

Coming Clean for Economic Development

by Elizabeth Collaton and Charles Bartsch

Virtually every city in the nation's older industrial regions, regardless of size, grapples with the challenge of unused manufacturing facilities and other industrial sites. These properties include the shuttered steel mills in western Pennsylvania and Chicago's southeast side; mining operations in Montana and Arizona; closed timber mills that dot many small towns in Washington and Oregon; and declining defense contractors, metal plating factories, machine shops, and chemical plants in communities from Michigan to Mississippi.

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

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

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

sites — characterized as "brownfields" — generally are easier to clean and offer greater opportunities for reuse.

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

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

Environmental Justice

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

Simply put, these communities seek a new paradigm of clean communities and clean jobs, a message similar to

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

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

Landfills, waste transfer stations, incinerators, or other intermediary processing facilities often are sited proximate to communities of color. Experts differ on how this relationship evolved. A recent study based on 1990 census data shows that nonwhites are 47 percent more likely to live near hazardous waste treatment, disposal, or storage facilities than are whites. The 1994 report, sponsored by the National Association for the Advancement of Colored People, the United Church of Christ, and the Center for Policy Alternatives, shows that the number of nonwhites living near these sites has increased from 25 percent in 1987 to 31 percent in 1994. Unique challenges in the selection of remedies, cleanup standards, and future land use in these communities

must be confronted.

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

The trend in brownfields policy to tailor cleanup plans to future land use raises anew the issue of zoning for affected communities. In cities without zoning laws, such as Houston, Texas, the interests of industry and an increasingly aware public continue to clash, as residents try to cope with contaminated properties and businesses try to move away from community opposition. Federal and state officials acknowledge that special arrangements need to be established in situations where residential and industrial properties abut. The Environmental Protection Agency's new Prospective Purchaser Agreement, for instance, requires the agency to consider the benefits of jobs created as a result of cleanup and redevelopment, and the potential costs of further environmental contamination caused by continued operation of industry in a mixed-use industrial/residential area. Environmental justice advocates see in this flexibility some opportunity to inject discussions about environmentally sustainable enterprises occupying former brownfields next to residential areas, or of converting past industrial properties to green space or non-polluting commercial operations.

While EPA has been the lightning rod for complaints from local residents about cleanup decisions and results, the process most often has broken down at the local level, in real neighborhoods and cities. In response to this problem and anticipating its impact on the brownfields program, EPA recently sponsored five public meetings through its National Environmental Justice Advisory Council.

Job Development and Training

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

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

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

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

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

of course development. HMTRI suggests that community colleges try to tap into state programs as well as EPA's planning grants.

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

Other Tools Available to Help Level the Playing Field

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

As millions of Americans flee urban centers and sprawl into undeveloped areas, economic development

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

The human costs include inner-city crime, unemployment, poverty, and exposure to contamination. From an environmental perspective, these trends blight urban areas and threaten sensitive ecosystems. The abandoned steel mills ringing the southern coast of Lake Michigan, for instance, contain unchecked pollution that harms Great Lakes water quality and, hence, the drinking water for 28 million people living in the Great Lakes Basin.

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

Transportation Planning

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

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

- the consistency of transportation planning with applicable federal, state, and local energy conservation programs, goals, and objectives;
- community long-range plans detailing future transportation objectives, including economic development projects;

- the need to relieve congestion and to prevent congestion from occurring where it does not yet occur;
- the likely effect of transportation policy decisions on land use and development, and the consistency of transportation plans and programs with provisions of all applicable short- and long-term land use and development plans; and
- the overall social, economic, energy, and environmental effects of transportation decisions.

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

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

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

Of importance for brownfields redevelopment, these pollution control requirements are more stringent for new construction, including construction in greenfields, than for

modifications at existing facilities or for new construction in urban areas. In the latter two cases, "offsets" in emissions levels can be negotiated among polluting facilities to avoid an overall net increase in emissions allowable in that area.

The CAA goal of "prevention of significant deterioration" of air quality is targeted at keeping clean air areas clean. According to some experts, however, the legal threshold for proving the potential for "significant deterioration" is so high that a proposed facility or development in a greenfield would need to operate at unrealistically dirty levels in order to trigger the regulatory constraint.

Local government familiarity with these CAA regulations is inconsistent across the country, leading to widely diverging views of appropriate development priorities. EPA has proposed numerous steps that local governments could take to improve air quality (and possibly receive CAA credits) and to increase urban development including:

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

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

Open Space Preservation Efforts

Brownfields present a unique opportunity to rebuild from the ground up this nation's urban areas and abandoned, inner-ring suburbs. They offer the chance to design cities that integrate work, housing, and recreation through high-density, mixed-use development, and plenty of open space. After decades of suburban and outer-fringe development, the growing concern for brownfield reuse can level the playing field and offer incentives for businesses and residents to relocate in already developed areas. One key benefit is the

long-term preservation and conservation of open space. The value of open space to a community should not be underestimated, argues the Trust for Public Land, an organization that purchases land outright or encourages citizens, through bond issues, to put land into public ownership.

The inventory of sites potentially available for cleanup and redevelopment often outstrips the city's or region's needs in terms of projected growth in employment and economic activity. For example, an inventory of Union County, New Jersey, showed that redevelopment of just 10 percent of the 2,500 acres available for industrial activity would meet the county's projected short-term employment growth. For this reason, the Regional Plan Association, which conducted that inventory, engaged local environmental organizations and state and local officials in a planning process that incorporates wetlands restoration and ecologically sensitive waterfront redevelopment.

Portland, Oregon, voters in spring 1995 approved a \$135-million open spaces bond to preserve about 6,000 acres of land in and around the city, as part of the Metro Government's Greenspaces Program. Part of the strategy involved informing low-income and working-class voters about specific park proposals situated in their communities.

In Bridgeport, CT, economic development officials believe that a mix of development options — including industrial, commercial, residential, and open space — can show affected city residents the positive aspects of brownfields reuse. Local opposition to the redevelopment of an industrial site (due to concern over cleanup standards or the future operation of the site itself) may be tempered, in some cases, by additional proposals to create parks and open space in the same neighborhood.

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

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