfields project, a transfer tax might be initiated in conjunction with new property transfer laws that require sellers to report the environmental status of land to new owners.

Tax Abatements

A tax abatement is a temporary moratorium on charging the usual tax rate on property or other tax base. Several states and communities are using them to attract investment to brownfields. In some areas, tax abatements can be approved on a project-by-project basis; in others, they can only be enacted by the state legislature or local governing body. They can be permanent or only last the first few years of a project. Tax abatements can make otherwise uneconomical projects more attractive and provide a guaranteed incentive.

Tax Abatements -- Ohio Tax Abatement Program

The State of Ohio has a tax abatement program for property owners who have been given a covenant-not-to-sue agreement from the state. The program grants these property owners a ten-year exemption from any increase in property taxes due to an increase in the assessed valuation on the land where the voluntary action was undertaken. In addition, the owner is exempt from property taxes on improvements, buildings, and fixtures for ten years.

Debt Finance

A loan is money that must be repaid in a set amount of time at a negotiated interest rate. Brownfields project sponsors may be able to identify state and federal debt finance programs that will provide capital at subsidized rates for projects that meet their eligibility criteria. Some debt finance programs are revolving, meaning that the program is at least partially financed by repayment of earlier debt.

Subsidized Low-Interest Loans

Subsidized low-interest loans reduce the cost of capital for project sponsors. They also provide full or partial financing for projects that might otherwise be unable to obtain financing on the private capital markets, or that would be expected to pay a higher interest rate to compensate for the potential additional risk involved in a brownfields project. Many projects have made use of existing state and local loan programs for redevelopment. Others have made use of loan programs specifically targeted to brownfield assessment, cleanup, and redevelopment.

Subsidized Low-Interest Loan -- WorldClass Steel, Ambridge, Pennsylvania

In Ambridge, Pennsylvania, the Commonwealth of Pennsylvania is providing subsidized loans to redevelop a 100-acre brownfield site. The site, which formerly belonged to the U.S. Steel group, had been vacant for 10 years. In 1991, WorldClass Steel took ownership of the site and redeveloped 16.5 of the 100 acres. In 1994, WorldClass and the city made plans for a \$375 million expansion that would redevelop the remaining acres. The Commonwealth is expected to finance 10 to 15 percent of the entire package at a subsidized interest rate of approximately 4 percent.

Revolving Loan Funds

In some cases, state and local loan programs operate revolving loan funds, meaning that future loans are financed by current repayments. This mechanism may be particularly appropriate for brownfields assessment, cleanup, and redevelopment, since repayment terms tend to be more flexible than commercial loans.

Bonds

Bonds can extend payment for new projects over a period of fifteen to thirty years -- allowing time to generate sufficient income to repay the capital invested. Typically, states and localities repay bonds with taxes, fees, or other sources of governmental revenue. For brownfield projects, bonds backed by tax-increment financing can be particularly popular because they rely on future tax revenues anticipated from the project.

Michigan Environmental Bond Program

In 1988, Michigan voters approved issuance of \$425 million in bonds to fund cleanup actions, with \$45 million dedicated to a site reclamation program which provides grants to local governments to investigate and cleanup contaminated sites for economic development.

Grants

Grants for different purposes are awarded by a wide range of entities, including federal, state, and local governments, nonprofit organizations, and corporations. Brownfield assessment, cleanup, and redevelopment projects may be eligible for many existing grant programs, and EPA has a national demonstration pilot grant program specifically targeted for brownfields-related activities.

EPA Brownfields Demonstration Grants

EPA's Brownfields Initiative seeks to empower states, communities, and other parties involved in economic redevelopment to work together in a timely manner to prevent, assess, safely cleanup, and sustainably reuse brownfields. As one component of the initiative, 50 communities across the country will receive grants for demonstration pilots for the redevelopment of their brownfields. The Agency is funding the 50 brownfields pilot projects for up to \$200,000 each over a two-year period. These pilots will:

- Test redevelopment models,
- Direct special efforts to removing regulatory barriers without sacrificing environmental protection;
- Encourage community groups, lenders, investors, developers, and other parties to come together to cleanup sites and return them to appropriate productive use;
- Provide a series of redevelopment models for states and localities struggling with such efforts; and
- Provide guidance to cities for cleaning up and returning industrial brownfields to productive use.

EZ/EC SSBG and EDI Funds

Each community participating in the federal Empowerment Zone/Enterprise Community program is allotted a certain amount of Empowerment Zone /Enterprise Community Social Service Block Grant (EZ/EC SSBG) funds. The EZ/EC SSBG funds must pass through the state(s). States must obligate these funds in accordance with a community's strategic plan within 2 years of the empowerment zone/enterprise community designation. The statute does not impose specific reporting requirements, although communities are required to certify that entities administering funds will provide "periodic" reports on their use of funds.

The Department of Housing and Urban Development (HUD) has made available Economic Development Initiative (EDI) funds of varying amounts to empowerment zones and enterprise communities. HUD is using these grant funds to encourage communities to use the existing Section 108 loan program, which allows communities to obtain loans for development projects at subsidized interest rates. Historically, communities have not used all of their Section 108 loan authority because HUD regulations require them to pledge their future grant funds as collateral. In the event of a loan default, the community will have to repay the loan by using these future grant funds. Many communities have been reluctant to risk future entitlements with loans to projects that may lose money.

To provide a financial incentive to communities to accept this risk, HUD is requiring communities to use their Section 108 loan authority before they can receive an EDI grant. For example, if a community received a \$22 million EDI grant, it would have to use at least \$22 million of Section 108 loan authority to use the EDI grant award.

Other Federal Programs

Some communities have pursued funding from other federal programs, such as:

- HUD Community Development Block grants which can be used for grants, loans, loan guarantees, and technical assistance. (HUD has explicitly stated that the cost of environmental reviews and the actual cleanup of identified hazards are eligible activities);
- Economic Development Administration Public Works and Development Facilities Grant Program;
- Appalachian Regional Commission (ARC) Supplemental Grants; and
- State Underground Storage Tank Trust Fund Program.

Eligibility criteria, amounts available, and application procedures for these programs and others are described in the federal government's annual publication, the Catalog of Federal Domestic Assistance.

State Grant Programs

Many states have grant programs providing funding for localities and agencies undertaking brownfield assessment, cleanup, and redevelopment. In seeking grants, project sponsors should know that grant assistance can be found at a variety of agencies, not necessarily the primary environmental agency. For example, communities may be able to finance brownfield projects via a state economic development agency. Alternatively, localities can seek grants not traditionally been used for site cleanup, such as groundwater protection grants, which could awarded for protecting groundwater from contamination from a brownfield. Since grant programs vary widely from state to state, localities should seek grant catalogs or other information directly from their state governments.

**State Grant Programs -- Industrial Communities Action Program,
Commonwealth of Pennsylvania**

The Commonwealth of Pennsylvania has adopted an Industrial Communities Action Program (ICAP) that provides grants to communities for redeveloping contaminated sites. Project sponsors -- including local governments, development agencies, and redevelopment authorities can apply for grants for the purchase of land and buildings, site demolition and clearance, construction or renovation of infrastructure, cleanup, and other activities that assist in preparing the site for redevelopment. ICAP supported 53 projects for in its first year, and 117 in its second year.

Private/Nonprofit Grants

Private nonprofit organizations and corporations can also be a source of grant funds for brownfield projects. Publications such as the *Grants Register* and the *Foundation Directory* can direct states and localities to organizations and corporations likely to provide grants, as well as information on criteria, amounts available, and application procedures.

Private/Nonprofit Grants -- The Great Lakes Protection Fund

In July, 1995, the Great Lakes Commission received a \$26,000 planning grant from the Great Lakes Protection Fund to identify ways to spur brownfields projects in the Great Lakes Basin. The Commission will use the funds for three tasks: reviewing the impacts of brownfields on Great Lakes basin ecosystem health; planning and conducting a regional workshop to assess the potential for cooperative arrangements on brownfields redevelopment and greenfields protection; and preparation of a more detailed report and project proposal.

INDIRECT STRATEGIES

Some financing strategies available to state and local governments do not directly increase the funds available for investment in brownfield projects. Rather, these indirect strategies facilitate or enable site assessment, cleanup, and redevelopment by overcoming a barrier(s) impeding the project's financing. Indirect strategies can help overcome three kinds of barriers:

Knowledge Gaps. A developer or investor may be interested in, or willing to consider, financing a brownfields project, but be unaware of suitable sites or regulatory options. Informational/advisory services provided by state and local governments can overcome these knowledge gaps.

Perceived Liability. Many lenders may be aware of brownfields-related issues but fear the potential liability associated with a particular site, which may or may not equate to the site's actual liability risk. In addition, lenders may fear the public's perception of environmental contamination, and the associated stigma, which can have a financial impact on a project if it deters customers from using it. Informational/advisory services, and more importantly, financial assurances provided by states and localities can overcome problems with perceived liability.

Actual Liability. Some indirect financing strategies shield property owners and redevelopers from environmental liability risk by providing liability assurances.

Informational/Advisory Services

Part of the barrier to brownfields redevelopment is that developers and capital providers often lack information about sites, the site assessment process, and liability law. By educating developers and capital providers about available sites, the site assessment process, and environmental legislation, communities can help overcome reluctance by developers and capital providers to participate in brownfields redevelopment. For example, changes in environmental regulations can affect lending decisions by capital providers. In addition, developers and capital providers should be aware of land use controls, cleanup options, and potential reuses of property.

Land Registry

A number of communities have set up land registries that collect information about potential redevelopment sites. These registries inform developers about the potential advantages and disadvantages of sites, and allow projects to occur on sites that might otherwise be overlooked. Some communities operate land registries conjunction with programs that fund site investigation and assessments for the parcels. Subsequently, the registry will contain detailed information about the sites and anticipated cleanup costs.

Land Registry --Bridgeport, Connecticut

The city of Bridgeport, Connecticut is using EPA demonstration grant funds to develop an inventory of contaminated sites. Currently over 500 acres of contaminated land exist throughout the city. The inventory will classify properties by the level of cleanup required, the method and cost of the cleanup, and the anticipated time required.

Brokering/Facilitation

An agency or local government can broker or facilitate agreements between federal, state, and local agencies and developers. In this case, the public sector can provide proactive services to bring buyer and seller together, and to help negotiate brownfield (assessment, cleanup, and redevelopment) deals, and assist in arranging project financing.

Regulatory Compliance Assistance

A public environmental agency can advise developers on regulatory options and assist in obtaining cooperation from other agencies. Navigating the environmental permit process can be difficult. Assistance with the process encourages developers to continue projects that might otherwise be unacceptably delayed. To expedite the process, some communities have formed task forces with membership from all agencies responsible for regulating a particular brownfields site.

Regulatory Compliance Assistance -- Elizabeth, New Jersey

The Regional Plan Association, a nonprofit organization that studies land-use issues in New Jersey, New York, and Connecticut, assisted a developer in acquiring environmental permits to turn a 166-acre site in Elizabeth, once a municipal landfill, into a 1.5 million square-foot commercial hub, including a 1.2 million square-foot factory-outlet center. The Association worked with the developer and regulatory agencies to ensure that cleanup plans were approved and deadlines were met.

Liability Assurances

Liability assurances help finance the assessment, cleanup, and redevelopment of brownfields by giving needed certainty to lenders and other financial actors. Tools used by states and localities include no-further-action letters, covenants-not-to-sue, certificates of completion, and liability releases. Each tool addresses a particular kind of uncertainty that can impede access to capital. These assurances promote brownfield projects by

shielding prospective and current owners from potential liability in exchange for cleaning up contaminated property.

Most state voluntary cleanup programs offer some form of liability assurances to prospective purchasers. Some also offer assurances to current owners who successfully complete an approved cleanup. But, state laws vary widely as to whether current owners receive any liability protection, even if they undertake a cleanup. Although there are no standard definitions for liability assurances, they can be created in a number of different ways, including legislative action, or administrative action by an environmental agency.

No Further Action Letter

After a site assessment determines that cleanup action is required on a brownfield property, a state can inform a property owner what level of cleanup is necessary for issuance of a no further action letter. This letter is only granted after a cleanup has been done, or a site assessment determines none is required. The letter does not release the new owner from liability, but does guarantee that the state will not take any new enforcement actions at the site, barring discovery of new information unknown at the time of the letter. Where an approved cleanup has been completed, a no further action letter is a promise by the state not to require further cleanup. If state cleanup standards change, or new cleanup technologies are developed, the new owner will not be required to do additional cleanup. But, this varies from state to state. Some limit reopeners severely, while others do not.

Covenant-Not-To-Sue

A covenant not-to-sue (CNTS) is granted after cleanup and offers protection from future state suits for contamination found on the property. In some states, it may not cover conditions or contamination that were unknown at the time the covenant was granted. In some cases, a CNTS may be contingent on an approved land use for the property. For example, the state may require that the property be maintained in industrial use, or that the new use will not exacerbate the contamination that already exists.

Covenants Not to Sue -- State of Michigan

The Michigan State Attorney General has the authority to issue CNTS to sponsors interested in redeveloping brownfields who are not affiliated with a potentially responsible party. The CNTS protects the purchaser from all liability to the State of Michigan associated with past releases, known and unknown. It also provides protection from claims by other responsible parties, in exchange for implementation of response activity.

Certificate of Completion

A certificate of completion is issued after cleanup if the site meets the agreed-upon state cleanup standards. In some cases, these standards will be individually negotiated for each site, based on a risk assessment. In other cases, the standards will be voluntary cleanup standards that apply to all sites statewide. The certificate of completion proves to prospective purchasers that the cleanup has occurred, and that the state environmental agency participated, and was satisfied with the results. In many states, possessing a certificate of completion limits further liability for both potentially responsible parties (laws vary by state on a PRP's eligibility for such a certificate) and nonresponsible parties.

Certificate of Completion -- Culver City Kite Site, Culver City, California

The Culver City Kite Site is a 4.5 acre property formerly used by manufacturers of wood products, plastics, and concrete blocks, die casting machine shops, and auto body and painting enterprises. The Department of Toxic Substances Control participated in the site remediation process and granted a certificate of completion at the site, which enabled the development of the property as an industrial park containing retail outlets for electronic, home building, and automobile equipment.

Liability Release

A liability release shields property owners from all liability, providing that they are in no way responsible for the original contamination. It is intended to encourage prospective purchasers to cleanup contaminated property, without exposing them to the risk of being held liable for the original contamination. It may be granted prior to cleanup, and may be conditional on an intention to clean and reuse the site. State laws vary as to the liability protection afforded by these releases.

Financial Assurances

Financial assurances assure lenders and capital providers that they will be repaid by another source if the project sponsor should default. By providing additional guarantees for bond or loan repayment, financial assurances improve the ability of project sponsors to acquire capital, or to acquire capital at a lower cost.

Loan Guarantees

To reassure capital providers regarding the safety of brownfields lending, state, and local governments, and some federal programs, provide loan guarantees to project sponsors. These guarantees assist sponsors in obtaining financing because they provide an additional source of repayment in the event of project bankruptcy. For example, a

HUD program called Section 108 provides loan guarantees that enable local governments to command a more favorable interest rate.

Loan Guarantees -- Ohio Financial Assistance Programs

The state of Ohio provides loan guarantees from the state water pollution control fund, the Ohio Water Development Authority, and the Ohio Economic Development Authority. These guarantees are available to parties involved in cleanup or undertaking voluntary actions including assessment, investigation, and remediation, and assist these parties in obtaining project financing.

Bond/Loan Insurance

Bond and loan insurance are credit enhancements that assure lenders and bondholders that interest and principal will be repaid in the event of default by the entity that contracted the debt. States, communities, and private developers can use bond and loan insurance to make debt offerings appear more secure from default, and therefore more attractive to potential investors. These assurances would be particularly important for obtaining debt for brownfield projects. To secure bond or loan insurance, project sponsors can either seek out insurers on the private capital markets who are prepared to insure a brownfield project, or the state or local government could create a bond or loan insurance program specifically for them.

Legislative Reforms

A number of states have enacted legislative reforms to help reduce uncertainty in assessing, cleaning up and redeveloping brownfields. These reforms have typically addressed at least four key areas: liability limits; cleanup standards; administrative oversight (distinguishing between sites appropriate for voluntary cleanup and sites where state oversight is tighter); and public funding for cleanup.

Voluntary Cleanup Programs

Voluntary programs allow private parties to initiate cleanups and avoid some of the costs and delays associated with state superfund or other enforcement-driven programs. Such programs provide technical guidance, in some cases assisting with site investigation and cleanup. Some apply special cleanup standards to parties in the program. Others incorporate land-use controls that anticipate a future use that usually involves less public exposure to the site (e.g. 500 employees at an industrial site rather than thousands of consumers at a mall). The land use controls do not lower or eliminate risks to the human health environment, but provide assurance of an appropriate public exposure/use of a site. Finally, upon completion of cleanup, most voluntary programs offer some kind of liability

assurances to protect purchasers, lenders, and municipalities from liability. Currently, 21 voluntary cleanup programs exist. Most states design their programs for sites that not currently listed or being considered for the Superfund National Priority List (NPL).

Voluntary Cleanup Program – State of California

In 1994, California established a Voluntary Cleanup Program to promote the cleanup of low-priority hazardous waste sites in the state. The program is run by the California Environmental Protection Agency's Department of Toxic Substances Control (DTSC). The program offers a streamlined process for cleanups in order to put property back into productive use. As of March 1995, over 100 voluntary projects had begun under the program. To participate in the program, project sponsors and the state negotiate an agreement specifying the extent of the cleanup planned for the site. On a fee-for-service basis, the DTSC staff provides technical assistance at all stages of the process, from site investigation to cleanup. Once cleanup has been completed, DTSC will issue a "certificate of completion" and a "no further action" letter, limiting further liability for project sponsors.

Cleanup Standards

The broad discretion of state regulators under CERCLA leaves developers unclear as to the cleanup standards to which they will be held. Since regulators have the power to require a cleanup to pre-contamination levels, or in some cases, to permit deviations from state determined minimum levels, the extent of final cleanup required can be uncertain. This uncertainty prevents developers from quickly estimating the costs required for a site cleanup. To encourage cleanup and redevelopment, many states have attempted to develop clearer cleanup standards. These new standards employ site-specific criteria, such as future land use, proximity of ground and drinking water sources, and other factors. There is also the issue of double jeopardy that currently exists due to the overlap of federal and state laws. EPA can second-guess a cleanup conducted and approved by a state.

Cleanup Standards -- State of Pennsylvania

Under Pennsylvania legislation, developers have three sets of standards to choose from:

- *Statewide Health Standards* are developed by the Department of Environmental Resources in order to "protect ground water and prevent contaminated soil from exposing the public to harm.
- *Background Levels* are defined as the greater of "background as represented by the results of analyses of representative samples; or the "lowest level that can be reliably attained within specified limits of precision and accuracy under routine laboratory conditions." If this method produces a standard that is less stringent than the statewide health standard, then the statewide health standard applies.
- *Site-Specific Standards* can be chosen by developers on a case-by-case basis after a detailed site investigation. These standards are directly linked to the future land use of the sites and the actual health risks associated with exposure. These standards may also be linked to deed restrictions, limiting future use of the property to prevent exposure and/or recontamination.

This flexibility allows developers to quickly estimate the cost of a cleanup, and to either choose a more stringent standard, or negotiate for a standard that recognizes differences in land uses and other site-specific characteristics.

IV. FINDINGS AND CONCLUSIONS

Abandoned, idled, or under-used industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination represent major environmental and economic challenges to many communities. Financial issues are a key component to the successful revitalization of these sites, which are better known as "brownfields".

To provide a context within which to examine financing strategies used to revitalize brownfields, this report presents a seven-stage process for brownfields redevelopment. The seven stages are site identification, initial site assessment, economic assessment, detailed site assessment (if needed), project development and financing, cleanup planning and execution, and redevelopment of property. Selecting the appropriate financing strategies to successfully complete the redevelopment process requires a knowledge of these seven stages, the particular brownfields site, and the financing strategies that can overcome barriers applicable to each stage and the site.

The report pictures the economic redevelopment potential of brownfields sites by classifying them as viable, threshold, and non-viable. This valuable tool provides a way to target both public and private resources to sites. For example, since viable sites are ones where the private markets drive redevelopment, no public assistance is usually needed. Threshold and non-viable sites, on the other hand, will not be redeveloped by the private markets without public assistance. Increasingly limited public resources should be targeted to threshold and non-viable sites with the intent of making them viable and attracting private investment. For environmental and/or health reasons, governments may also want to target resources to selected non-viable sites that may not be redevelopable. Finally, governments may want to target resources to viable sites where projects can generate substantial public benefits.

All participants in brownfields revitalization -- communities, developers, federal and state governments, capital providers, community groups, and other interested parties -- should be familiar with financing strategies for cleanup and redevelopment. This report examines a wide variety of the financing strategies currently being used in brownfields projects. Major financing categories presented include -- equity participation, fees, taxes, debt finance, grants, informational/advisory services, liability assurances, financial assurances, and legislative reforms. The report matches, where possible, the strategies to the stage(s) in the brownfields redevelopment process, and provides numerous real-life examples of how the strategies have been applied. But, the report is only a first look at this important topic. It is not all inclusive by any means.

Further study and analyses of brownfields financing strategies are needed. In addition, because of the complexity and difficulty of brownfields redevelopment, cooperative approaches that include and assist all parties involved in brownfields

revitalization need to be examined and developed. Information on new approaches should be widely shared and tested in communities throughout the country.

One approach that should be considered to promote and share information on brownfields financing was suggested in one of EFAB's other reports entitled, "Information Needs of Capital Providers in Brownfields Redevelopment". That report proposed the creation of a Brownfields Cleanup and Redevelopment Clearinghouse. Such a clearinghouse could be designed as a partnership between local governments, federal and State agencies, developers, capital providers, nonprofit associations, and community groups. It could provide newsletters, brochures, consultations, referrals, case studies, and data retrievals on numerous brownfields topics, including financing strategies.

V. ENDNOTES

- 1** Page, G. William, and Rabinowitz, Harvey Z., "Potential for Redevelopment of Contaminated Brownfield Sites", *Economic Development Quarterly: The Journal of American Economic Revitalization*, Vol. 8, No. 4, November 1994.
- 2** Page, G. William, and Rabinowitz, Harvey Z., "Potential for Redevelopment of Contaminated Brownfield Sites", *Economic Development Quarterly: The Journal of American Economic Revitalization*, Vol. 8, No. 4, November 1994, p.360.
- 3** Hawvermale, Greta J., "A Brownfields Success Story: Project History", *Remediation and Reuse*, June 1995, Vol 1, Issue 7, Indiana Department of Environmental Management, Office of Environmental Response.