Summary of Symposium Discussion

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In this, the first environmental symposium sponsored by the U.S. Department of Housing and Urban Development (HUD), and hosted by the nonprofit organization Clean Sites, participants discussed the opportunities and problems associated with redevelopment of contaminated urban industrial sites, also known as brownfields. This summary outlines briefly the nature and extent of the brownfields problem, relates discussion of the key issues posed by participants, and suggests directions for future policy consideration and research by HUD and others.

The Brownfields Problem

The restructuring of the American economy from manufacturing to service-based activities, which began in the 1950s and continues today, has created major changes in America's cities. Industrial activities have closed or moved away from the central city in search of cheaper land and more plentiful workers, leaving behind vacant buildings and abandoned land. Many of these properties contain toxic contamination that requires cleanup, thus adding to the cost of reusing the property.

In 1980 the Federal Government passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), to identify and prioritize hazardous waste sites, provide funds to assist in cleaning up those sites, and assign legal responsibility for their contamination and cleaning. CERCLA also set aside taxes from petroleum and chemical operations as a Superfund to provide capital for site cleanups.

CERCLA has been criticized for making property purchasers, lenders, and others responsible—and legally liable—for site cleanup regardless of whether they were responsible for the environmental damage, for imposing high cleanup standards that are costly and are sometimes unrelated to a site's intended reuse, and for costing taxpayers a great deal while accomplishing only a small percentage of the needed cleanup. Several States have passed similar laws, resulting in confusion regarding which level of government, which standard, and which process must be followed.

Approximately 1,200 locations throughout the country have been designated as Superfund sites, and an estimated 400,000 or more as brownfield sites. Most of the sites that are candidates for reuse are the moderately contaminated brownfield sites, rather than the severely contaminated Superfund sites. The precise magnitude of the brownfield problem

is not known, but it is certainly pervasive and significant. Virtually every community in the country contains abandoned or underused urban industrial land—often in a prime location.

Because of the environmental problems and the general physical and economic deterioration experienced by older industrial areas in recent decades, it is a challenge to attract redevelopment to abandoned urban industrial sites. Cleanup costs may exceed the value of the site's most appropriate use, and investors are reluctant to expose themselves to the risk of potential liability. Consequently, the successful redevelopment of an individual site is unlikely without large-scale improvements to make the area more attractive to other types of investment.

During the course of the discussion, moderated by Richard Munson, executive director of the Northeast—Midwest Institute, participants exhibited differing perspectives about what constitutes "the problem." Some were concerned with the way environmental regulation affects the redevelopment of a single site. Others were thinking in terms of groups of sites at certain types of locations, such as near transit facilities. Some spoke in terms of blighted areas within the city, while others were concerned primarily with identifying and protecting the interests of neighboring communities.

Yet all participants could agree that the presence of a large number of vacant industrial sites with varying degrees of contamination creates a number of problems. These problems include health hazards for nearby residents, especially children; wasteful abandonment of well-located but economically unproductive sites; and areas of blight within the city that exacerbate disinvestment and deterioration while depleting the city's much-needed tax base. The existence of derelict industrial areas worsens other problems cities must confront, such as middle-class outmigration, poverty, crime, and deterioration of the educational system.

Numerous benefits would accrue to a city that cleans and reuses idle sites. Redevelopment would bring much-needed economic life and new jobs to inner city environments, and the initial economic activity would be likely to stimulate more. Potential health problems could be avoided. Revitalization of the urban core would offer new employment opportunities and a better living environment to nearby residents, many of them low-income and minority families. By creating alternative location choices for tax-paying industrial, business, and residential activities, contaminated urban sites that have been cleaned up can help restore a city's financial vitality.

Redevelopment of unused or underused areas within a central city can often benefit the metropolitan region by helping to restore economic vitality to its physical and symbolic core, making it a more attractive place to live, work, and visit. Redevelopment also makes more efficient use of existing infrastructure and transportation systems. To the extent that industries choose to locate on reclaimable city sites rather than in the suburbs, redevelopment of urban land also helps to encourage more compact metropolitan development. The alternative—unrestrained suburban growth, or urban sprawl—creates inefficiencies in land use and transportation, requires expensive construction of new infrastructure, encourages dependence on the automobile, and exerts a negative effect on the region's air quality.

All participants agreed that better approaches to solving the problems associated with brownfields are needed and that the primary goals must be to:

- Protect human health.
- Promote redevelopment of vacant properties or clusters of properties, consistent with their market potential.

The purpose of most environmental laws is to protect human health and the environment, rather than to promote redevelopment. But discussants recognized that these goals are not incompatible and that cleanup of a site is more likely if its reuse is financially feasible. Therefore, discussions were organized around scenarios that would promote redevelopment and return properties to productive use. Such approaches would tap the power of the marketplace to stimulate more vigorous private-sector participation. They would also send a strong signal that HUD, the U.S. Environmental Protection Agency (EPA), and other Federal agencies recognize the importance of brownfields redevelopment and want to help solve the related problems.

EPA has already begun to address these concerns. Recognizing that Superfund is perceived as an impediment to redevelopment, Eliott Laws, assistant administrator for EPA's Office of Solid Waste and Emergency Response, invited participants to recommend specific changes to the law. The agency has also initiated an urban redevelopment grant program designed to involve public- and private-sector interests in identifying sites with market potential, cleaning them up, and attracting economic vitality back to the cities. Fifty cities are participating in the program.

Key Issues

During the symposium, participants identified a number of key issues that must be resolved in order to encourage redevelopment of vacant urban industrial sites. These issues include:

- Uncertainty about the requirements of environmental regulations and the cost of complying with them.
- Fear of potential liability.
- Insufficient and inaccurate information upon which to base decisions.
- Unclear and poorly coordinated government roles and responsibilities.
- Insufficient community participation in decisionmaking.
- Lack of coordination between brownfields redevelopment policies and regional markets, economic goals, and planning.
- Inadequate funds and funding mechanisms.

These issues are not discrete but overlap and reinforce one another. Participants differed in their opinions regarding which issue or set of issues was most pressing. The following sections discuss the issues and suggest approaches to resolving them.

Uncertainty in Process and Costs

From a developer's point of view, the most frustrating aspect of the brownfield problem may be the lack of clarity as to which actions are required in order to prepare a site for redevelopment, how much time the process will require, and what it will cost. As Michael Freimuth, director of planning and economic development for the city of Bridgeport, Connecticut, noted, "Even when we can define the problem, we can't always define the cleanup. And when we can define the cleanup, we can't always define the cost, because the cost is dictated by a process that doesn't have boundaries to it."

As a result, investors, lenders, and real estate brokers also hesitate to participate in site development when contamination has been an issue. Craig Schelter, executive vice president of the Philadelphia Industrial Development Corporation, observed that the unpredictable

process causes businesses to select clean sites in the suburbs, because "by and large, the businesses aren't [so] big that they have a sophisticated staff or want to pay expensive lawyers to work through that problem."

Even large companies are reluctant to become entangled in the cleanup process. As Bernard Reilly, corporate counsel to E.I. du Pont de Nemours and Company, stated, "We despair being able to cut our liability on brownfield sites, so we've pretty much made a corporate decision that we're only going to lease."

The lack of guidelines for assessing health risks related to the intended use of sites has created credibility problems. In some cases, the extent of cleanup required has seemed excessive and unreasonable. David Feehan, executive director of Detroit Renaissance Downtown and Development Company, highlighted the "need to focus on real standards that relate to real risks," citing the example of Kalamazoo, Michigan, where EPA required the city to spend \$42 million to clean a landfill to a standard that would make its ground-water drinkable, even though it was not used as a water source. These kinds of standards, Feehan explained, make it more difficult to work with businesses, because they "do not see the requirements relating to issues of real concern."

Requirements for cleanup can be set forth as either presumptive or use-based standards. Presumptive standards, which dictate a single standard for the cleanup of a relatively uniform problem, give the owner or developer a clear and predictable set of requirements. They are, however, almost always more expensive to conform to than site-specific standards.

Conversely, use-based standards, which allow for cleanup tailored to the condition and intended use of a given site, may be more reasonable for a specific situation. Michael Freimuth was among those who advocated use-based standards, with provision for future reevaluation when a change in use is contemplated. "We feel that we should be able to use old industrial sites for modern industry, not to clean them to some pristine open-space standard. And if the site does go to some pristine open-space standard in the future, we're prepared and willing to put in covenants on the land to clean it to a higher standard for a new use in the future. But let's get going today," he urged.

However, the tradeoff is time. Making standards more site-specific works dramatically against quick turnover of sites, particularly when community participation is part of the process. Charles Powers, president of the Institute for Responsible Management, pointed out that setting use-based standards complicates the question of how to incorporate community participation, whether that means participation in determining the appropriate use of the site or in setting the cleanup standard.

Meanwhile, although various uncertainties are being sorted out, neighbors of a cleanup site must live with health risks. Warren Howze, then a special assistant in HUD's Office of Community Planning and Development, related his experience working with a project in Florida. "We were told that there was an environmentally contaminated public housing site. It took us 2 years . . . to get some determinations about the nature of the problem and what was dangerous, and you can imagine what the citizens were going through at this particular time. So timeliness is not only an important issue for the developer, but it's also tremendously important when you're dealing with issues of health. If we find out that there's a health issue, we need to bring that to closure with some degree of clarity and certainty to put people's minds to rest."

Liability

Closely related to the uncertainty about cleanup requirements is the question of liability, not only for property owners and developers but also for lenders and for board members of for-profit or nonprofit corporations holding or developing the properties. Liability issues also inhibit lender investment. The key issue is the difficulty of knowing—and being able to document—whether and when the responsibility for site cleanup has been met. Project participants need assurance that they will not be at risk of present or future lawsuits from governments or individuals.

Because the requirements are imposed by various levels of government, participants agreed that when cleanup has been completed, government must provide some security for those who have an interest in the site. At present, the Federal Government provides a release from liability on Superfund sites, once its cleanup requirements have been met. Yet, as Michael Freimuth explained, "A piece of paper from the Feds is not enough to get you through the State clearances. Lending officers, real estate brokers, and investors cannot distinguish between Superfund and non-Superfund situations. They only know it's bad. Until we get clear standards and hold-harmless provisions saying, 'You're not going to be held to a new standard tomorrow,' we're stuck." Eliott Laws noted that EPA recognizes lender liability concerns as a major issue, although statutory action would be needed to make the necessary changes.

States can approve sites that have been cleaned up according to their requirements, but these approvals can be overridden by the Federal Government. Connecticut, unlike other States, has not been hampered by EPA's reserved right to overturn State approvals. Connecticut is unique in that its law allows the State to interpose itself in the transfer of property and assume the liability. Other States have no way to offer liability protection. Edward Parker, director of site remediation for Connecticut's Department of Environmental Protection, described his State's program as a model for dealing with the uncertainties and liabilities associated with site cleanup. Connecticut's urban site remediation program uses bond money to advance State projects and to work with private developers. In those projects, neither CERCLA nor the Resource Conservation and Recovery Act (RCRA) has been an obstacle to cleanup, development, or reuse. Developers receive expedited review of their cleanup plans. Approval of the plans by the State agency overcomes the obstacle to financing decisions, because lending institutions in the State have an official, implicit certification that the site is clean. Lenders are willing to make a business decision that any additional risk encountered, either through CERCLA or RCRA, will be small, and thus are willing to proceed. Moreover, the State will give a release from liability to third-party developers who are not liable through creation of pollution or property ownership.

Private liability insurance programs for cleanup of contaminated sites offer another possible solution to the problem of liability. Scott Bernstein, president of the Center for Neighborhood Technology in Chicago, commented that insurance companies know how to measure and pool risk and how to create insurance programs that respond to pooled risk. If the companies agree that risk is acceptable under certain circumstances, they need to price that risk. Paul Freeman, president and chief executive officer of ERIC Group, Inc., concurred, explaining that his company provides private insurance coverage of cleanup, primarily for commercial sites. In the past year, the ERIC Group has insured 1,000 sites against the liability associated with environmental cleanup. In a number of instances, the company has also created insurance policies that guarantee the cost of remediation on heavily contaminated sites. Freeman noted that mechanisms exist both to quantify the amounts of the owner's exposure to liability and to price that quantification in such a way as to conclude the transaction. The issue is not pricing or quantification, because those can be determined. Instead, according to Freeman, the question is whether the costs can be absorbed and who will absorb them.

Insurance programs can also be tailored to, and funded by, the geographic area that will benefit. Tom Black, senior fellow at the Urban Land Institute, suggested overcoming liability problems through the possible use of publicly underwritten insurance, funded out of the value increment accruing to cleaned sites. Site owners would benefit tremendously if there were some sort of indemnity for new investors or new users. The public sector should facilitate this collective action because:

- It is difficult for private parties to organize such an effort.
- The public has a vested interest in the condition of these sites.

In answer to the question of who should assume responsibility—the owner, the lender, board members of community development corporations—symposium participants agreed that "people who have a stake in what needs to be done, or what will be done, should be the responsible parties." There was discussion about the possibility of creating a "mediating institution" to assume ownership of property that requires extensive cleanup, but discussants concluded that such mechanisms are complex and unnecessary, because the relevant government authority (usually the State) can provide actors who are responsible up to the point of transfer.

Insufficient, Inaccurate Information

An important first step, before encouraging cleanup of a particular site or group of sites, is to determine the real barriers to development. Participants such as Paul Freeman recognized that "environmental issues are not always the barrier. Other factors, such as lack of market demand or the price of rehab, may make a project infeasible." Scott Bernstein, "as someone who cares a lot about environmental justice, community development, and business development," expressed the need for "empirical evidence before we say, 'Let's waive liability,' or 'Let's change risk standards,' or 'Let's do these sweeping sorts of things that may not make much difference at all."

Participants quickly agreed that, although Superfund receives much criticism and needs to be reformed, it is not a major factor in issues related to cleanup. Only a small portion of contaminated sites—about 1,200 of an estimated 20,000 or more—are Superfund sites. Lee Botts, an independent environmental consultant from Gary, Indiana, described efforts by environmentalists, bankers, real estate professionals, local officials, and community residents in northwest Indiana to develop a strategy for dealing with a huge concentration of industrial sites, very few of which are Superfund sites. "Superfund is almost irrelevant," she explained, "not nearly as important an issue as it is perceived in Washington."

Lack of contextual information, on the other hand, *is* an important issue. Cities, developers, lenders, and other interested parties often have little or no information about the number, location, and condition of redevelopable sites in their cities or metropolitan regions. Virtually every sizable older city has clean sites that are lying idle and dirty sites that have not been inventoried. According to Tom Black, cities need to identify those that are clean and those that are not, particularly those that are clean and available. Then the city will know whether contamination onsite or nearby is the controlling factor preventing redevelopment.

Such knowledge is needed to enable decisionmakers to develop cleanup strategies, set priorities that reflect the public interest, and give private developers more complete information about available choices. When sufficient information is not available, the private sector will generally avoid potentially dirty sites. Thus the challenge to the public sector, Toby Clark observed, "is to figure out how to focus the limited available funding on those sites that will make a difference."

James Bush, president of the East Michigan Environmental Action Council, felt that priorities for cleanup should include the recognition that some sites are more clearly related to the national interest than others. According to Bush, the national interest includes welfare reform and a reduction in structural unemployment, the waste of limited capital, and dependence on foreign oil. For example, Michigan funded an analysis that ranked sites according to their relative risk. The risks included sprawl, absence of land use planning, degradation of the urban environment, and high fuel consumption.

Norris McDonald, president of the Center for Environment, Commerce, and Energy, described his organization's approach to packaging information on redevelopable sites in Washington, D.C. The center compiled a survey of pollution sites in a comprehensive document geared toward helping business people, lending institutions, and government agencies make informed decisions. The survey, called *Unfair Share*, lists all polluted sites and includes clean water permits, clean air permits, RCRA sites, CERCLA sites, and unregulated pollution sources such as automobiles and highways. The center uses the document for reference whenever a development issue arises.

Because of the complex technical issues involved in dealing with contaminated sites, most public officials, developers, citizens, entrepreneurs, lenders, and other interested parties need additional education in the subject to enable them to participate in an informed manner. All should have at least a minimum understanding of environmental and economic risks and requirements in order to develop the mutual trust and cooperation needed to take collective action.

Education and training will also be required to create the larger workforce that will be needed for site cleanup and reuse. To that end, cities must examine their education and job training needs and design environmental technology curricula at local community colleges and, with community development corporations, design training programs at the community level. Kevin Gremse of Bridgeport, Connecticut, suggested that HUD's Youthbuild program could provide an appropriate venue for job training in environmental testing and cleanup.

Government Roles and Responsibilities

From both the private- and public-sector perspectives, one of the most frustrating aspects of the brownfields issue is the need to clarify the roles and responsibilities of various participants at different stages of the process. In the public sector, responsibilities and relationships among Federal, State, local, and regional governments must be more clearly delineated, and the activities of the agencies on each of those levels of government must be better coordinated.

Requirements vary from one government entity to another. Lee Botts bemoaned the "lack of a coordinated standard of when clean is clean, according to all the agencies involved." Joseph Reilly, vice president for commercial lending at Chase Community Development Corporation in New York, agreed, saying that "lack of coordinated standards will prevent us from delivering a product." Brenda Richardson, executive director of the Anacostia/ Congress Heights Partnership, echoed similar concerns about Washington, D.C. "We find that many times the local government is not talking to the Feds, and the Feds are not talking to the local government as it relates to Washington, D.C. That's a tremendous problem here for us." To help develop coordinated Federal standards that respond to actual health risks, Dr. Eric Mood of Yale University's Department of Epidemiology and Public Health suggested that EPA, the Department of Health and Human Services, and HUD jointly analyze the risks of potential remedial measures for brownfields.

Federal assistance is fragmented and poorly coordinated. As Warren Howze related, "The greatest frustration is to go from HUD to EPA to DOT [U.S. Department of Transportation] and get different definitions of what a brownfield is. You get different definitions about eligibility and use of funds for particular purposes." He suggested that the process be consolidated—that public- and private-sector applicants for various kinds of Federal assistance to clean up a given site be allowed to file a single, joint application with one Federal agency.

Because the various Federal agencies have independent agendas, they sometimes channel funds in directions that can negatively affect other public goals. Tom Black observed that the Departments of Defense and Energy will spend \$6 billion for military base cleanup, and that the newly available land will compete with the old industrial sites. Black suggested that the Federal Government take a more comprehensive look at the way it allocates the money for land redevelopment.

Participants also recommended that the Federal Government consider the cumulative effects of all of its programs and requirements on the cities—in particular, on intrajurisdictional equity. Black noted that urban governments cannot compete effectively in the market-place when they must deal with environmental cleanup costs as well as the social costs of poverty and immigration problems. The high level of taxes required to meet these needs makes the cost of doing business in the city too high. Black suggested that the Federal Government devise a more equitable means of raising revenues at the regional level. Others, such as Don Iannone, director of the economic development program of Cleveland State University's College of Urban Affairs, believe that part of the answer lies in increasing States' institutional capacities and responsibilities. Currently, States differ in their ability to take specific actions to ameliorate environmental problems. Bernard Reilly noted that these differences cause such difficulties as making CERCLA function in relation to various State programs.

As mentioned earlier, when a State signs off on a site cleanup EPA can override its decisions. Because of the differences in requirements and the threat of EPA overruling State signoffs, many States remain reluctant to proceed with a project without prior EPA approval. Timothy Fields, Jr., a deputy assistant administrator for the Office of Solid Waste at EPA, suggested that EPA and HUD provide technical resources to States with existing voluntary programs and provide seed money and technical assistance to other States to encourage them to develop statewide voluntary programs.

Community Participation

The affected local community often feels slighted in discussions of the redevelopment of brownfields. According to Brenda Richardson, barriers to community participation include lack of flexibility in Federal and State governments, difficulty in gaining access to appropriate officials, and lack of communication with groups that are not politically wellconnected. She commented, "Governments think communities are not very sophisticated, and we aren't intelligent enough to come to the table to understand what this process involves. And we really are, and we really want to come to the table and be part of the process."

Another barrier to community involvement is the developer's belief that it is time-consuming and slows the redevelopment process by adding another layer of risk and uncertainty and increasing overall development costs. Yet, the participants agreed, local residents have an immediate stake in the outcome at a particular site. Carol Andress, economic development specialist with the Environmental Defense Fund, pointed out that "economic and community development decisions have an impact on the environment and on community health, and as an outgrowth of that, the community should be very much involved and integral in deciding how these sites should be reused." She wondered who would decide what is in the public's best interest without public participation.

John Rosenthal, director of environmental affairs for the National Association for the Advancement of Colored People, acknowledged that most land use procedures now in effect not only allow for but often require public participation. Nevertheless, he noted, the public often feels that decisions were made before their participation was solicited. In the long run, Rosenthal said, effective community participation can actually advance the process and reduce the cost. Involving the community builds credibility, trust, and a sense of ownership in the results. It also reduces the possibility of a citizen-initiated lawsuit. Recognizing this need, Superfund has called for much more community involvement. Lee Botts suggested that HUD and EPA work together to assist the local process by involving the community in achieving a successful cleanup and bringing in new development.

Brenda Richardson suggested five ways the Federal Government could invite more effective community participation:

- Notify residents of HUD-assisted housing about contamination in and around their developments and give them information about risk reduction.
- Include the community in the cleanup process through task forces, hearings, and information meetings.
- Hold quarterly collaborative meetings that include Federal officials, the community, and the local government.
- Develop a partnership among EPA, HUD, and the local health department to evaluate health issues on a continuing basis.
- Conduct sensitivity training for Federal officials who work with disadvantaged communities and for residents of communities faced with the environmental issues.

In addition, Richardson suggested the use of a third-party liaison to facilitate communication between the communities and the government. Conversely, other participants maintained that community participation is an issue that must be solved locally—perhaps through the local zoning process—rather than at the Federal level.

Regional Market Context

To enable government and the private sector to set priorities and use limited resources wisely, participants suggested that the cleanup of individual brownfield sites be achieved within the context of regional land use and economic development policies and planning. Market demand may be the strongest motivator for the cleanup and reuse of a particular site. Those sites for which a profitable reuse can be demonstrated are likely to be redeveloped

within the existing framework. For other sites, redevelopment may not be possible or even desirable. Since demand for new development is limited, and not all development is desirable, efforts should focus on development of high quality.

Regional planning can help provide a framework for high-quality development by allocating uses where they are most economically efficient and where they will produce the greatest individual and societal benefits. According to symposium moderator Richard Munson, regional planning must take place on the following three levels:

- Broad regional land use planning.
- Economic development strategy.
- Federal, State, and local policies that do not favor greenfields over brownfields.

Regional land use planning can help steer urban and suburban growth away from the haphazard, uncontrolled consumption of suburban land that we call *urban sprawl*. Sprawl is associated with problems of expensive infrastructure construction, unnecessary consumption of greenfields, inefficiencies in transportation, degradation of air quality, and abandonment of certain areas of the central city. To correct these problems, governments must consider the cumulative impact of the positive and negative incentives they offer which affect investment location decisions. With this in mind, participants noted the importance of looking at the ways in which Federal incentives may encourage sprawl. James Bush commented that "in Michigan, we found that three-fourths of the Clean Water Act money went to extend sewer networks." Regarding competition among sites, Lee Botts noted, "They don't become greenfield sites until the direct and indirect Federal subsidies make them greenfield sites."

A regional economic development and investment strategy would consider the full range of incentives and disincentives that affect economic investment at various locations within the metropolitan area. If cities are to continue to play a vital economic role, the cumulative effect of government programs and incentives must be to stimulate reinvestment rather than abandonment.

For a variety of reasons, including lower land and development costs and lower costs of doing business, market demand for many uses has largely shifted to the suburbs. Don Iannone noted that the concentration of vacant or underused contaminated industrial sites in inner-city locations reflects the restructuring of the national economy and the ways in which land, labor, and capital are trying to adapt and to redefine new roles. From 1980 to 1990, suburbs captured 80 percent of the increase in retail floor space, 70 percent of the increase in population, and 10 percent of the increase in retail sales. In addition, because the uses of information and knowledge are changing rapidly, Iannone went on to say, manufacturers are not likely to return to city sites. However, cities may be able to help remaining manufacturers expand their operations.

Since the cities are no longer capturing the largest share of economic development activity, regional land use planning and a regional economic development strategy are needed to ensure that central cities continue to play an important role within metropolitan areas and that there will be markets for development sites in cities as well as in suburbs. As Lloyd Smith, executive director of the Marshall Heights Community Development Organization in Washington, D.C., observed, "Regional economic development policy should drive this effort. If we conclude that the future is in the suburbs, we will have a different set of policy needs. Where are we going? Who is making the decisions? Where will we need housing? If you have no market for brownfield sites, why bother?" Scott Bernstein agreed, saying "You can create opportunities with the right incentives, streamline all the permits, clean to reasonable standards, but still you must make a case that there's effective demand for all this, that there's a general recognition of the value of cities."

Looking at a region in a more comprehensive manner may highlight hitherto unseen possibilities. For example, according to Tom Black, the locational pattern of unused industrial sites may suggest development opportunities. During the growth of central business districts (CBDs) in the 1970s and 1980s, many industrial areas expanded into rail yards, with the result that many industrial districts developed along rail lines. Black believes that those corridors might be restructured to take advantage of the very strong passenger transit system linking industrial areas to CBDs. Where market demand exists, he sees opportunities for housing, retail establishments, or, perhaps, satellite office development.

Revising Federal policy to encourage regional land use and economic development planning may prove difficult, however, because these functions have traditionally been within the purview of local government. Nonetheless, participants offered a number of suggestions about ways in which regional planning might be instituted. An important regional planning tool now in place is the Intermodal Surface Transportation Efficiency Act (ISTEA). Through ISTEA, the Federal Government seeks to consolidate regional transportation, air quality, energy, and land use policies.

Hopes that regional planning will help revitalize central cities under ISTEA are tempered by the fact that suburban jurisdictions hold most of the power on regional planning boards. According to Lee Botts, "Despite what everybody hoped, ISTEA has been mostly used to extend the suburban fringe." Craig Schelter pointed out that "right now all the ISTEA money that comes to Philadelphia goes to the Delaware Valley Regional Planning Commission. It has a board of 19 people. Philadelphia, which has 40 percent of the region's population, has one vote."

To promote a more equitable balance between cities and suburbs, participants recommended several ways that ISTEA should be reformed. James Bush suggested that ISTEA be strengthened and enforcement mechanisms be provided. He suggested, for example, that ISTEA be coordinated with the sewer program in the Clean Water Act. Were that to be accomplished, agencies could give preference to road projects within existing sewer networks rather than to those that would need additional sewering. Likewise, participants closely scrutinized Federal transportation policy. Noting that transportation spending by Federal, State, and local governments is the biggest nonentitlement, nondefense funding stream still in operation, Scott Bernstein suggested that the National Transportation System, which might be the subject of a major policy debate in 1996, could be made performance based and could integrate broader cleanup goals into its decisionmaking process.

Bernstein also recommended performance-based intergovernmental agreements to guide public investment decisions. He suggested that priority in Federal financial assistance be given to proposals or activities that meet longer term Federal policy goals—for example, reduced travel demand, nondegradation of air quality, and energy efficiency. James Bush suggested that the Federal Government "resurrect the community conservation guidance of the Carter administration—which was intended to promote the revitalization of our urban cores and discourage urban sprawl—as well as the whole gamut of urban policies that considered the development impacts of infrastructure construction, such as the FmHA [Farmers Home Administration, now Rural Housing Service] policy of not doing sewer grants or home mortgage insurance in areas where it would lead to loss of farmlands."

Inadequate Funding

The cost of cleaning up a given site is often too expensive for the development project to bear alone if it is to remain economically feasible. When assistance is contemplated, issues that must be addressed include how much money is needed, who pays and in what order, where the money will come from, and who assumes the risks.

In regard to determining the amount of money needed, participants expressed concern not only with the price of site cleanup but also with cost effectiveness. "As a public policy matter," asked Jill Ehrenreich, director of multifamily product development for Fannie Mae, "does it make sense to redevelop an existing low-income family project at \$193,000 per unit?" Joseph Reilly agreed that "environmental standards are killing cost-efficiency analysis," but noted that "the alternative is a 'dead zone' of no investment and no economic activity."

In further discussions about cost effectiveness, participants cautioned that the full cost of building in the suburbs must be calculated, including new highway construction and sewer capacity. As Lee Botts put it, "Consider direct and indirect subsidies on greenfields sites." In many cities, new infrastructure construction will not be required when vacant or underused areas are redeveloped.

The question of who should commit money to the project first, the public sector or the private developer, is another important issue. As Michael Freimuth related, "We're in a bit of a catch-22. Public agencies don't want to invest money until the private sector has. The private sector doesn't want to until the public sector is already in and done, and when it comes to brownfields, that's the biggest problem." Yet public money is scarce at all levels of government, since agencies' myriad interests place competing demands on dwindling public funds. As Warren Howze explained, "Nobody has money, particularly if it's an issue that has to deal with a segment that's not generating the money."

The potential for private-sector participation in funding is also limited because, even though cleanup costs and risks can be quantified, the private sector cannot price *political* risk. For example, Jill Ehrenreich explained that more private capital could be generated if Fannie Mae assumed more of the long-term financing risk. But Fannie Mae cannot underwrite the risk that public policies may change and subsidies may be terminated.

Suggestions for the funding of site cleanups focussed on both process and resources. Recommendations for expanding the funding for cleanup include:

ISTEA. According to Scott Bernstein, "You can use transportation money to try to address the brownfields issue using ISTEA flexibility. And right now, with no change in legislation and no change in funding, you could use the planning framework to review the environmental impacts, or relative environmental impacts, of greenfield versus brownfield development."

Environmental lottery. Don Iannone suggested a national environmental lottery to raise public capital, although he acknowledged that such an action would probably be resisted by the education community, which has grown accustomed to receiving those funds.

Matching funds. Edward Parker recommended that the Federal Government match Statecommitted funds on a dollar-for-dollar basis. He observed that when Connecticut started its program a few years ago no money was earmarked for site remediation, so the State raised \$25 million on the bond market. Federal matching funds would reward and encourage that kind of effort. **Credit enhancements.** Scarce Federal resources could be used as credit enhancements such as loan insurance or guarantees to mitigate lenders' risk—rather than as matching funds. The dollar outlay would be considerably lower but, as Jill Ehrenreich noted, matching funds could generate a tremendous amount of State and private investment.

Section 108 loan guarantees. Participants noted that HUD has a substantial (up to \$2 billion) unused Section 108 loan guarantee authority. The obstacle to distributing those guarantees is the cities' fear of jeopardizing their Community Development Block Grant (CDBG) entitlement funds if they invest a loan guarantee in a project that fails. HUD must allay these fears so that cities will use the Section 108 money, help cities understand how to mitigate credit risks, and clarify the liability issues for cities that use loan guarantees for site cleanup.

Targeted industrial revenue bonds (IRBs), municipal bonds, and Community Development Block Grants (CDBGs). James Bush recommended that use of IRBs be allowed only in transit-accessible areas and not in greenfields, with some focus on cleaning up brownfield sites. Similar changes could be made to tax-free municipal bonds, targeting them to existing rather than new communities. Block grants, too, should be refocussed in order to promote the renewal of urban communities—the program's original purpose.

Casino money. States that allow gambling could allocate a percentage of their casino-tax revenues to urban redevelopment.

Real Estate Investment Trusts (REITs). Tom Black suggested the use of REITs tied to pension fund financing as a possible way to provide capital for projects requiring cleanup while avoiding the lender liability issue. For example, as part of the Rebuild L.A. effort, a group in Los Angeles has established a special-purpose urban REIT linked to CALPERS, the State pension program. The trust will provide an initial funding of \$300 million to invest in Los Angeles. Agreeing that REITs could be focussed on environmentally challenged properties, Don Iannone suggested that "with the right kinds of changes in Federal tax law, you could make it attractive for both individual and institutional investors to begin to put some money into some well-crafted portfolios containing these properties."

Districtwide and value-capture approaches. Recognizing that real results will come from the redevelopment of whole areas within cities rather than individual sites, participants suggested several district approaches. Cleanup and redevelopment of specific areas could be financed, according to Tom Black, through the creation of special benefit/taxation districts financed out of the incremental value captured by abating contamination of all of the sites in the area. Such an approach would be particularly useful in encouraging cleanup of mildly contaminated sites whose redevelopment value is limited by their proximity to dirtier ones. Cleanup could be accomplished through a quasi-public development corporation or a public redevelopment authority, which could also clear clouded land titles. Black believes that all property owners would be willing to contribute to the cleanup of all of the sites because all would benefit. Capturing the enhanced value could be accomplished through a Tax Increment Finance approach, property tax revenues, a benefit assessment, or direct contributions similar to homeowner association assessments.

Similarly, an environmental enterprise zone program could use the district concept to capture value for a region, especially if the program had "real teeth." Scott Bernstein recommended the establishment of a regional "representatively governed planning framework with capital access." The first requirement would be to demonstrate that environmental restoration on a regional scale adds value. "Pricing would be similar to the process followed by a utility or a big tax and financing district that is trying to figure out how to do value capture . . . on a scale that makes sense."

As it went through the cleanup process, the State of Michigan found ways to generate cash by tapping the increment from income taxes generated by the increased number of jobs. According to David Feehan, the money was then used to fund additional cleanups.

Investment tax credit. In the search for new resources, Bernstein cautioned, "It's not going to be mostly, let alone exclusively, public capital." He suggested the use of an investment tax credit that would make investment in brownfields more attractive to private entities. "Instead of asking who will bear the burdens, the question will be who will get to use the tax credits first, second, and third." Bernstein advised that, to implement the idea, economic models supported by a system to enable them to achieve economies of scale will be needed. Comparing the use of an investment tax credit for environmental cleanups to use of the Low Income Housing Tax Credit (LIHTC), he noted that an equity fund would be needed to pool investments, as well as an intermediary system of specialized financial institutions capable of evaluating and funding individual projects. In the case of LIHTC, the intermediary concept was developed and then replicated in a number of cities. Research by HUD or other Federal agencies would be needed to develop the application of this concept to brownfields cleanup.

Procedural Recommendations

Participants also offered several suggestions for improving the site cleanup process.

General Suggestions

Land Banks. Public land banks could be used to foster redevelopment of brownfields, especially on a neighborhood basis. This approach would also aid in the assembly of tracts of land large enough for economic development. According to Don Iannone, "Cities create a land bank by taking distressed properties or tax delinquent properties that become available and rolling them into a land bank, which may or may not have a strategy to guide the future use of those properties. Most land banks are not well run and tend to sit on properties. I'm suggesting that we define specifically how to pick up brownfield properties and put them in that bank, with a development concept that would guide the future use of that property."

Receiverships. To enable transfer of properties to responsible ownership, Scott Bernstein suggested an environmental receivership program. Such a program would create institutions similar to housing receiverships that specialize in the necessary holding, packaging, and disposition of property.

Models. To facilitate the sharing of experiences among cities, Iannone suggested the development and dissemination of workable approaches to guide the way money from various sources can be obtained and put to use. The models should relate the financial tools—public and private—to a series of specific situations. Similarly, Craig Schelter recommended that public policies and forms of assistance make use of lessons already learned. "To encourage creative solutions and 'planning by reasonable anecdote,' EPA should agree to do two no-sue agreements in every region in the country and, after a few years, we can evaluate the success of those approaches and develop policies based on those successes."

Recommendations for HUD

In addition to the recommendations above, participants suggested a number of ways that HUD could help foster redevelopment of brownfields through research and related activities. Their suggestions included:

Identify problems. Determine the types of development that could take place in innercity areas, competing market opportunities and other barriers that prevent such development, and nonenvironmental concerns that must be considered. Which factors determine the possible types of appropriate development? Are environmental factors the real problem? What institutional changes could make development more attractive?

Provide information. Inventory all HUD properties that contain CERCLA sites. Consolidate HUD databases and environmental information on the Internet. Identify ways that information technology can help control costs and hasten the cleanup process.

Identify additional programs. Identify Federal programs that promote environmental cleanup and economic development and find ways to coordinate these efforts so that development occurs once cleanup is accomplished. Create a mechanism to share information about relevant technology developed by Federal agencies for other purposes, such as the Bureau of Mines' technology for mine cleanup.

Identify funding sources. Identify secondary market strategies that could be used to enhance capital access and provide more liquidity, stability, and security. Provide information on alternative investment tax credit program options and other types of incentives for attracting private investment. Include ideas on the kinds of institutions that would be needed to implement the programs efficiently.

Research job creation. Identify the kinds of jobs created as a result of site cleanups and creative ways to connect jobs and development. Explore the use of programs such as Youthbuild to link job opportunities and community residents. Reward demonstration projects that show what kinds of jobs are generated by auditing, engineering, and technical work, as well as construction, and what kinds of job linkages could be made during the cleanup process.

Develop brownfield policies. Join other Federal agencies—perhaps through the White House Task Force on Sustainable Development—to examine ways of translating sustainable development ideas, as they apply to brownfields, into policies.

Identify technologies for residential redevelopment. Work with EPA to determine which technologies are appropriate for the redevelopment of residential communities and other areas. Encourage provision of publicly funded housing in the context of regional development.

Study the DOT experience. Establish a working group to study DOT's experience through the Federal Transit Administration, the Federal Highway Administration, and the Federal Railroad Administration—in responding to the executive order about innovative infrastructure and financing, since the issues involved are similar. **Resolve equity issues.** Convene an interagency group to resolve metropolitan intrajurisdictional equity issues. Consider such incentives as waiving certain matching grant requirements; streamlining applications for projects; providing new, nonresidential secondary markets to purchase loans, thereby furnishing capital for additional lending, packaging loans into securities for sale to investors, and supplying other benefits; and creating a central mechanism to pool the incentives and use them to leverage capital.

Provide security for vested interests. Identify possible ways that government could provide assurances or security for parties that have differing interests in a particular site.

Research cost-efficiency factors. Conduct research on the use of location efficiency factors to calculate the advantages, in dollars, of central-city locations compared with other locations in the region. One objective would be to develop a program that recognizes location efficiency as a value and a means for setting priorities. Such a program could form the basis for changing underwriting standards and enhancing the value of credit mechanisms without resorting to credit enhancements. Location efficiency ranking could be applied to both residential and business lending and would be compatible with existing banking programs. (An analogous measure, refined over the past 20 years, is that of energy efficiency.)

Determine common problems. Identify and research recurring situations and the potential economies of dealing with common problems at a central level.

Provide forums for problem resolution. Help create and support regional forums or workshops on strategies for brownfield reuse at which interested parties can come together to resolve some of the issues.

Conclusions

HUD's first environmental symposium, focusing on efforts needed to clean and redevelop the Nation's contaminated urban industrial sites, stimulated a number of specific suggestions. Participants offered ideas about ways to improve existing programs, develop new mechanisms, and design research that would bring better understanding to the cleanup and redevelopment process.

Discussion centered on ways to establish a system guided by better information resources, with a representationally governed regional planning framework and clearly redefined Federal, State, and local government roles. The system would include more effective community participation, better financing alternatives (including specialized financial institutions, district funding mechanisms, and incentives to attract private-sector capital), job training and linkages to ensure the availability of a trained work force, and models to demonstrate how to put the various components together successfully. Participants concluded that both a regional investment framework and a site-by-site development strategy would be needed. For each, general principles should guide specific actions.

Although the need to establish market demand for reuse of sites was discussed in terms of individual sites and central cities in general, more attention must be focussed on the way to revitalize and generate market demand for specific areas within cities. For redevelopment to be significant and sustainable, a critical mass of economic vitality must be created. This mass must be self-sustaining and must stimulate additional investment nearby. Therefore, cities must find ways to incorporate the system for correcting environmental contamination into economic development and revitalization strategies for specific neighborhoods.

In addition, despite determined and well-intended efforts, there will be some contaminated sites for which no market exists—nor can one be created. Cities must find the best way to deal with those sites in order to mitigate health risks and prevent the worsening and spread of deterioration and blight.

Author

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