

# Strategies for Promoting Brownfield Reuse in California

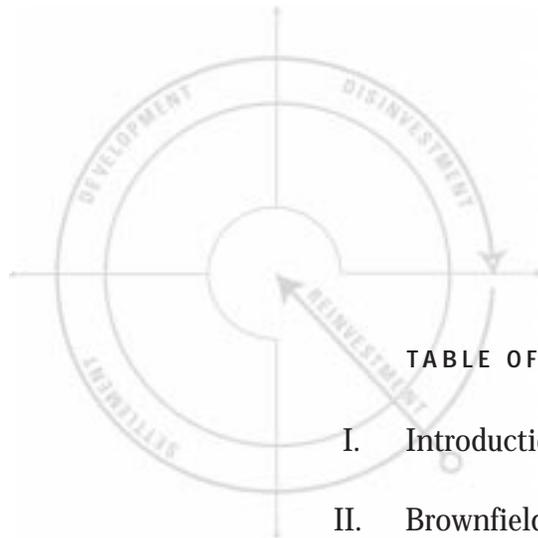
## A Blueprint for Policy Reform

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on financing issues*

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# Foreword

The recycling of land and buildings in urban areas is critical to redirecting growth from the urban fringe to its core. The threat of toxic contamination (real or perceived) in sites known as brownfields represents one of many obstacles to land recycling; it also tends to encourage development in pristine greenfield sites.

Brownfield sites constitute an estimated 5 to 10 percent of America's urban land area. In California, the figure approximates 300,000 to 600,000 acres, much of which is recyclable land close to urban centers and serviced by roads, utilities, and public services.

Encouraging the redevelopment of brownfields requires overcoming obstacles unique to sites with actual or perceived contamination, such as liability risk, regulatory uncertainty, difficulty finding financing, and the need for informed community involvement in planning. Over the past few years, several states have tried different approaches to contending with these issues, learned valuable lessons, and ultimately developed successful new tools and strategies that are now stimulating redevelopment, housing, and new jobs. Many have implemented comprehensive laws and programs that constitute a coordinated and meaningful approach to brownfield redevelopment. California is not one of them. But it has the opportunity to learn from their experience.

In this report, we provide an analysis of how California brownfield programs are – and are not – working, and recommend badly needed state-level reforms. To do this, we review some of the programs from other states that have successfully encouraged brownfield reuse. The recent failure of the California legislature to reauthorize the state Superfund law in effect offers the opportunity to start with a clean slate and incorporate the best of these approaches into California's land use policy. We hope this report will provide a focus for dialogue between environmental and industry interests aimed at encouraging and facilitating land recycling and brownfield redevelopment in California.

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### **Author's Note:**

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#### California's 1981 Superfund Law Fails to be Reauthorized

California's Superfund law – the Carpenter-Presley-Tanner Hazardous Substances Account Act of 1981 (Chapter 6.8 of the Health & Safety Code) – is the primary statute guiding cleanup of contaminated sites, including brownfields, in the Golden State. It is scheduled to sunset on January 1, 1999. For nearly two years, numerous constituencies, including state officials, industry representatives, and environmental organizations, have been working to reauthorize the law. Their challenge – to craft a bill that not only extends the law's sunset provision but meets the needs of disparate interest groups – proved daunting, and their efforts ultimately were unsuccessful. The key Superfund reauthorization bill, AB 851 (Bowen), failed passage before the end of the legislative session.

The result is that core elements of the Superfund program, including liability provisions, cleanup requirements, and cost recovery provisions, will cease to exist as of January 1999. (In contrast, the key provisions of the federal Superfund law remain in place despite the fact that reauthorization has been stalled since 1994; what has expired in the federal program are the taxes, previously levied on chemical and petroleum companies, that feed the actual "Superfund.")

What does this recent legislative development mean for cleanup of contaminated sites in California? Many staffers and consultants will be struggling to answer this question in the coming months. There are several possible scenarios. When the legislature reconvenes in January 1999, it could pass emergency legislation reenacting Chapter 6.8 of the Health & Safety Code. Alternatively, the DTSC could continue to order and oversee cleanups under other statutes, such as Chapter 6.5 of the Health & Safety Code (the state equivalent of the federal Resource Conservation and Recovery Act). However the extent to which the department can use Chapter 6.5 to order the full range of cleanups remains unclear. Finally, the DTSC should be able to continue pursuing cleanup under the *federal* Superfund statute (department officials are still exploring whether their authority to do so remains intact).

Certainly more cleanup responsibilities might be shifted to the regional water quality control boards, whose authority to oversee cleanup activities under the Porter-Cologne Water Quality Control Act remains unchanged (this statutory authority is limited to hazardous substance releases that threaten surface and ground water resources). At a minimum, however, the present state of legal uncertainty will significantly slow the pace of cleanups across California.

While the state's Superfund policy debate is temporarily quelled, it is far from over. When the legislature reassembles, it will continue to examine many of the issues debated earlier this year: Should the state's 1981 Superfund law be reenacted, and if so, what statutory changes should be made? Should a new and completely different cleanup law be contemplated? Can the state "get by" without having a formal Superfund law at all? And most importantly, to what extent are industry and environmental groups willing to be flexible on certain pivotal issues?

Whether the Superfund law is reauthorized, amended, or scrapped entirely, this report remains on target both in terms of the broad policy themes discussed and the legislative recommendations set forth. Ironically, the demise of the Superfund law may present California legislators with a unique opportunity to start with a clean slate and draft smart, new brownfields legislation that draws on the best programs from other states. Doing so, however, will require that industry and environmental groups find common ground on certain pivotal and highly inflammatory issues. This is a formidable task - but one that state decision makers must take on - in order to revive inner cities, slow the steady advance of urban sprawl, and generally promote sensible land use planning in California.



# I. Introduction

Phil Schemmeister



The former Pemaco chemical plant site, Maywood, California

**“We continue to abandon people and investments in older communities, as development leapfrogs out to fringe areas to accommodate another generation of low-density living.”**

– The Bank of America et al, *Beyond Sprawl*, 1995.

As the turn of the century approaches, California is witnessing a period of economic growth reminiscent of the Gold Rush 150 years ago. Fueled by the promise of high-paying jobs and boundless opportunity, newcomers are flooding into the state. Analysts predict the current population of 32 million will swell to 50 million by 2025<sup>1</sup>. In this same period, the population of California’s Central Valley – the country’s most prosperous agricultural region – is expected to triple, leading to the conversion of more than one million acres of prime agricultural land into housing subdivisions, shopping malls, and new highways.<sup>2</sup>

As California’s cities balloon outward, many of the urban areas left behind spiral into deeper physical and economic decline. The result is an expanding “donut city” – one that thrives at the perimeter but is devoid of opportunity and investment at its core. “We continue to abandon people and investments in older communities,” the Bank of America noted in 1995, “as development leapfrogs out to fringe areas to accommodate another generation of low-density living.”<sup>3</sup>

A cursory look at California’s metropolitan areas illustrates an important impact of this kind of growth: scores of once-thriving industrial and commercial facilities – commonly known as brownfields – now sit idle or abandoned, draining surrounding neighborhoods of vitality. Because brownfields often possess low levels of contamination (real or perceived), an array of legal, regulatory, and technical concerns preclude smooth redevelopment. Fearful of costly environmental cleanups, owners often choose to not investigate or sell their properties, deciding instead to simply fence them off and pay property taxes in perpetuity – a practice known as “mothballing.” Other brownfields revert to city ownership due to tax delinquency. Many sit idle for years unless willing buyers come forward.

Why have brownfields become a major phenomenon in California? They are symptomatic of larger forces at work: massive scalebacks in the aerospace, defense, and timber industries, the closure of military bases, the steady flight of jobs and housing to newer suburbs. The recent corporate downsizing trend

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## Brownfields: What Are They?

The U.S. Environmental Protection Agency (EPA) has defined brownfields as “abandoned, idled or underutilized industrial and commercial sites where expansion or redevelopment is complicated by real or perceived contamination that can add cost, time or uncertainty to a redevelopment project.” The federal Office of Technology Assessment adds that brownfields tend to be poorly located, have old or obsolete infrastructure, and feature other intangible factors linked to neighborhood decline. All pose obstacles to redevelopment.

State and federal agencies create public lists of only those sites that fall within certain categories; many obsolete and privately owned properties do not make it onto such lists. Nor do “residential brownfields” – older public housing projects and slum apartments that may not be contaminated, but which are nevertheless perceived to be impaired. Most brownfields can be found in inner cities and older suburban areas, although many rural facilities, including a large number of closed timber mills and defunct mining operations, are also considered brownfields.

A broader definition of brownfields might be: residential, commercial, or industrial land or buildings in already-developed urban, suburban, or rural locations which have been passed over for development or redevelopment due to actual or perceived contamination of the soil, water or structure, or because of intangible factors related to the site’s location.

Greenfields, in contrast, are undeveloped lands on the outskirts of metropolitan regions that offer prime targets for future development. Most development occurs in greenfields because it is so much easier to do, and because many public transportation, housing, tax, and insurance policies support and subsidize it.

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has created a demand for cheaper and more adaptable new buildings in suburban areas, rendering older urban ones obsolete.<sup>4</sup> These factors are compounded by the specter of laws governing the cleanup and transfer of sites with hazardous substances – laws that have cast a chill on real estate transactions involving environmentally impaired property.

Left unaddressed, brownfields pose lingering public health threats, exacerbate neighborhood blight, and serve as magnets for drug dealing and other criminal activity. They typically generate little if any local tax revenues, causing area schools and public services to suffer greatly. When brownfields languish for years, the surrounding neighborhood eventually begins to erode as well – a process that is often characterized by the deterioration of older infrastructure, such as roads and water and sewer lines.

The trend in California and elsewhere has been to leave these struggling areas behind and push outward to ever greener pastures, installing new infrastructure and schools in emerging communities while turning our back on existing ones. This pattern is not sustainable from an economic or environmental standpoint over the long haul.

In recent years, the plight of brownfields has captured the national spotlight. At every level of government, it seems, there is a growing recognition that through brownfield redevelopment, we can begin to chip away at a host of pressing and seemingly entrenched urban problems – crime, poor housing, unemployment, poverty – while also helping to curb the pace of urban sprawl.

California cannot afford to stall on this issue. The Golden State’s capacity to control sprawl and revive cities will largely depend on its ability to channel investment into existing urban cores. A U.S. Conference of Mayors survey of 74 cities revealed that the land and infrastructure (collectively) present today could absorb an

additional 2.5 million people, a finding that reinforces the notion that existing infrastructure is not only available for brownfield development, but that such development can significantly contribute to the preservation of farmland and open space.<sup>5</sup>

The U.S. General Accounting Office reports that there are roughly 450,000 brownfield sites nationwide. Although typically associated with the more heavily industrialized “rust belt” states in the Northeast and Midwest, brownfields are peppered throughout California. Estimates vary considerably – from 38,000 to 93,000 sites – but regardless of the true number, the challenge is formidable.<sup>6</sup> San Francisco alone hosts 5,000 to 15,000 idle brownfields, depriving the city of \$16 million to \$100 million in tax revenues.<sup>7</sup>

### Key Obstacles

Over the decades, numerous factors have rendered brownfields unworkable for developers and lenders. The number one problem, of course, is the threat of toxic contamination, which unleashes a host of related risks and legal uncertainties. The four key obstacles, discussed in greater detail in the coming chapters, are as follows:

- **Liability concerns.** The law at the heart of the California brownfields debate is the Superfund law – the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) – and the equivalent state statute passed in 1981. These laws in broad terms hold site owners and operators liable for the cost of a cleanup, regardless of whether or not they actually polluted the site. This liability scheme has proved highly successful in some ways, forcing responsible parties to acknowledge and pay for their pollution. But a major side effect has been that real estate transactions nationwide involving environmentally contaminated sites (whether the contamination is real or perceived) have virtually ground to a halt. While the U.S. EPA

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### Job Creating Investments

*Are pushed from older communities by:*

- Highly visible concentrations of poverty
- Low-achieving, high poverty schools
- High or rising crime rates
- Falling tax base, high tax rates
- Falling home values
- Polluted, costly industrial sites
- Low levels of new public investment

*Are pulled to developing communities by:*

- Rising median incomes
- High-achieving, low-poverty schools
- Low crime rates
- Rising tax base, lower tax rates
- Cheaper new home opportunities
- Rising home values
- Clean, cheap industrial sites
- High levels of new public investment

Source: Henry Richmond, *Regionalism: Chicago as an American Region*, December 1995.

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and many states, including California, have enacted specific laws and policies to reduce the threat of liability for prospective purchasers, the overwhelming question remains: Are these assurances enough? Or do federal and state Superfund laws require an overhaul?

- **Confusing and complicated regulatory environment.** Parties interested in a site often need to work with multiple state and federal agencies, as well as local authorities, to obtain permits and zoning approvals. This daunting and confusing process can extend the time frame for a project considerably, consequently raising costs and threatening the viability of the project as a whole.

- **Unclear cleanup standards.** Due to technical limitations and cost considerations, California, like many other states, no longer requires all cleanups to meet residential-level standards. In many cases, the California Environmental Protection Agency (Cal/EPA) allows parties to tailor the degree of cleanup to the site's intended use (which is frequently industrial). As part of the reauthorization of the state Superfund law in 1998, industry groups were pushing to have this concept of risk-based cleanups – cleanups tailored to end use – codified into law. Environmental and community groups were arguing that risk-based cleanups threaten public health and limit long-term land use choices for communities. From a policy perspective, the main question was: should state law remain unchanged, with officials allowing risk-based cleanups on a discretionary basis, or should the legislature rewrite the law to expressly allow for risk-based cleanup and outline procedures for its use? The inability of state Democrats and Republicans to agree on this issue was one of the main factors that derailed Superfund reauthorization this year.

- **Difficulty obtaining financing.** Costs associated with brownfield projects can be significant, running 20 to 60 percent higher than comparable projects in greenfield locations. Sometimes cleanup costs alone exceed a property's market value. Developers must struggle with banks reluctant to make loans on environmentally impaired (real or perceived) property to cover site assessment and remediation work. To render such deals viable, the public sector must step forward and bridge the financing gaps. Unfortunately, many California cities find themselves ill-prepared to do so. This leaves the state in a critically important position. The good news is that there is strong bipartisan support for

brownfield financing; the bad news is there is not a readily identifiable, politically viable source of money to fund brownfield activities.

### **Other Key Obstacles**

Other obstacles impeding brownfield cleanup and redevelopment include:

- **Lack of information about site environmental conditions.** A developer can invest tens of thousands of dollars to determine what lies under the ground before even committing to a project. The prospect of this type of potentially fruitless investment alone discourages many potential players. Importantly, when contamination is discovered, it in many cases can be cleaned up cheaply and quickly. One study of 13 brownfield redevelopment projects revealed that remediation costs add only 10 to 15 percent to project cost.<sup>8</sup> Of course, remediation costs can far exceed estimates in some cases, as well. As it stands, developers cannot be certain what degree of cleanup they will face when initiating a brownfield project.

- **Market factors.** The location of many brownfield sites – distressed urban areas – can significantly deter redevelopment. Crime, safety, absence of a skilled local labor force, and poor quality schools are just a few of the concerns developers may have. To attract investment, a community must galvanize interest and cooperation among civic groups, public officials, and local businesses to establish crime watch programs, clean up the neighborhood, or do whatever else is needed to make the neighborhood attractive and stable. In addition, brownfield deals are most successful when they occur in the context of broader community revitalization – in other words, not just one brownfield project, but as part of a larger area transformation.

- **Reluctant sellers.** Even when a developer expresses interest in taking on a brownfield project, the owner may be reluctant to sell. Exactly who is responsible for the cleaning task may be unclear. In some cases, an owner will conclude that it is both cheaper and easier to “mothball” a site – fence off the property and pay property taxes in perpetuity – than undergo the potentially costly site assessment and cleanup required for a sale.
- **Concerns about community opposition.** Residents living close to a brownfield site may oppose a project, raising the specter of additional delays and costs. Developers can help avert this problem by involving the community in decisions about the site at the outset. Nevertheless, at a typical greenfield site, there often is no organized or vocal community living nearby to question a proposed project – a fact that makes these sites imminently more attractive to developers.
- **The lure of greenfields.** One of the most significant impediments to brownfield reuse is the broad appeal of suburban and rural greenfield locations. Most developers, if given the choice, will locate a project in a greenfield over a brownfield. Changing this equation demands that the public sector find ways to make brownfields more attractive (cheaper and easier than they presently are to develop) while simultaneously making greenfield development less attractive (more expensive and difficult to develop). Until such a realignment takes place, brownfield sites will remain at a distinct disadvantage.

While there are significant challenges associated with brownfields, in many cases these sites feature distinctly attractive elements: access to utility, sewer, and water lines, and proximity to existing roads, highways, and public transit (although the immediately surrounding area may be in decline). Many sites are located near

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## Mission Bay Project, San Francisco

The San Francisco Bay Regional Water Quality Control Board is expected to give final approval to the 300-acre Mission Bay redevelopment in San Francisco late in 1998. The development is slated to net 28,000 area jobs. The new biomedical research campus for the University of California at San Francisco alone will draw an estimated 9,100 jobs into the community. The redevelopment as a whole will create 1,700 affordable housing units, provide more than 40 acres of public open spaces and parks, and provide a public school and police/fire station.



Aerial view of the current Mission Bay project site



Artist's rendering of the proposed Mission Bay redevelopment

**Despite the efforts of state agencies and the legislature, the brownfields program in California seems more like a “patchwork of solutions” than a multi-faceted, coordinated program that sufficiently meets the needs of developers.**

downtown areas that are bustling with shops, offices, and other amenities. These properties often adjoin desirable waterfront locations. Viewed with these attractive features in mind, some developers are beginning to view brownfield sites and dilapidated buildings as untapped gold mines.

### **The Superfund Context**

The call for action on brownfields started at the federal level – primarily because the main barriers to site reuse stem from the federal Superfund law. Beginning in 1993, the U.S. Environmental Protection Agency (EPA) launched a series of initiatives to encourage brownfield reuse within the existing Superfund framework. First, the agency removed from the federal database of contaminated sites 28,000 properties that were determined to need no further cleanup. It then clarified liability risk and cleanup requirements through a series of guidance documents, and fostered job training initiatives near brownfield sites.

Most notably, the agency has awarded upwards of \$28 million in grants (between \$100,000 and \$200,000 each) to 157 cities, towns, states, counties and tribes in order to assess environmental conditions at brownfield sites. It also has begun awarding cities \$350,000-grants to capitalize revolving loan funds designated for cleanups. And in March 1998, the Clinton Administration announced the selection of 16 “Showcase Communities” which will receive more than \$28 million from an array of federal agencies. This money will be used to help revitalize these communities, with brownfield redevelopment being a key component in the process.

Brownfield cleanup efforts are presently enjoying strong bipartisan support on Capitol Hill. In fiscal year 1997, Congress appropriated \$36.7 million for brownfield activities. The following year, it nearly tripled that amount: \$86.4 million was given to the EPA, and \$25 million to the Department of Housing and Urban Development (HUD).<sup>9</sup>

Thus far in the 105th Congress, more than 19 brownfield bills have been introduced. These bills set out, among other things, to clarify critical liability issues, offer financial incentives for brownfield cleanup, and ensure greater certainty vis-à-vis environmental liability. A particularly important bill, passed in August 1997, provides \$1.5 billion in federal tax incentives to spur brownfield cleanup nationwide.

Despite this legislative action, however, it seems unlikely that an integrated and comprehensive brownfields package will pass this session. Brownfields have unfortunately become entangled in broader Superfund reauthorization discussions which, by all accounts, continue to flounder. Thus, the prospects of passing an independent brownfields bill this session are slim at best.

In California, a somewhat different situation has unfolded. In a major blow to environmental groups, the legislature in August 1998 failed to reauthorize or extend the state Superfund law, set to expire on January 1, 1999. Unlike at the federal level, where the U.S EPA’s authority to order and enforce cleanups remains intact despite stalemate over reauthorization, in California, much of the state’s authority ends when the law expires. In the meantime, however, several smaller brownfield bills – including AB 871 and AB 1909, both introduced by Assemblyman Howard Wayne – sailed through the state Assembly and Senate with little opposition. It remains to be seen whether lawmakers will resurrect the state Superfund law next year or whether they will support enactment of smaller, narrowly targeted brownfield bills instead.

## California's Brownfields Program

In California the feasibility of redeveloping brownfield sites varies widely. Hundreds of sites have, in fact, already been cleaned up and redeveloped, including Sacramento's Southern Pacific Railyard, the Kaiser Steel plant in Fontana, and the Revere Copper facility in Commerce. But these sites share some features that have allowed them to move forward despite environmental complications: high land value, relatively low cleanup costs, or the presence of financially viable responsible parties whose assets exceed the cost of cleanup.

The majority of brownfields do not share these features. They might be plagued by high cleanup costs, possess low land value, or have no readily identifiable end use. These typically smaller parcels also may lack financially viable parties who are responsible for the contamination, and the bill for assessing and cleaning them up could be upwards of 50 percent higher than the cost associated with a typical greenfield location. Returning them to productive use is a formidable challenge – one that will require vigorous public sector engagement.

In recent years, California officials have made it a priority to promote the cleanup and reuse of brownfields. In 1993, the Cal/EPA's Department of Toxic Substances Control established a Voluntary Cleanup Program (VCP) designed to help alleviate concerns about liability, lack of legal certainty, and a confusing regulatory environment. According to former Cal/EPA Secretary James M. Strock, the VCP has been generally successful:

- More than 320 sites have enrolled in the program and 125 are currently being assessed and cleaned up
- 1,400 acres have been cleared for redevelopment
- More than 21,000 jobs have been created as a result of cleanup and redevelopment
- Nearly \$475 million in current and future tax



Damson Oil site near Venice Beach, Los Angeles, California

**The key to reversing the “donut city” phenomenon in California involves action on two coordinated fronts: first, making brownfield reuse easier, more attractive, and less risky to the private sector; second, making development in greenfield locations more difficult than it is currently.**

- revenues is generated annually
- 5,200 housing units have been provided and more than 13 million square feet of office, commercial, recreational and industrial space have been developed.<sup>10</sup>

Brownfields are also addressed by the Cal/EPA's State Water Resources Control Board (SWRCB), through its nine regional water quality control boards. The water boards oversee voluntary cleanups involving petroleum releases and contamination to surface and groundwater. The SWRCB has roughly 600 sites enrolled in its Spills Leaks, Investigations, and Complaints (SLIC) program.

In addition to these administrative programs, the California legislature has entered the fray, enacting several laws aimed at facilitating site reuse. The most important initiatives have been the 1990 Polanco Act (for redevelopment agencies), the 1994 Expedited Remedial Action Program (ERAP), and the 1996 lender liability relief statute.

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## Why is brownfield reuse important?

Reusing brownfields is not only an important tool for reviving depressed urban areas, it simultaneously accommodates growth that might otherwise have occurred in greenfield areas. Whether ultimately used for housing, retail, industry, or recreational purposes, brownfield sites that have been redeveloped represent powerful catalysts for change in three fundamental ways.

**Social Equity.** Brownfield redevelopment provides an opportunity for advancing social equity while combating gentrification. Brownfield deals can help generate wealth in the neighborhood and empower its residents by tapping into the area's unique assets, encouraging the growth of local businesses, creating jobs that pay above the minimum wage, promoting construction of housing for a varied range of incomes, and involving the community.

**Environmental Protection.** Brownfield redevelopment not only leads to cleanup of toxic contamination, it helps to ensure that poor (and frequently minority) populations are not exposed to contaminants at disproportionate rates. By indirectly deterring development in rural areas it also helps to preserve natural habitats and open space, in turn minimizing pollution of water and air and easing development pressure on agricultural lands.

**Economic Growth.** Brownfield redevelopment can generate new jobs and increase the local tax base, spurring improvements in – and fuller use of – existing public services and amenities. It can kick-start the revitalization of a neighborhood. Simply put, it encourages the type of economic growth that metropolitan regions so clearly thirst for and benefit from in immediate and future terms.

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Despite the efforts of state agencies and the legislature, however, the brownfields program in California does not function as smoothly as it should. To many observers it feels more like a patchwork of solutions than a multifaceted, coordinated program that sufficiently meets the needs of developers. Indeed the laws that *have* been implemented only tackle narrow aspects of the brownfield process or apply to a limited number of sites. What's needed at this point is a comprehensive brownfield bill that simultaneously addresses key concerns such as long-term environmental liability, unclear cleanup standards, lack of financing, and a confusing regulatory process.

The good news is that California *can* address the concerns of the private sector without in any way compromising environmental safety or public health. Officials need only look to “brownfield pioneer” states such as New Jersey, Pennsylvania, Michigan, and Massachusetts, which have enacted highly innovative programs over the past several years. California has the opportunity to learn from these states and borrow some of their more innovative ideas, many of which are outlined in the forthcoming chapters.

The key to reversing the “donut city” phenomenon in California involves coordinated action on two fronts: first, making brownfield reuse easier, more attractive, and less risky for the private sector; second, making development in greenfield locations more difficult than it currently is. This report, in proposing policies and recommendations for overcoming obstacles to brownfield reuse, offers a blueprint for making the first half of the equation possible.

## II. Brownfields and Liability Issues

**“ We need reform that will streamline the Superfund process, speed-up cleanups at Superfund sites, and help eliminate unnecessary litigation without compromising the principles of ‘polluter pays’ and ‘putting- public-health-and-safety-first.’ ”**

– Senator Barbara Boxer (D-CA) at a Congressional hearing on Superfund reform, March 1997.

Over the past few years, California has adopted numerous policies and laws that attempt to provide liability relief for owners of brownfield sites. This chapter not only provides a primer on these policies but points to areas where more needs to be done. In broadest terms, the California Environmental Protection Agency (Cal/EPA) must find ways to provide greater legal and regulatory certainty to prospective purchasers, a task that can be accomplished without compromising the environment or public health in any way. California should import ideas from states with relatively progressive brownfield programs such as New Jersey, Pennsylvania, and Massachusetts. The first task, however, is to examine the state and federal Superfund reauthorization process, and more specifically the critical liability issues currently being debated.

### **Brownfields and Federal Superfund Reauthorization**

For the fifth year in a row, the federal Superfund law (CERCLA) awaits Congressional reauthorization. Lawmakers continue to grapple with the fundamental question: Has the Superfund program worked? Or has it failed?

The U.S. EPA declares Superfund a success. Seventy percent of all sites on the National Priorities List (NPL), a registry of the country’s most polluted sites, are under construction or are actively being cleaned up. Responsible parties are footing the bill for 75 percent of these cleanups, saving taxpayers \$12 billion. In sharp



South Bayfront site, Emeryville, California

contrast to this stance, industry groups assert the program has been a disaster, leading to slow and exceedingly expensive cleanups that have served to amply line the pockets of lawyers and consultants (as much as 60 percent of total annual expenditures).<sup>11</sup>

Both sides are actually right. Some parts of the law are effective and should be retained; others need revamping. The real challenge is deciding which parts to change. Liability and cleanup provisions clearly represent the most divisive issues. Brownfields have become an important factor in the Superfund discussion as well. Congress must decide whether legislation relating to brownfields should be considered separately or as part of a broader Superfund reauthorization package.

The 105th Congress has seen 20 brownfield bills introduced so far, with 5 of them tucked into larger Superfund reauthorization bills. Most House and Senate Democrats support narrowly



Southfork Timber Industries mill site, North Fork, California

**Many property owners, fearful of environmental liability, decide it is cheaper and less risky to simply warehouse or “mothball” a facility than to sell it or restore it to productive use. Prospective purchasers and developers similarly are reluctant to become entangled in projects that could expose them to liability and years of high cleanup costs.**

targeted CERCLA amendments and a stand-alone brownfield bill. Most Republicans, eager for comprehensive statutory overhaul, recognize the priority that their Democratic colleagues place on brownfields and would therefore like to fold brownfields legislation into a broader Superfund reform bill. Without the brownfields component, the Republicans lose important bargaining power when it comes time to secure the more controversial elements of Superfund reauthorization.<sup>12</sup>

In crafting Superfund 18 years ago, Congress wanted to ensure that polluters, rather than taxpayers, would pay for environmental cleanups. The EPA was directed to place the most seriously polluted sites on the NPL. Where polluters were absent or financially insolvent, remediation would be shouldered by a multibillion dollar “Superfund” to be financed through taxes on certain chemical and petroleum companies. Currently approximately 1,300 sites are listed on the NPL. More than 400 sites have been cleaned up (excepting ongoing groundwater treatment projects) and construction is underway at nearly 500 more.<sup>13</sup>

The liability scheme for Superfund is, in legal terms, strict, joint, several, and retroactive.<sup>14</sup>

- ‘Strict liability’ stands for liability without fault or negligence. Under the CERCLA provisions, liability automatically extends to certain parties, including: 1) current owners and operators of a facility; 2) former owners and operators; 3) parties involved in transporting hazardous waste; and 4) generators that arranged for waste disposal. This means that a recent purchaser may be held liable for CERCLA cleanup costs (with some exceptions), even if he or she was in no way involved in creating the contamination. The concept of ‘strict liability’ has been applied to hazardous activities for more than a century and is the general rule of liability under many environmental statutes, including the Clean Water Act of 1972.

- **'Joint and several liability'** is a long-standing common law rule that courts have applied in CERCLA cases involving more than one responsible party, and in which harm is indivisible. Under this type of liability, the government may hold all responsible parties, or a subset of responsible parties, liable for the entire cost of a cleanup. The government is not required to prove the relative contribution of each party.
- **Under 'retroactive liability,'** parties can be held liable for activities prior to CERCLA's enactment in 1980, even though their actions may have been legal and non-negligent at the time they occurred. Most federal Superfund sites involve contamination that took place before 1980.

By adopting strict, joint, and several liability within Superfund, Congress (and subsequently the courts) empowered the EPA to initiate cleanups easily and expeditiously without the need to prove a site owner's responsibility or his or her relative contribution to the contamination. Although the liability scheme has been highly effective in getting responsible parties to the table, it has had some unintended results. Many property owners, fearful of environmental liability, decide it is cheaper and less risky to simply warehouse or "mothball" a facility than to sell it or restore it to productive use. Prospective purchasers and developers similarly are reluctant to become entangled in projects that could expose them to liability and years of high cleanup costs.

There are some exceptions to federal Superfund liability. The "innocent landowner defense," added to CERCLA in a 1986 amendment, relieves of liability subsequent property owners who "did not know and had no reason to know" of site contamination. The new owner, upon acquiring the property, must have made "all appropriate inquiry...consistent with good commercial and customary practice" into the previous ownership and uses of the property.<sup>15</sup>

Unfortunately, the EPA and the courts offer little guidance on what constitutes a satisfactory inquiry.<sup>16</sup> Numerous bills pending before Congress would clarify this murky area by establishing a Phase I site assessment (in accordance with the American Society for Testing of Materials procedures) as "all appropriate inquiry."

As the law currently stands, purchasers aware of site contamination are disqualified from the "innocent landowner" defense. Efforts are being made in numerous states and on Capitol Hill to provide liability relief for bona fide prospective purchasers who know about site contamination but had no hand in actually creating it.

Another major exception to federal Superfund liability can be found in the 1996 Asset Conservation, Lender Liability and Deposit Insurance Act. This legislation applies to lenders and fiduciaries (those who act as trustees or executors) who have not participated in the day-to-day management of sites contaminated with hazardous substances and petroleum. The law defines what "participation in management" means and describes how banks can engage in foreclosure proceedings without incurring liability. The law also codifies an earlier EPA ruling that exempts municipalities from liability when they acquire properties involuntarily, such as through bankruptcy proceedings, tax delinquency, or abandonment.<sup>17</sup> While providing some comfort to lenders, the law does nothing to alter the fact that contamination can impair a property's value and thus jeopardize the bank's collateral. Nor does it provide lenders protection from third party suits under statutory or common law, a significant concern for lending institutions.

In the mid-1980s, the EPA attempted to reduce the threat of federal enforcement action at brownfield sites. The goal was to provide some much-needed comfort and security, especially to innocent parties, without compromising the law's basic liability structure.

**While recent federal measures appear to have created a climate more conducive to brownfield redevelopment, numerous industry groups contend that they fall far short of the mark and that statutory overhaul remains necessary. Proponents of the current Superfund liability scheme – environmental and community groups, state attorneys general, and most Democratic lawmakers – argue that the law’s problems can be corrected through targeted amendments to Superfund.**

Some of the more important policies enacted were as follows:

- **Policy Towards Owners of Property Containing Contaminated Aquifers**

In May 1995 the agency outlined its policy on suing property owners for groundwater contamination of an aquifer underlying their site, stating that it would not proceed if the owner did not cause or contribute to the contamination. The Cal/EPA issued a similar guidance in December 1990.

- **Guidance on Agreements with Prospective Purchasers of Contaminated Property**

In May 1995 the EPA issued guidance outlining situations under which the agency may enter into agreements not to sue prospective purchasers where a site has previously been contaminated.<sup>18</sup> The Cal/EPA issued similar guidance in July 1996.

- **de minimis settlements**

The EPA may enter into de minimis settlements with small-volume waste contributors provided they did not handle the hazardous waste or contribute to its release (or the threat of its release). Once the EPA enters into a de minimis settlement, the landowner is given protection against third party suits for cleanup costs. The Cal/EPA, which has similar authority to enter into de minimis settlements with small contributors, has done so in limited cases and on occasion in concert with the U.S. EPA.

- **Superfund Memoranda of Agreement.**

Over the years, the EPA has entered into brownfield-specific Superfund Memoranda of Agreement (SMOA) with 11 states. These agreements indicate the EPA’s no-enforcement policy at sites that have successfully completed state voluntary cleanup programs. Cal/EPA and the U.S. EPA Region 9 have been trying unsuccessfully to negotiate a SMOA for several years.

While these federal measures appear to have created a climate more conducive to brownfield redevelopment, numerous industry groups contend that they fall far short of the mark and that statutory overhaul remains necessary. These industry groups claim that CERCLA’s liability scheme is unfair and burdensome for both the “deep-pocket” corporations who get stuck with large cleanup bills and for the smaller mom-and-pop operations who occasionally find themselves ensnared in the Superfund web. Industry is calling for a more rational allocation of liability and clear liability relief for innocent parties and small businesses. They also argue that limitations must be placed on federal enforcement authority at sites cleaned up under state voluntary cleanup programs. While the likelihood of federal enforcement action at brownfield sites may be small, it is a serious threat to owners, developers, lenders, and municipalities.<sup>19</sup>

Proponents of the current Superfund liability scheme – environmental and community groups, state attorneys general, and most Democratic lawmakers – argue that the law’s problems can be corrected through targeted amendments to Superfund. Removing strict, joint, and several liability is unnecessary and unwise, they claim, and the law as it stands encourages responsible parties to settle among themselves rather than litigate with the government.<sup>20</sup> Supporters also note that the liability scheme has triggered a revolution in industry’s approach to hazardous waste handling. “Superfund, more than any other hazardous waste law,” reports one EPA

official, “provides strong incentive for pollution prevention, waste minimization, and proper waste disposal.”<sup>21</sup>

### **Brownfields and Superfund Reauthorization in California**

California’s Superfund law – the Carpenter-Presley-Tanner Hazardous Substances Account Act of 1981 (Chapter 6.8 of the Health & Safety Code) – is the primary statute guiding cleanup of contaminated sites, including brownfields, in the Golden State. It is scheduled to sunset on January 1, 1999. For nearly two years, numerous constituencies including state officials, industry representatives, and environmental organizations have been working to reauthorize the law. Their challenge – to craft a bill that not only extends the law’s sunset provision but meets the needs of disparate interest groups – proved daunting and their efforts ultimately were unsuccessful.

Experts nationwide have been closely tracking California’s Superfund debate given that the state often serves as a bellwether for the rest of the country, particularly in the realm of environmental law. Recognizing that what happens in Sacramento vis-à-vis Superfund reform could greatly influence other states as well as Capitol Hill, environmental and industry groups dug in and prepared for a major legislative showdown.

What they got was legislative impasse; unable to reach agreement on key provisions before August 31, 1998, the Superfund law was not reauthorized.<sup>22</sup> Industry representatives in particular opposed the final bill – AB 851 (Bowen) – because it failed to change the statute substantially enough, particularly with regard to cleanup standards. Republican lawmakers, with industry backing, killed the bill in eleventh hour negotiations. As a result, core elements of the program, including liability provisions, cleanup requirements, and cost recovery provisions, will

cease to exist as of January 1, 1999. (In contrast, the key provisions of the federal Superfund law remain in place despite the fact that reauthorization has been stalled since 1994; what has expired in the federal program are the taxes, previously levied on chemical and petroleum companies, that feed the actual “Superfund.”)

What does this recent legislative development mean for cleanup of contaminated sites in California? Many staffers and consultants will be struggling to answer this question in the coming months. There are several possible scenarios. When the legislature reconvenes in January 1999, it could pass emergency legislation reenacting Chapter 6.8 of the Health & Safety Code. Alternatively, the DTSC could continue to order and oversee cleanups under other statutes, such as Chapter 6.5 of the Health & Safety Code (the state equivalent of the federal Resource Conservation and Recovery Act), although the extent to which the DTSC can use Chapter 6.5 to order the full range of cleanups remains unclear. Finally, DTSC should be able to continue pursuing cleanup under the federal superfund statute (department officials are still exploring whether their authority to do so remains intact).

Certainly more cleanup responsibilities could be shifted to the regional water quality control boards, whose authority to oversee cleanup activities under the Porter-Cologne Water Quality Control Act remains unchanged (this statutory authority is limited to hazardous substance releases that threaten ground water resources). At a minimum, however, the present state of legal uncertainty will significantly slow the pace of cleanups across California.

What is clear is that the state’s Superfund policy debate, while temporarily quelled, is far from over. When the legislature reassembles, it will continue to examine many of the issues debated

Experts have been closely tracking the Superfund debate in California because the Golden State often serves as a bellwether for the rest of the country, particularly in the realm of environmental law.



Phil Schemmelster

Union Point site, Oakland, California

earlier this year: Should the state's 1981 Superfund law be reenacted, and if so, what statutory changes should be made? Should a new and completely different cleanup law be contemplated? Can the state "get by" without having a formal Superfund law at all? And most importantly, to what extent are industry and environmental groups willing to be flexible on certain pivotal issues?

While answers to these questions are somewhat elusive, analysts speculate that California's Superfund law will indeed be reenacted and extended at some point in 1999. The following discussion of the state's liability scheme is based on this assumption.

\* \* \*

Although California's Superfund program mirrors the federal program in many ways, it does allow for consideration of apportioned or proportional liability.<sup>23</sup> Proportional liability generally has not been used, however, because the state lacks the funding to pursue all responsible parties. And when responsible parties cannot easily be found or are insolvent, the state has only minimal funds to pay for cleanup of "orphan shares," those portions of cleanup for which no viable responsible party can be identified. As a result, state officials can, and almost always do, turn to the federal law's more

stringent strict, joint, and several liability scheme when overseeing cleanups and attempting to recover their costs for cleanup.

In recent years, industry groups have fought to transform many elements of the state Superfund law.<sup>24</sup> With their backing, the legislature in 1994 enacted SB 923 (Calderon), a pilot initiative known as the Expedited Remedial Action Program (ERAP). Slated to be a "fast track" brownfields cleanup program for 30 sites, ERAP boasts a number of innovative – and controversial – features. First, the program allows for risk-based remedy selection – that is, allows cleanups based on future site use and specifies no particular treatment preference. This represents a departure from federal Superfund regulations, which favor permanent cleanup solutions over all others. ERAP also gives equal consideration to a range of remedies, including engineering controls (e.g., containment and mitigation measures) and institutional controls (e.g., deed restrictions). Finally ERAP uses the proportional liability scheme allowed under state law; joint and several liability under federal law is actually precluded by the execution of agreements between the state and the ERAP participant.

To make proportional liability under ERAP possible, the legislature in 1994 authorized \$5 million for the cleanup of orphan shares, to the

extent that funds became available through fines and penalties collected by the Department of Toxic Substances Control (DTSC). To date, approximately \$2 million has been funneled into the ERAP Trust Fund. The legislature approved orphan share funding for 10 sites; so far 4 have made requests.

Understanding ERAP is essential because it is this program that industry groups were pushing to expand statewide through state Superfund reform. The main problem is that ERAP has not been widely used to date; 16 sites have enrolled and only 1 has received closure. Some observers contend that ERAP is still the “new kid on the block,” somewhat unknown and untested. Environmental consultants similarly may have grown accustomed to the protocol outlined in the National Contingency Plan (NCP), the federal regulations that have governed cleanup of hazardous waste sites in California for 16 years, and view ERAP as a departure from this norm.

Strong arguments can be made for and against the type of proportional liability scheme found in ERAP. Proportional liability certainly seems fairer than strict, joint, and several liability given that it attaches liability to parties only for their specific contribution to a site’s contamination; one company should not be asked to pay for another’s contamination. From a practical perspective, however, proportional liability fails to be effective unless there is money available to pay for orphan shares. Cleanup can be put on hold indefinitely, for example, if the state cannot pay for a site’s orphan share cleanup and the remaining responsible parties refuse to absorb the costs. (One model for financing an orphan share trust fund was proposed by industry groups and incorporated into AB 851 [Bowen], the superfund reauthorization bill which recently failed passage by the legislature.)

As it stands, California officials do have a contingency plan if responsible parties fail to



Aerial view of Union Point, Oakland, California

Phil Schmeisler

cooperate under ERAP. “Federal joint and several liability remains available as a tool should the [ERAP] process break down,” explains former Cal/EPA Secretary James Strock.<sup>25</sup> His comment actually illustrates the agency’s uncertainty about the potential of a proportional liability system, and underscores the importance of having a federal back-up strategy should it fail.

Proportional liability is not an ideal solution for other reasons as well. Apportioning liability would “only bog down [the agency’s] enforcement program,” one EPA official notes, “as parties would find it to their advantage to litigate over their relative share rather than settle.”<sup>26</sup> The Sacramento-based Planning and Conservation League agrees that “once the state has to prove the actual percentage share of each

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## Michigan: State Law Utilizes Causation-Based Liability

Only one state – Michigan – has formally dropped the “guilty-until-proven-innocent” approach of strict liability for the “innocent-until-proven-guilty” framework of causation-based liability. Michigan’s 1995 law eliminates strict, joint, and several liability for owners or operators of contaminated property who acquired the property before June 5, 1995, unless they were responsible for an activity that caused a hazardous substance release.<sup>29</sup> Purchasers of contaminated properties after this date are free of liability for existing contamination provided they submit results of a Baseline Environmental Assessment (BEA) to the Department of Environmental Quality within 45 days of buying the property. A BEA confirmation of property contamination triggers the obligation to conduct cleanup and requires the seller and other responsible parties to complete the required investigation and remediation activities.<sup>30</sup> In contrast, most other states presume that property owners are responsible unless they meet certain exceptions or have been granted a specific release from liability release, such as a covenant not to sue, a certificate of completion, or a “no further action” letter.

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potentially responsible party, rather than just some involvement, the inducement for PRPs to litigate is greatly increased.” According to Sally Magnani Knox, chief consultant to the Assembly Committee on Environmental Safety and Toxic Materials, “responsible parties who don’t want to clean up sites are going to drag out an allocation process just the same way they do under the existing strict, joint, and several system.”

The Wilson Administration introduced a compromise proposal in late 1997 designed to combine certain elements of proportionate liability with aspects of strict, joint, and several liability.<sup>27</sup> This new approach, available to non-NPL sites, would require the DTSC to pursue cost-recovery in an equitable manner using the proportionate standards outlined in state law. Responsible parties performing the cleanup would propose an allocation of cost shares, with

the state picking up any left over orphan shares; the legislature would need to increase orphan share funding by an estimated \$7 to \$10 million a year.<sup>28</sup> The state would be allowed to use CERCLA liability to recover orphan costs for recalcitrant and uncooperative polluters. Under this type of system “good actors” would get rewarded while “bad actors” would not only be discouraged but punished. This model was not incorporated into any legislation in 1998.

### Existing Brownfield Programs, Laws, and Policies in California

#### The Department of Toxic Substances Control’s Voluntary Cleanup Program

The DTSC’s primary vehicle for handling brownfields is its Voluntary Cleanup Program (VCP), established administratively in 1993. The program was created in response to the fact that most lower-priority cleanups were being cleaned up without departmental oversight – officials simply did not have the time or the resources to oversee them – and this made potential lenders and developers uneasy. Under the VCP, parties pay DTSC to oversee their cleanups and in exchange can receive a certificate of completion when remediation is done.<sup>31</sup> Like similar programs in other states, California’s is open to responsible as well as nonresponsible parties. Properties ineligible for the program include federal facilities, sites on the state Superfund list or the NPL, properties contaminated with pure petroleum, and federal facilities.

The process begins with DTSC and the involved party negotiating a voluntary cleanup agreement, outlining the scope of the work, agreeing on a schedule, and calculating an estimate of DTSC’s oversight costs. Those entering the program do not admit legal liability for site contamination and either side may terminate the project, for any reason, with a 30-day notice. The state, however, reserves the right to take enforcement action if necessary to protect public health and the

environment. Approximately 320 sites have enrolled in the program in its first 4 years. More than 198 have received formal sign-off, although not all have actually been remediated (some only have gone through the site assessment or consultation phase).<sup>32</sup>

Under the VCP, the DTSC offers two types of assurances to involved parties: 1) a “No Further Action” letter when there is some remaining site contamination but it poses no threat to human health or the environment, and 2) a “Certificate of Completion” once site assessment and cleanup activities have been completed in accordance with a DTSC-approved voluntary cleanup agreement. While significantly reducing liability, these letters of assurance do not rule out the possibility of third party suits or state enforcement action at some future point. Of particular importance is that DTSC can issue these letters even when there is ongoing operation of a pump and treat system (provided an enforceable agreement is in place to ensure proper operation and maintenance).

#### **Brownfields and the Regional Water Quality Control Boards**

While DTSC focuses on the cleanup of contaminated soils, California’s nine Regional Water Quality Control Boards (RWQCBs) handle sites with contaminated soils that threaten surface or groundwater sources under their Spills, Leaks, Investigations, and Complaints (SLIC) program. The water boards also oversee cleanup of leaking underground storage tank sites under a separate program.<sup>33</sup>

Once a site is cleaned under SLIC, the water board either rescinds the cleanup order or, if the site is not under such an order, issues a “No Further Action Required” (NFAR) letter. NFAR letters are typically issued for petroleum-related UST cleanups. The San Francisco Bay Regional Water Board and Bay Area Local Oversight



This vacant site is a magnet for illegal dumping

**The Polanco law stipulates that following cleanup, redevelopment agencies may receive limited liability relief, which, under specific circumstances, can be extended to subsequent site owners as well as lenders.**

Programs have issued thousands of NFAR letters for cleanup of petroleum-related leaking underground storage tank (LUST) sites. For long-term remediation, responsible parties remain under regional water board orders requiring cleanup, monitoring, proper operations, and maintenance.

When a party is affected by a site and/or cleanup but is not responsible for any contamination, the regional water board can issue a comfort letter stating that the water boards will not take enforcement action against the party for known soil or groundwater pollution.

Since 1988, the state has allowed local health agencies to oversee site assessment and remediation of LUST sites. The state water board has more than 20 formal contracts with Local Oversight Programs and informal contracts with many more local agencies.

#### **Statutory Liability Relief in California**

California has adopted the same statutory exceptions to liability that are outlined under Section 107 of CERCLA, including those for

“innocent landowners” and municipalities that involuntarily acquire property. With the 1996 passage of SB 1285 (Killea), protection was further extended to lenders and fiduciaries with legal interest in a site who did not directly cause or contribute to the release of a hazardous substance. This law is somewhat broader than the federal one; it applies to all hazardous materials releases, including those regulated under the state Superfund law, the state equivalent of the Resource Conservation and Recovery Act, underground storage tank laws, and local ordinances. It should be noted that some environmental organizations, including the Sierra Club, opposed this bill, arguing that it would compromise public health.<sup>34</sup> They believe the law is flawed because it fails to require banks to investigate the financial capacity of new businesses to handle and dispose of hazardous materials.

The 1990 Polanco Act (SB 1425) endows redevelopment agencies with broad cleanup powers as well as liability protection following remediation. A redevelopment agency can order parties legally responsible for contamination to perform a cleanup. If those parties do not cooperate, the agency can take title and conduct the cleanup itself, or, under specific circumstances, arrange for a new purchaser to acquire and clean the property.<sup>35</sup> A powerful feature of the Polanco Act is that it allows redevelopment agencies to sue responsible parties to recover costs and attorney fees. They also may deduct cleanup costs from a property's purchase price. An even more critical aspect of the law is that following cleanup, redevelopment agencies may receive limited liability relief, which, under specific circumstances, can be extended to subsequent site owners as well as lenders.

Despite its obvious appeal to redevelopment agencies, the Polanco Act has only been used approximately 40 times, a rate lower than experts had predicted. One reason may be that

the law's immunity provisions have yet to be tested in court, possibly deterring some redevelopment agencies and lending institutions from using it. Another explanation may be that until the 1996 enactment of SB 1248 (O'Connell), local agency cleanups, though commonly conducted, were not officially recognized under state law. SB 1248 changed this. It authorizes local health agencies to set cleanup goals and issue closure letters for contaminated sites without the need for state involvement or approval. In conjunction with the immunity provisions found in the Polanco Act, the local agency cleanup law is a powerful tool for redevelopment agencies. Still unclear is whether banks will accept local agency closure letters as sufficient proof of limits to a site's environmental liability.

Yet another explanation for the modest use of the Polanco Act is that many redevelopment agencies are under the impression that the law requires more extensive cleanup than what is stipulated under other sections of the Health and Safety Code and the Porter-Cologne Act. According to Kenneth Emanuels, a legislative advocate in Sacramento, redevelopment agencies have shied away from the Polanco Act because they are uncomfortable with its explicit requirement that cleanups be conducted in accordance with the NCP, the federal regulations governing cleanup at Superfund sites.<sup>36</sup> Many redevelopment agencies view NCP requirements as too complicated and extensive for addressing smaller brownfield sites, and in practice, they say, DTSC and water boards routinely approve cleanups that do *not* actually meet all NCP requirements.

#### **Administrative Relief**

Cal/EPA has adopted a number of administrative measures in an effort to assure parties that the agency will not pursue certain parties involved in brownfield projects.

## Prospective Purchaser Agreements

In July 1996, DTSC and the regional water boards adopted a formal policy for entering into Prospective Purchaser Agreements (PPAs) with parties not responsible for environmental contamination.<sup>37</sup> The policy was intended to streamline the regulatory process, reduce the time it takes to negotiate agreements and undergo agency review, and lower transaction costs. Although both DTSC and the regional water boards had entered into PPAs in the past, the new document clearly outlined eligibility criteria, provided a standardized application, and offered a model agreement/covenant not to sue.<sup>38</sup>

Once the PPA has been negotiated, parties take ownership of a site and conduct the appropriate cleanup (or have the responsible party do so), and in return receive a covenant that protects them from being sued. They also get administrative protection from third-party CERCLA suits. To date, several sites have been redeveloped under formal PPAs. Both the Cal Compact Landfill and Golden Eagle Refinery in Carson were remediated and are now being redeveloped as shopping malls, creating thousands of temporary and permanent jobs. The Kaiser Steel Mill site in Fontana has been cleaned and is being used as a motor speedway. Under a PPA issued by the San Francisco Bay Regional Water Quality Control Board, the former Bethlehem Steel fabrication plant in South San Francisco is being cleaned up for use as a hotel and commercial retail complex.

Unlike typical voluntary cleanup agreements, PPAs are very resource-intensive and time-consuming to negotiate. The state enters into them only if the project is likely to produce substantial benefits such as new jobs, an increased tax base, environmental benefits, or opportunities for disadvantaged groups. Recently some entities have been pushing to codify the PPA so that each agreement need not be individually negotiated, a move that would

**Recently some groups have been pushing to codify the PPA so that each agreement need not be individually negotiated, a move that would greatly expedite and simplify the process for both developers and the Cal/EPA.**

greatly expedite and simplify the process for both developers and the Cal/EPA. In 1998, DTSC proposed language to this effect as part of its “Draft Final Superfund Reform Package.” The language, which was not incorporated into any legislation in 1998, would have given limited liability relief to nonresponsible prospective purchasers in situations in which a responsible party is willing to do the cleanup.

Some states with substantial brownfields funding, such as Pennsylvania, do not require that the prospective purchaser actually conduct the cleanup; if responsible parties are absent or insolvent, the state will pay for the necessary cleanup.<sup>39</sup> When a prospective purchaser has been identified in Connecticut, the state can take title to the property and do the cleanup itself as long as it costs are no more than \$15 million.<sup>40</sup> California differs from these states in that money has not been allocated to fund brownfield cleanups. Until such funding is available, prospective purchasers will only obtain liability relief in instances in which a party is (or is willing to be) financially responsible for the cleanup.

Like California, Massachusetts has not allocated substantial funding to pay for brownfield cleanup. In July 1998, the Massachusetts legislature passed a bill that retains strict, joint, and several liability but offers clear “endpoints” to liability for innocent parties and site owners in cases in which a permanent solution for the entire site

**Should state law remain silent on the subject of reopeners, which serves the state's interest by keeping options flexible, or should it clearly spell out instances in which reopeners may occur, thereby reducing uncertainty for all parties involved?**

(or a portion of it) has been implemented. The law also provides immunity to third party claims for property damage and cleanup costs. Finally, it exempts owners of neighboring properties from liability, as well as tenants who lease contaminated property. The Massachusetts model is one that the California legislature should consider because it provides innocent parties with critical liability relief in situations in which a viable cleanup has occurred.

**Protection Against Third-Party Claims**

Most states offer liability protection in conjunction with successful brownfield cleanups – protection that assures parties the state will not take future enforcement action for known contamination. However, the prospect of third party claims brought under statutory or common law remains a major concern for developers.

Pursuant to the 1996 Prospective Purchaser Agreement policy, the Cal/EPA does provide contribution protection for prospective purchasers under certain circumstances.<sup>41</sup> Under this policy, third parties are prohibited, under state hazardous waste laws, from suing entities that have already conducted remediation and received a covenant not to sue. Some brownfield practitioners contend that this protection is not foolproof, however, because it is provided through administrative means rather than through a court of law. In theory, DTSC and the regional water boards could solve this problem by entering individual PPAs into federal court as consent decrees. In practice, however, it would be very resource-intensive and time-consuming to do this for all of the state's smaller brownfield projects. The need to protect prospective purchasers and lenders from third-party contribution claims

in California, therefore, remains pressing.

Neither federal nor California law currently protects individuals from suits by third parties who claim to be injured (whether in the form of a personal injury claim, diminution of property value, natural resource damages, or otherwise) due to contaminants from a brownfield site.<sup>42</sup> Several states, including New Jersey and Pennsylvania, have attempted to attract brownfield developers by folding this type of protection into their brownfield laws.

California may want to consider doing the same. However, a federal advisory committee to the U.S. EPA reports that there have been few if any third-party environmental damage claims brought around the country. Thus, it appears the main deterrent to brownfield development is fear of third-party common law claims.<sup>43</sup>

**Responsible Party Ownership of Property Over Contaminated Groundwater**

In 1990, the Cal/EPA adopted a policy that assures owners of properties affected by plumes of contaminated groundwater from other sites that they will not become a target of state enforcement or cost recovery action, provided they did not cause or contribute to the contamination.<sup>44</sup> The state water board has no formal policy for dealing with this subject although some regional water boards provide “comfort letters” to innocent property owners whose land overlies contaminated groundwater. Some sources feel that, as with PPAs, this type of liability protection should be codified into state law.

**Approval of a Partial Site Cleanup**

Cal/EPA's 1992 Approval of Partial Site Cleanup Policy allows parties to receive closure for cleanup that has occurred on certain portions of a site and for parcels that the lead agency deems “clean” (not requiring cleanup). This strategy enables property owners to obtain incremental financing for site activities rather than wait until the entire site is clean.

## Reopeners

Like most other states, California reserves the right to reopen cleanup agreements in a broad range of circumstances, including situations in which a remedy fails, previously undisclosed site information comes to the surface, or fraud or misrepresentation has occurred. These circumstances, however, are not explicitly spelled out in either the Water Code or the Health and Safety Code. Instead, they are determined by state agencies on a case-by-case basis.

Such lack of clarity regarding liability may deter potential owners, tenants, and other parties from getting involved with brownfields in the first place.<sup>45</sup> The question here is: Should state law remain silent on the subject of reopeners, which currently serves the state's interest by keeping options flexible, or should it clearly spell out instances in which reopeners may occur, thereby reducing uncertainty for all parties involved?

Illinois, New York, and Ohio explicitly reserve the right to reopen agreements if the site subsequently is used in such a way that merits a higher degree of remediation. Texas only reopens agreements when a responsible party has performed the cleanup. Several states, including New Jersey, Washington, and Pennsylvania, will reopen agreements if and/or when more stringent cleanup standards are adopted – an approach that raises fairness questions since parties who have completed a cleanup in good faith may one day be required to undertake further remediation. Action must clearly be taken if a previously approved cleanup is no longer protective of human health. But if no financially viable responsible parties come forward to pay for the cleanup, who should foot the bill? California does not have money set aside for such a purpose, which explains why the state is eager to keep reopeners as flexible and broad as possible.

**Unless the federal Superfund statute is changed, it will be important to clarify the relationship between U.S. EPA and the states vis-à-vis liability.**



Along Palmetto Avenue, Pacifica, California

Several states, such as Michigan, Minnesota, Ohio, Oregon, Texas (non-responsible parties only) and Wisconsin have very narrow reopeners: agreements can only be reopened if there was fraud or misrepresentation on the part of the remediating party or if the party aggravates contamination that the state allowed to remain at the site.<sup>46</sup> Wisconsin explicitly spells out instances in which the state will not reopen cleanup agreements: if environmental standards change, if an approved cleanup remedy has failed to restore the environment, or if contamination is found to be more extensive than originally thought, for example.

### **Brownfields Superfund Memoranda of Agreement (SMOA)**

Unless the Superfund statute is changed, it will be important to clarify the relationship between

**Cities and redevelopment agencies are optimally positioned to conduct up-front inventory and site assessment work in order to make brownfield projects attractive to potential developers.**

the U.S. EPA and the states vis-à-vis liability. While parties may enjoy liability relief from a state environmental agency, they are not necessarily shielded, in turn, from potential enforcement action under federal law. SMOAs attempt to solve this problem by establishing EPA's no-enforcement policy at sites that have successfully completed a state's voluntary cleanup program. Currently 11 states (Delaware, Maryland, Minnesota, Wisconsin, Indiana, Michigan, Illinois, Texas, Missouri, Colorado, Rhode Island) have brownfield SMOAs in place. Many others are in the works. However, while SMOAs represent an added layer of comfort for lenders and investors, they do not completely eliminate liability. The U.S. EPA reserves the right to take action under several circumstances, and third party actions remain a possibility.

In August 1997, the U.S. EPA issued a draft guidance designed to make the SMOA process uniform among the states. Many states, including California, strenuously opposed the guidance – the main reason being that it established baseline criteria that all state voluntary cleanup programs would need to meet in order to gain EPA approval. These criteria included adequate community participation, protective cleanup standards, sufficient state oversight of cleanups, and formal certification procedures. The EPA was attempting to assure that the varied state programs meet a common baseline in terms of cleanup approach and stringency. But several states declared the guidance too prescriptive and far-reaching. Some states feared that the SMOAs they

currently have with the EPA, many of which fail to meet all of the above criteria, would need to be repealed and rewritten.

The guidance also would have created a new site designation/screening process intended to separate seriously polluted Tier I sites (those appropriate for the federal Superfund program) from less-polluted Tier II sites. According to the guidance, only Tier II sites would be eligible for inclusion in state VCPs. Although part of the EPA's impetus for the measure was reasonable – to ensure that serious, Superfund-caliber sites do not slide under the more flexible brownfield programs – the states were in an uproar. They argued that the EPA was disregarding the original aim of SMOAs, which was to limit, rather than increase, federal involvement at brownfield sites, and that the guidance would only further discourage parties from initiating cleanups. The EPA withdrew the guidance after several months of heated debate.

California and U.S. EPA Region 9 have been unsuccessful in trying to negotiate a SMOA for years. EPA would like to see a more prescriptive SMOA, while DTSC officials support a more limited agreement, similar to the one negotiated between EPA Region 5 and Illinois, and which contains the following language:

*“If a site in Illinois has been remediated or investigated under the practices and procedures of the Illinois [brownfields program] and the state has approved the remediation as complete or made a no-action determination...consistent with existing information the site will not be expected to require further response actions. Accordingly, Region 5 will not plan or anticipate any federal action under Superfund law unless, in exceptional circumstances, the site poses an imminent threat or emergency situation.”<sup>47</sup>*

Several bills pending before Congress would codify a SMOA-like process into federal law. H.R. 1990 would allow the EPA to certify state

voluntary cleanup programs; sites successfully cleaned up under these certified programs would be released from CERCLA liability. To be certified, state programs would need to: 1) facilitate “good faith” public participation; 2) provide limited reopeners (when a site’s use changes, improper site maintenance is discovered, or there is a “significant” change in environmental standards); 3) contain cleanup standards that protect public health and the environment; and 4) promote coordination between a state’s economic development and environmental agencies.<sup>48</sup>

### **Empowering Local Agencies**

The California legislature should encourage local governments to take the lead in redeveloping brownfields around the state. Cities and redevelopment agencies are optimally positioned to conduct up-front inventory and site assessment work in order to make brownfield projects attractive to potential developers. Investigating and assembling sites, demolishing existing structures, conducting clean-ups, and aggressively marketing sites to potential buyers are just a few tactics that can be used.

Cities are often reluctant to assume this leadership role, however, because of concerns about liability. There is an exception to liability under state and federal Superfund laws for local

agencies that “involuntarily” acquire property contaminated with hazardous substances. But immunity is not available if the site has petroleum-based contamination, as with leaking underground storage tanks, or groundwater contamination. These situations are addressed by the federal RCRA statute, state underground storage tank laws, and the Porter-Cologne Act. In addition, legal immunity is not an option when the municipal acquisition of the contaminated site is voluntary, as is the case with sites acquired through eminent domain.

In recent years, several California legislators have proposed expanding liability relief for municipalities. The most recent bill, AB 2248 (Poochigian), introduced in 1998, would have established that municipalities that acquire contaminated property involuntarily be given immunity under all state laws, including those laws that address petroleum releases and underground storage tanks. The bill was eventually withdrawn due to opposition from environmental organizations and attorney groups. AB 2248 was modeled on the state’s 1996 lender liability law (AB 1285, Killea) which provides lenders statutory immunity under multiple environmental laws, not just the state Superfund law. But unlike the lender liability law, AB 2248 also would have shielded municipalities from common law claims for damages to persons or property resulting from a hazardous substance release. Viewed by many critics as too expansive – there was concern that it would give cities too much legal protection – the bill died in the state Assembly without a hearing.



## Recommendations – Liability Relief

The following strategies would help to eliminate or minimize obstacles to brownfield redevelopment in California:

- **The U.S. Congress should retain but clarify the Superfund liability scheme, create explicit “carve-outs,” and codify EPA’s no-enforcement policy against states.** CERCLA’s strict, joint, and several liability scheme does not appear to be the primary obstacle to brownfield reuse in California. While far from perfect, its alternative – a proportional liability scheme – also features significant drawbacks. Congress should retain CERCLA’s strict, joint and several liability scheme but create explicit carve-outs for bona fide prospective purchasers, non-responsible property owners whose land overlies contaminated aquifers, and innocent

landowners whose property adjoins a contaminated site. Alternatively, the EPA could certify states whose voluntary cleanup programs meet basic criteria and establish a “no-enforcement” policy or provide a CERCLA liability release for sites that successfully complete the programs. Federal legislation should clarify CERCLA’s existing innocent landowner defense by clearly defining what “all appropriate inquiry” means. Numerous bills now pending before Congress would enact these changes.

In addition, to reduce the impact of Superfund on small sites, the EPA should continue to actively pursue de minimis settlements with “mom-and-pop” companies responsible for only minor contamination.

- **When the California legislature reconvenes in January, 1999, it should either reenact Chapter 6.8 of the Health & Safety Code, the state Superfund law, or replace it with a new, comprehensive brownfields law.** Without such a law in place, the ability of the DTSC to order and enforce hazardous substance cleanups is diminished, as is protection of public health and the environment. In addition, many of California's innovative, flexible cleanup programs, such as the Private Site Management program, will cease to exist.
- **The California legislature should provide statutory liability relief to bona fide prospective purchasers and certain innocent landowners.** The Cal/EPA's prospective purchaser agreement (PPA) policy should be codified.<sup>49</sup> This would provide clear immunity to prospective purchasers, but only where there is a party that is able to conduct cleanup; responsible parties should not be relieved of liability. California could look to the recently enacted Massachusetts law as a model. To maximize certainty, California should also provide clear contribution protection against future claims from individuals seeking to recover state and federal Superfund cleanup costs.

Under this scenario, it would be possible to give parties that meet the specific PPA criteria a "statutory right" to a PPA rather than leaving it to Cal/EPA's discretion. The state could be required to process a PPA within a certain period of time – 60 to 90 days, for example – thus giving purchasers and lenders more of a sense of security. A contingency fund would be needed to pay for any future cleanup costs at sites where prospective purchasers have been given immunity and responsible parties are absent or insolvent.

In addition, California's Superfund law and the Porter-Cologne Act should be amended to provide immunity to land owners whose property overlies contaminated aquifers. Such

an amendment would essentially codify DTSC's existing policy on this issue.

- **The California legislature should provide greater liability relief for cities and counties.** The California legislature should encourage local governments to take the lead in brownfield redevelopment by focusing on ways to reduce liability for non-responsible local agencies and counties who acquire property involuntarily and perhaps even voluntarily (i.e., through eminent domain), provided the responsible party performs all necessary cleanup. A contingency fund would be needed to pay for site cleanups in instances in which a public agency has been granted immunity and new, unforeseen site cleanup is needed.
- **Alternatively, the 1990 Polanco Act could be expanded to include cities and counties as well as redevelopment agencies.** This would give both cities and counties the same sweeping powers that redevelopment agencies have to order and conduct cleanup, as well as to secure immunity for themselves and subsequent site purchasers.<sup>50</sup> However, a cautious approach to this strategy would be important as some cities might abuse the power and not perform adequate cleanup given funding limitations and local development pressures.
- **The California legislature should make covenants not to sue more widely available.** Currently, covenants not to sue in California are only available in conjunction with formal PPAs. To provide more comfort to parties enrolled in the VCP, the Cal/EPA could offer covenants in conjunction with voluntary cleanup agreements (in addition to the certificates of completion that are typically issued). Unlike certificates of completion which imply liability relief, covenants not to sue generally mark an end to liability for existing contamination except in cases in which reopeners are specified. The Cal/EPA also could target covenants not to sue to specific "high priority" groups, such as municipalities that acquire properties voluntarily.

In January 1998, New Jersey passed a law that heightened liability relief for parties who buy and remediate brownfield sites. In addition to issuing no further action letters following site cleanup, the state will now also issue covenants not to sue. These covenants, which must be consistent with all the conditions, limitations, and reopeners in no further action letters, apply to all a site's subsequent owners, lessees, and operators. The covenant shields the given party from liability claims under both statutory and common law. Other states that offer covenants not to sue include South Carolina, New Hampshire, Connecticut, and Ohio.

- **The California legislature should protect brownfield redevelopers with “contribution protection.”**

California developers and lenders need greater assurance that when the Cal/EPA signs off on a cleanup, other parties will not sue them for site-related cleanup costs sometime in the future. The Cal/EPA does provide administrative contribution protection under its prospective purchaser policy, but critics contend this is insufficient.

The legislature could codify the Cal/EPA's existing PPA, thus providing statutory contribution protection for parties that have successfully cleaned up sites and received a covenant not to sue. In addition, the Polanco Act could be amended to provide clear contribution protection for redevelopment agencies.<sup>51</sup>

- **State agencies and/or the California legislature should make conditions for “reopeners” more explicit.** The DTSC and regional water boards should issue guidance, or the legislature should enact legislation, that explicitly states under what circumstances the department will pursue reopeners with parties who already have received official agency sign-off. Reopeners could be limited to the following situations: 1) the discovery of new and incriminating information

about a site; 2) the failure of a cleanup remedy; and 3) the presence of fraud or misrepresentation. Alternatively, the DTSC or the legislature could clarify circumstances in which cleanup agreements will *not* be reopened. As in New Jersey, for example, reopeners could be ruled out (except for responsible parties) in situations in which state cleanup standards subsequently change.

- **In lieu of federal legislation clarifying the liability relationship between U.S. EPA and the states, the Cal/EPA and the U.S. EPA should enter into a brownfields SMOA.** The brownfield-specific language in such a SMOA should incorporate many of the “hands-off” features used by the EPA's Region 5. It should provide a federal no-action assurance and specify circumstances in which the EPA will reopen or intervene in the state's supervision of brownfield cleanups. This clarification of the federal role vis-à-vis state cleanup activities would provide prospective purchasers in California with a much-needed element of security.

#### Issues Needing Further Exploration

- **Should the California legislature adopt a proportional liability scheme?** More experience is needed with California's ERAP program, and with proportional liability in general, before its effectiveness can be properly gauged. The legislature should examine the merits of DTSC's proposal that combines elements of the state's proportionate liability with aspects of the federal strict, joint, and several scheme. The proposed system essentially would reward “good actors” with proportional liability and punish “bad actors” with the CERCLA liability scheme. To work in California, the DTSC estimates that the legislature would need to increase the annual orphan share funding available to the agency by \$7 to \$10 million. Many experts contend the real figures would be exceedingly higher, however.

- **Does it make sense to link liability release to compliance with numeric state cleanup standards?**

As discussed in Chapter Four, California has no generic, numeric cleanup standards or “look-up tables” for soil remediation. Each site cleanup is negotiated individually and must meet a carcinogenic and noncarcinogenic risk range outlined in federal regulations. This system creates a great deal of ambiguity regarding “how clean is clean” and makes developers and lenders apprehensive about their long-term liability.

In Pennsylvania, parties are released from liability once compliance with state environmental remediation standards (the state’s soil cleanup numbers) has been met. At that point, parties are no longer liable except for future releases that occur. Liability protection is extended to the party conducting the cleanup, future property owners, anyone who occupies the site, and the current owners who participated in the cleanup. Significantly, these liability restrictions include protection from third party contribution actions and from Pennsylvania citizen suits.<sup>52</sup>

With detailed yet easy-to-read look-up tables, California could follow Pennsylvania’s lead and tie liability release to compliance with numeric standards. It should be noted, however, that the concept of generic cleanup standards does not enjoy universal support. Many environmental and community groups contend that the standards fail to sufficiently protect public health and assert that site-specific risk assessments remain essential.

- **Should the California legislature explore ways to separate liability for ground-water contamination from soil contamination?** The state could require that prospective purchasers only remediate soils; groundwater contamination could be separated out for liability purposes and addressed by the responsible parties or, in situations in which responsible parties are absent or insolvent, by the state.<sup>53</sup>

If a California property owner can demonstrate that no action on his or her part generated the groundwater pollution beneath a site, the state typically will free the owner of any cleanup burden.<sup>54</sup> The drawback to this scenario is that the onus rests with the property owner to demonstrate his or her innocence, rather than with the state to prove the owner’s guilt. Several other states – including Delaware, Illinois, Indiana, Minnesota, Texas, Wisconsin, and Washington – exempt owners from groundwater cleanup requirements if they can demonstrate that waste at their site is not causing the contamination.<sup>55</sup>



# III. The Regulatory Environment

**“California has long been a world leader in promoting environmental protection and setting high environmental standards. Yet, the individual laws and regulations developed to save and enhance California’s environment, when taken together, have produced a complex and confusing compliance process which sometimes tests the patience of even the most committed applicants.”**

– California EPA, December 1995

One of the biggest challenges associated with brownfield redevelopment in California is the highly confusing regulatory environment. Like many states, California has attempted to simplify its regulatory programs and make the brownfield cleanup experience more user-friendly. A few of the more notable initiatives have included consolidation of state and local permit applications, designation of “lead agencies” in the cleanup process, accelerated state oversight and approvals, and the creation of a private site manager’s program. Some of these initiatives are working better than others. At this point, the state needs to improve its existing programs and consider implementing some entirely new and innovative ones.

## Multiple Oversight Agencies in California

Two state agencies oversee brownfield cleanups in California. The Department of Toxic Substances Control (DTSC) administers the main brownfield program, the VCP, and can handle cleanups of nonpetroleum contaminants, such as metals, PCBs, solvents, and semi-volatiles. But if there is groundwater contamination (or polluted soils threatening groundwater contamination), a petroleum release, or concerns about leaking underground fuel tanks, one of nine Regional Water Quality Control Boards (RWQCBs) usually assumes oversight. Often parties will need to consult

both the DTSC and the water boards – as well as relevant local agencies – during a cleanup. Sometimes even federal agencies must be involved. Such consultation considerably increases the time and the cost it takes to get a project underway.

While the DTSC and the water boards have similar missions, their requirements and procedures can differ significantly given the separate statutory schemes that bind them: the Health and Safety Code and the Water Code, respectively. Many view the DTSC as a typical state agency – large, bureaucratic, slow – but

Pemaco chemical plant site, Maywood, California



Like many states, California has attempted to simplify its regulatory programs and make the brownfield cleanup experience more user-friendly.

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**WHAT STATES CHARGE TO OVERSEE VOLUNTARY BROWNFIELD CLEANUPS**

|                      |   |
|----------------------|---|
| <b>Arkansas:</b>     | \$65/hour   |
| <b>California:</b>   | VCP participants must pay 50 percent of estimated project costs in advance; the DTSC and the water boards both bill on a quarterly basis at \$70 to \$85/hour |
| <b>Connecticut:</b>  | \$500 application fee; \$50/hour  |
| <b>Delaware:</b>     | \$5,000 deposit. Additional costs billed at \$45 to \$65/hour   |
| <b>Illinois:</b>     | \$5,000, or half the anticipated cost, whichever is less  |
| <b>Indiana:</b>      | \$1,000 application fee   |
| <b>Maryland:</b>     | \$6,000 application fee   |
| <b>Minnesota:</b>    | Billed on a quarterly basis at \$75 to \$85/hour  |
| <b>Missouri:</b>     | \$200 application fee, plus up-front deposit of \$500 to \$5,000  |
| <b>Nebraska:</b>     | \$5,000 application plus \$5,000 participation fee  |
| <b>New Jersey:</b>   | Roughly \$75/hour   |
| <b>Oregon:</b>       | \$5,000 due when agreement is signed  |
| <b>Ohio:</b>         | From \$1,000 to \$18,500 (typical fees are between \$1,000 and \$7,900)   |
| <b>Pennsylvania:</b> | \$250 to \$500 to review work plans and reports   |
| <b>Tennessee:</b>    | \$5,000 application fee   |
| <b>Texas:</b>        | \$1,000 application fee (16 hours of oversight @ \$60/hour)   |
| <b>Vermont:</b>      | \$500 application fee and a \$5,000 deposit   |
| <b>Wisconsin:</b>    | \$250 application fee; \$1,000 if site measures less than one acre and \$3,000 if site measures more than one acre  |

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relatively consistent in its policies. The water boards, on the other hand, tend to be more responsive and flexible, able to achieve faster turnaround times on approvals. But they also have a reputation for being inconsistent from one region to the next. Water board officials agree; policies do vary from logging regions in the northwest part of the state to the urbanized areas in Oakland and San Francisco. But they argue that this set-up is preferable to the DTSC’s one-size-fits-all regulatory approach.

DTSC officials contend that water boards generally do not have the technical expertise and staff available to oversee many sites. As a result, they say many properties are being reused without proper agency oversight, or being mothballed rather than put back to productive use.<sup>56</sup> Water board officials argue that the DTSC falls short of the mark, as well. They cite the bill analysis for SB 1248 (Local Agency Cleanups) in which a Ventura County health officer said that he had “encountered several instances when a property owner wished to clean up a spill or other contamination problem under government supervision but was turned away by the DTSC because it did not have sufficient staff to supervise the cleanup.”

The truth is that both agencies are highly overworked and lack the resources needed to address hundreds of these lower-priority brownfield sites. But what is the solution? Should California try to make piecemeal changes within the existing regulatory framework? Or should it contemplate wholesale change, possibly creating a consolidated brownfield redevelopment agency that focuses solely on promoting site cleanup? Designating a single “lead brownfields agency” for the state – either the DTSC or the water boards – may make the most sense, but it could prove politically infeasible given that each agency is so institutionally entrenched.

One solution would be to amend Chapter 6.8 of the Health and Safety Code to require that the DTSC and the State Water Resources Control Board (SWRCB) develop a “consistent and unified program,” as opposed to a “not inconsistent program” which the statute currently calls for.<sup>57</sup> At a minimum, the DTSC and the SWRCB should comply with current laws requiring that they jointly review and revise their policies and procedures for consistency.

A bill recently enacted by the state legislature (AB 871, Wayne) makes a seemingly minor but potentially important change to the state Superfund law: it gives the DTSC authority over sites with pure petroleum releases, such as former oil refineries, that it currently is prohibited from handling due to the petroleum exclusion in the Health and Safety Code. The department is still precluded from overseeing leaking underground storage tank cleanups. “This will potentially expedite the cleanup process by consolidating authority for cleanup with DTSC for non-fuel tank hazardous material releases,” according to the bill analysis for AB 871.”<sup>58</sup> This statutory change is somewhat nebulous, of course, given that the state Superfund law is set to expire on January 1, 1999.

### United Agency Review

In 1994, the California legislature enacted the “United Agency Review of Hazardous Materials Release Sites” (AB 2061, Umberg), a program designed to simplify investigation and remediation of sites by allowing responsible parties to request that a single state or local agency (commonly referred to as a “lead agency”) be named to oversee their site activities. A party submits an application to the Cal/EPA’s Site Designation Committee and then a hearing is held to select the appropriate lead agency.

In theory, United Agency Review is an excellent idea. In practice, however, it works less smoothly

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### SITE DESIGNATION COMMITTEE STATEWIDE STATISTICS (FEBRUARY 1998)

Since June 1984, 63 sites have been assigned a “lead agency” by Cal/EPA’s Site Designation Committee. More sites applied, but not all were accepted and assigned a lead agency.

- 19 were assigned to one of the RWQCBs
- 28 were assigned to the DTSC (with 16 enrolled in the ERAP program)
- 16 were assigned to local agencies

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63 sites total

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**Both the DTSC and the water boards are highly overworked and lack the resources needed to address hundreds of lower-priority brownfield sites.**

than expected. Negotiating the selection of a lead agency is daunting to begin with, often costing developers thousands of dollars in consultant’s fees to simply figure out what is required. Even more troubling, turf battles frequently ensue among state officials, as well as between state and local officials, over how projects should be handled. “Other agencies simply don’t go away when they are not named the lead agency,” says one DTSC official. “In fact, ironically, sometimes they get more interested in the site.” A recent memo issued by the DTSC’s Site Mitigation Update Advisory Committee conceded that “coordination [between the lead agency and] support agencies remains problematic.”<sup>59</sup> Such turf battles undermine the very thrust of the program: to simplify, rather than complicate, the regulatory process.

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## DTSC'S SITE MITIGATION UPDATE PROJECT.

In 1997, the DTSC convened a group of interested parties to take stock of the state's hazardous waste cleanup programs and to suggest possible improvements. The group, known as the Site Mitigation Update (SMU) Advisory Committee, split into three subgroups—brownfields, process streamlining, and risk assessment/cleanup—to brainstorm about possible regulatory improvements. A number of ideas in this policy paper were drawn from the SMU project's conclusions. It should be noted that some groups feel these were industry-dominated discussions that excluded key stakeholders, such as community groups and environmental organizations.<sup>60</sup> For more information on the Site Mitigation Update Project, contact:

**Process Streamlining Subgroup:** Eric Newman, Kahl-Pownall Companies (916) 448-2162

**Remedy Selection/Standards Planning Subgroup:** Anthony Silva, Kaiser Ventures, Inc. (909) 483-8507.

**Brownfields:** Peter Weiner, Paul, Hastings, Janofsky & Walker, (415) 835-1610

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**Many state hazardous waste agencies lack the staffing and financial resources needed to oversee cleanups of brownfield sites.**

AB 2061 could be strengthened by limiting the extent to which other agencies can interfere with a brownfield project once a lead agency has been selected and, more importantly, once a closure letter has been issued. Currently, the law is somewhat unclear on reopeners under the lead agency process. The California legislature could step in and specify that nonlead agencies must petition the Cal/EPA's Site Designation Committee to reopen a cleanup agreement for which a certificate of completion has already been issued.<sup>61</sup>

### **Privatizing Cleanup and Oversight Activities**

Many state hazardous waste agencies lack the staffing and financial resources to oversee cleanups of lower-priority brownfield sites. As a result, contaminated sites are often cleaned up without subsequent state certification. Financial institutions are in turn reluctant to accept these properties as collateral on loans or redevelopment financing.<sup>62</sup>

To remedy this situation, the California legislature in 1995 launched a Private Site Management (PSM) program with the enactment of AB 1876 (Richter). Modeled on similar initiatives in Ohio, Illinois, Connecticut, and Massachusetts, this program allows qualified professionals – those registered as Class II Environmental Assessors – to conduct cleanups with theoretically minimal government oversight. The program is not available at sites with contaminated groundwater, parcels on or adjacent to residential areas, sites posing an imminent and substantial endangerment to public health, or properties with current administrative orders on them. Regulations for the PSM program are scheduled to be finalized late in 1998.

The program is expected to work as follows: a responsible party applies to the DTSC's Site Mitigation Program for eligibility to clean up a

site. Once accepted, a private site manager may take over cleanup following the state Superfund process or, if the site is proceeding under the SB 923 pilot program, the ERAP process.<sup>63</sup> When the cleanup is done, the private site manager delivers a final report and, if acceptable, the DTSC issues a certificate of completion.

Unlike some state programs, California's PSM program calls for extremely active state oversight. All the steps in the cleanup are subject to review and approval by the DTSC. The PSM program also stipulates that comprehensive audits be done at 25 percent of sites. From the perspective of environmental advocates and community groups, strong state oversight is critical to assuring that the work of private site managers is acceptable. For developers and lenders, however, strong state oversight means more red tape, higher costs, and longer project times—all of which they argue detracts from the basic goal of the PSM program, which is to help accelerate cleanups and avoid bureaucratic wrangling.

In contrast to California's program, Massachusetts only requires extensive state involvement at sites it determines have complex contamination. For sites with less complex levels of contamination, a licensed site professional may manage all oversight, permitting, and approvals without state agency involvement.

### **One Stop Shop Facilities**

One of the primary reasons that prospective buyers shy away from brownfield deals is that environmental conditions are frequently unknown at the outset. In order for a developer to decide whether to purchase a site, a battery of costly site assessments may need to be conducted. If contamination is discovered and the developer declines to buy the site, he or she has wasted a great deal of money and time. This prospect makes most developers understandably wary and prompts them to focus instead on

greenfield areas that pose fewer environmental uncertainties. To combat this problem and offer attractive "product" to buyers, cities and redevelopment agencies must start conducting much of the up-front brownfields work themselves.

Emeryville, California is doing just that. The city is launching an innovative "one stop shop" (OSS) initiative that serves as a model for other California cities. Housed in a central downtown location, the OSS will enable stakeholders to obtain information on brownfield parcels throughout the city. The main feature of the OSS is a geographic information system (GIS) database that will provide a listing of contaminated sites. For each site, the system will describe ownership history, land use, zoning ordinances, known environmental contamination, and financing information.

It also will recommend soil and groundwater tests, preapproved cleanup levels (based on intended land use and the location), and acceptable soil cleanup methods. Finally, the system will describe each parcel's relationship to citywide groundwater management initiatives. Emeryville hopes that the OSS will enable individuals to secure planning and building permits, as well as liability sign-off, once cleanup is complete. To date, Emeryville has compiled the needed hydrogeologic, soil, and groundwater information and is moving towards completion of the GIS database. The city has convened a broad-based community task force to provide guidance on the project. It is also drafting a Memorandum of Understanding with the DTSC and the San Francisco Bay RWQCB to ensure faster and easier regulatory clearance.

### **Public Participation in Brownfield Projects: What States Require**

Public participation requirements for California brownfield projects are fairly extensive. In fact,



South Bayfront site, Emeryville, California

according to a 1997 U.S. General Accounting Office report, California ranks among the three states (Indiana and Washington are the others) with the strictest brownfield public participation requirements in the nation. All California VCP participants must prepare a community profile and work with state officials to determine appropriate avenues for public participation based on that profile and the site's proposed activities.<sup>64</sup> Many other states, such as Colorado, Illinois, and Ohio, have virtually no public participation requirements.<sup>65</sup>

The majority of states fall somewhere in the middle of the spectrum. Most require that parties enrolled in a voluntary cleanup program inform neighboring residents of their cleanup and redevelopment plans. This might include publishing a notice in a local newspaper, posting placards at the site, placing copies of a work plan at the local library, or distributing fliers door-to-door. Written comments generally are accepted for 30 days from the date of posting. If a public meeting is requested, the state usually will hold one at the expense of the VCP participant.

Some states impose a "tiered" approach to public participation. At sites with more complex contamination problems, for example, procedures for notifying the public are more extensive. In Pennsylvania, sites that make use of background standards (the most conservative standards) or statewide health standards (generic look-up tables) need only submit notices to the Department of Environmental Protection and the municipality and publish them in a local newspaper. For site-specific cleanups, however, the developer must propose a detailed public involvement program if requested by the municipality. New Jersey also has a tiered approach: for the more complicated cleanups, a voluntary party may be required to hold public meetings and forums. Massachusetts is considering legislation that would require all development agreements to get formal "sign-off" from the municipality and

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## PROPOSED COMMUNITY ASSISTANCE CENTERS

Proposed legislation in 1998 (AB 851, Bowen) would have strengthened opportunities for meaningful public participation and involvement in the hazardous substance cleanup process. Under AB 851, the state would have had to:

- conduct a baseline community survey to determine the extent of public concern about a site
- develop a public participation workplan based on the level of interest expressed by the community
- develop explanatory fact sheets.

The bill authorized communities to form advisory groups with a diverse membership to review and comment on proposed cleanups. DTSC and the regional boards would have been required to assist in the formation of such advisory groups when requested to do so. The law also would have authorized \$400,000 to create two community services offices, one in the north and one in the south, for the purpose of helping DTSC and the regional boards communicate with the public

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## Recommendations – Simplifying the Regulatory Process

community representatives.

- **California's brownfield programs should be unified through either administrative or legislative action.**

This could be achieved in several ways:

- The Cal/EPA or the legislature could consolidate brownfield operations under one roof by naming a single “lead brownfields agency.” This might make a lot of sense. Because it would be fought vigorously by the “losing” agency, however, it is not a truly viable solution.
  - Assuming the legislature reenacts Chapter 6.8 of the Health and Safety Code, it could amend the statute to require that the DTSC and the SWRCB develop a “consistent and unified program,” as opposed to a “not inconsistent program” which the law currently requires;<sup>66</sup>
  - The DTSC and the SWRCB could more aggressively comply with Section 25355.7 of the Health and Safety Code that requires that they jointly review and revise their policies and procedures for consistency.
  - The Cal/EPA could keep the current regulatory set-up intact but focus on improving dissemination of information to the public. For example, it could establish a brownfields clearinghouse with a staff focused on coordinating all relevant brownfields program information from the DTSC, the regional water boards, the California Trade and Commerce Agency, the Office of the State Treasurer, and local and federal agencies. In addition to operating a brownfields hotline, the clearinghouse could disseminate information on brownfield financing options, community involvement strategies, and cleanup standards.
- **The California legislature should fund the creation of local “one stop shop” (OSS) facilities.** As the

city of Emeryville's experience illustrates, local government can take the lead in brownfield activities by performing essential up-front activities, such as providing area-wide site assessments, assembling disparate parcels, and performing occasional remediation. This helps make brownfield sites “market-ready” for potential developers. But cities cannot be expected to take these steps without additional funding. California can and should rise to the challenge by extending funds to local governments in the form of grants or low-interest loans. It should be noted that Emeryville's OSS facility got its start with a \$200,000 pilot grant from the U.S EPA.

- **The California legislature should strengthen the Unified Agency Review Program (AB 2061).** The Unified Agency Review Program, commonly known as the “lead agency” program, could significantly simplify the regulatory process for brownfield reuse projects. But it is not working as smoothly as it should. The California legislature could strengthen the program by amending Chapter 6.5 of the Health and Safety Code and limiting the extent to which other agencies can interfere with a particular brownfield project. Specifically, nonlead agencies could be required to petition the Cal/EPA's Site Designation Committee to reopen a cleanup in cases in which a certificate of completion had already been issued.<sup>67</sup>
- **The California legislature should implement the proposed public participation measures set forth in AB 851, which died in the California Senate in 1998.** These provisions would have required DTSC to develop workplans to coordinate public involvement at contaminated sites, and to create two Community Assistance Centers, one in the south and one in the north, for the purpose of communicating with the public.



# IV. Risk Assessment, Cleanup Standards, and Remedial Technologies

**Attaining traditional cleanup standards, particularly for groundwater contamination, has proven technically and economically infeasible in many instances.**

## Background

As in many other states, California's requirements for cleaning up hazardous materials are consistent with those set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), the federal Superfund program regulations. Rather than stipulate target numbers for the cleanup of soils, the NCP requires that cleanups achieve a risk range of between  $10^{-4}$  and  $10^{-6}$  for carcinogenics (concentrations that represent an excess lifetime cancer target risk of between 1 and 10,000 and 1 in 1,000,000), and a Hazard Index equal to or less than 1 for non-carcinogenic substances. The NCP favors site-specific risk analysis, development of site-specific cleanup standards, treatment of toxics, and permanent remedial solutions regardless of end use.

As a matter of policy, the U.S. EPA has begun to depart from the NCP's approach in recent years. Attaining traditional cleanup standards, particularly for groundwater contamination, has proven technically and economically infeasible in many instances. While the EPA traditionally assumed a residential use scenario as the "point of departure" in developing remediation alternatives, since 1995 it has embraced "reasonably anticipated future land use" in its decisions.<sup>68</sup> After all, contaminated sites are not always redeveloped for residential purposes; commercial and industrial end-uses are in fact more common, so adhering to residential cleanup standards may be overkill.

The EPA has started to allow cleanup standards that are tailored to a property's designated end use as long as the standards remain within the NCP's risk range. California, like most states, has followed this lead. The Cal/EPA will allow contaminants to remain in place provided they are believed to pose no threat to human health or the environment. Parties may use engineering controls, such as pump and treat systems, or institutional controls, such as deed restrictions, to meet remediation objectives.<sup>69</sup> The underlying premise here is that risk can be managed and need not, necessarily, be eliminated altogether. This approach to cleanup, which balances multiple considerations, including cost, public health risk, end use, community acceptance, and technical feasibility, is commonly known as "risk-based decisionmaking."

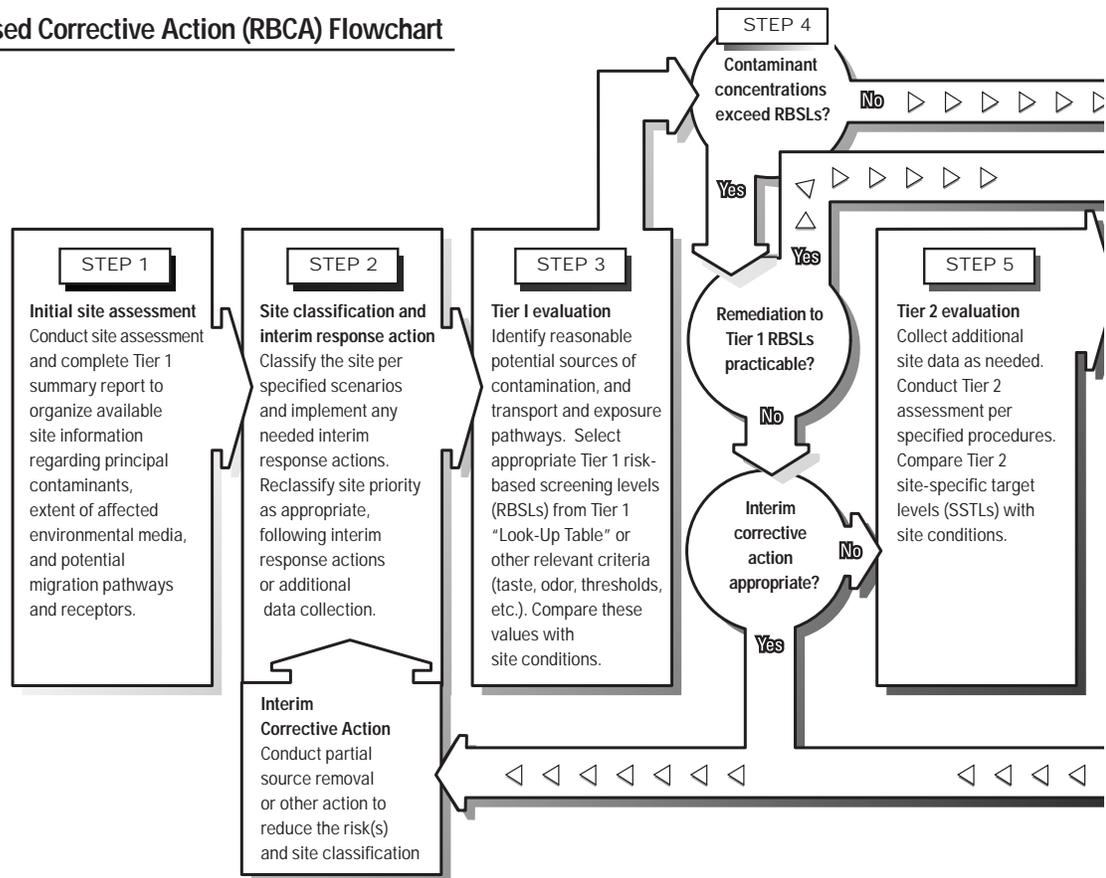
The bottom line is that risk-based decision making is frequently the de facto protocol at the state and federal level, even though the Superfund law is vague on whether it is even allowed. "The statute does not clearly say whether you can or cannot do risk-based cleanups tailored to end use," according to Sally Magnani Knox, chief counsel to the California Assembly Environmental Safety and Toxic Materials Committee. During discussions for reauthorization of the state Superfund law in 1998, lawmakers faced a key question: Should California law be changed to officially recognize

the risk-based policies that are now commonly applied “on the ground,” or should these cleanups remain subject to the judgement of state regulators?

Although the law as it stands appears to be more favorable to business than to environmental or community groups, it was primarily business groups who were pushing for statutory change. They contended that risk-based principles should be written into state and federal laws, and that the current preference for “treatment of contaminants” should be removed to give ongoing remedies, such as engineering and institutional controls, equal consideration. This would help expedite projects and reduce costs, they argued, both of which are essential for encouraging voluntary site cleanups in California.<sup>70</sup>

Advocates of the existing law disagreed. While recognizing that incentives are needed to make cleanups proceed more quickly, they worried that codifying risk-based cleanups would lead to a rash of “second-class” cleanups, with perpetrators of contamination routinely choosing less stringent – and cheaper – industrial cleanup standards. “Once you entertain negotiations to do with technological and cost feasibility [instead of setting stringent standards],” according to the Sacramento-based Planning and Conservation League, “you build in inducement for responsible parties to spend resources advocating for lower standards, simply in an effort to save money.”<sup>71</sup> Indeed, risk-based cleanups raise numerous environmental justice concerns. Such cleanups could potentially result in lower cleanup standards being routinely applied in economically depressed communities.<sup>72</sup>

### Risk-Based Corrective Action (RBCA) Flowchart



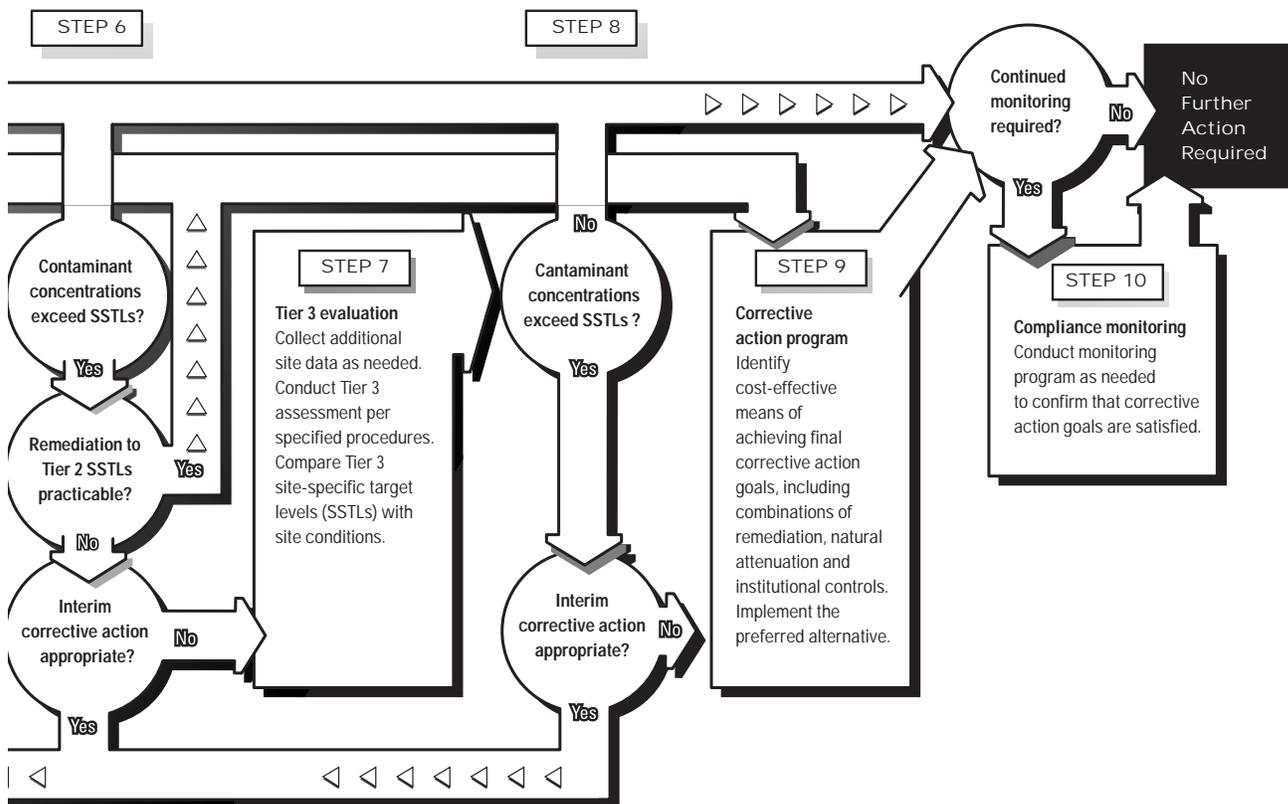
Ironically, some environmental and community groups believe that, for the sake of clarity and uniformity, risk-based principles *should* be codified. Existing standards, they argue, provide too little protection and allow regulators so much flexibility that cleanup standards are arbitrarily applied.<sup>73</sup> Under existing law, they claim, regulators are able to – and in fact do – implement risk-based remedies that allow contaminants to remain in the ground, but without the criteria and standards necessary to determine when it is appropriate to do so.

Ultimately, cleanup standards proved to be the pivotal issue causing stalemate over state Superfund reauthorization this year. Industry groups were troubled that the final bill under consideration, AB 851 (Bowen), contained no discussion of risk-based cleanup standards; in

fact, the bill reiterated that all hazardous substance cleanups in California would need to adhere to NCP guidelines. Industry representatives decided it would be preferable to shelve the law altogether than to extend it for another five years in its current form.

### Development of Formal Risk-Based Decision Making Protocols

Many states have adopted, or are in the process of adopting, formal risk-based decision making methodologies into their cleanup operations. Some are using the Risk-Based Corrective Action (RBCA, pronounced “Rebecca”) protocol originally developed by the American Society for the Testing of Materials (ASTM) for use at leaking underground storage tank sites. Others are designing their own protocols based on RBCA principles.



**“Using appropriately implemented risk-based standards is sound national policy [that helps stem] two environmentally undesirable trends: urban decay and the destruction of greenfields.”**

–The federal Environmental Financial Advisory Board, 1997

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#### **IMO-DELAVAL SITE, OAKLAND**

This site has seen the conversion of a long-closed compressor engine and casting plant into a FedEx facility and an office/warehouse complex. As many as 600 permanent workers are expected. This project is a good example of successful risk-based decision making whereby some contaminants were left on the site and “contained.” The San Francisco Bay Regional Water Quality Control Board reports that the nearby community was informed about the cleanup and involved in the site-related decisions along the way.



The Imo-Deval site prior to demolition, Oakland, California  
*Dennis Morris Photography*



Aerial view of the former Imo-Deval site following demolition  
*Dennis Morris Photography*

RBCA involves a “tiered” approach to risk assessment in which risk level and other variables are plugged in to a model to determine sufficiently protective cleanup standards and corresponding remedial actions.<sup>75</sup> The approach bases the selection of a remedy on intended land use and actual and potential exposure pathways, rather than hypothetical and worst-case pathways. This promotes faster, more efficient cleanups that are supposedly fully protective against contamination exposure.<sup>76</sup> Risk-based standards offer the option of using engineering and institutional controls (i.e., capping or containment of contamination) in lieu of removing or otherwise treating the contaminants.

A central component of RBCA is the creation of generic, risk-based cleanup standards that are applicable to all of a state’s contaminated sites. The standards take the form of “look-up tables” for contaminants under different exposure scenarios (ingestion, dermal contact, inhalation), in various environmental media (soil, air, groundwater), and for designated end-uses (industrial/commercial, residential). Typically the values are conservative, with a default risk range of  $10^{-6}$ .

Using the look-up tables, a developer can proceed directly to cleanup without undertaking costly risk assessments or taking the time and effort to establish site-specific cleanup standards. Alternatively, if the developer wishes to use values in excess of the generic standards, he or she may conduct a site-specific risk assessment to justify higher numbers. For several years, the San Francisco Bay RWQCB has used a modified RBCA protocol to clean up sites with leaking underground storage tanks. “Our experience is that most LUST sites go to Tier 2 when using RBCA because Tier 1 levels are very conservative,” says Steve Morse, chief of the San Francisco Bay RWQCB’s Toxics Cleanup Division. “We would expect that nonLUST sites

will also go to Tier 2, but it means that investigation can be reduced to match risk and expected exposure pathways based upon an agreed upon Site Conceptualization Model.”<sup>77</sup>

More than 15 states have adopted generic risk-based cleanup standards to date. Many developers and state regulators claim that they make the cleanup process significantly easier, more straightforward, and less risky. The federal Environmental Financial Advisory Board agrees: “using appropriately implemented risk-based standards is sound national policy [that helps stem] two environmentally undesirable trends: urban decay and the destruction of greenfields.” California is considering following suit, but there is notable resistance to RBCA on the part of environmental advocates. More significantly, some Cal/EPA officials claim that uniform standards for such a mammoth and geographically diverse state will be impossible to develop, even though several risk-based tools currently exist and are used by state and local officials.

One such tool, created by the U.S. EPA Region 9, is a series of look-up tables called Preliminary Remedial Goals (PRGs). PRGs combine current EPA toxicity values with “standard” exposure factors to estimate acceptable contaminant concentrations in different environmental media (soil, air, and water) that are protective of human health. PRGs correspond to fixed levels of risk:  $10^{-6}$  for carcinogens and a Hazard Index of 1 for noncarcinogens, whichever occurs at a lower concentration. If chemical concentrations exceed these levels, further evaluation and sampling is needed to determine the risks posed by the site.<sup>78</sup> PRGs are intended to function as a mechanism for screening pollutants and determining whether further investigation is needed, not to serve as a stand-alone decision making tool.<sup>79</sup> The DTSC’s Preliminary Endangerment Assessment Guidance Manual (1994) provides a similar “mini” risk-analysis that is widely used to determine the need for future site action.

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## THREE STRATEGIES FOR CLEANING UP CONTAMINATED SITES

### 1) CLEANUP TO BACKGROUND CONDITIONS

“Background” generally refers to contaminants that are present at a site but not related to a specific release. The substance may occur naturally at the site, for example. California does not have uniform background standards. The San Francisco Bay Regional Water Quality Control Board frequently relies on a University of California (UC) Lawrence Laboratory report to determine background concentrations in the Bay Area. Other water boards tend to use a UC Riverside report that addresses background concentrations in other locations throughout the state. The DTSC also has its own procedures for determining background levels.

### 2) CLEANUP ACCORDING TO SITE-SPECIFIC, RISK-BASED STANDARDS

The typical approach to cleanup of contaminated soils, outlined in the National Contingency Plan, involves establishing site-specific cleanup standards – that is, standards based on an assessment of the contamination risk at each individual site. This is the primary approach to contaminated soils cleanup in California.

*States that rely on site-specific determination of cleanup standards: Alabama, Arkansas, California, Colorado, Delaware, Georgia, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nebraska, New York, South Carolina, Vermont, Wisconsin*

### 3) CLEANUP ACCORDING TO STATEWIDE GENERIC, RISK-BASED STANDARDS

These standards are derived using assumptions of certain types of risk (ingestion, inhalation, dermal contact) for certain receiving media (soil, air, groundwater) and for particular end uses (residential/commercial, industrial). Developers start by comparing site conditions with conservative look-up tables; if they wish to exceed those numerical values, they then conduct site-specific risk assessments to justify doing so. Many states allow the use of engineering and institutional controls to meet the numerical standards. Pursuant to the NCP, these standards must fall into a risk range of between  $10^{-4}$  and  $10^{-6}$  for carcinogens and a Hazard Index equal to or less than 1; most states have selected  $10^{-5}$  as their default range.

*States with (or which are developing) statewide generic, risk-based standards: Arizona, Connecticut, Idaho, Illinois, Indiana, Louisiana, Michigan, New Hampshire, New Jersey, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Virginia, and Washington*

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## WHAT IS ENVIRONMENTAL JUSTICE?

Environmental justice is a principle that espouses the right of communities to be fully informed about the health and safety of their neighborhoods. It is inspired by the recognition that poor and minority communities have in decades past been adversely affected by air, water, and soil pollution much more than wealthier, nonminority communities. Environmental justice imposes a duty and an obligation on environmental polluters to prevent pollution from happening in the first place, minimize it if it does occur, properly inform the public, and then clean it up.<sup>81</sup>

The relevance of environmental justice principles to brownfield management is obvious. A report issued by the National Environmental Justice Advisory Council (NEJAC), a federal advisory committee to the U.S. EPA, notes that brownfields are inseparable from issues of social inequity, racial discrimination, and urban decay.<sup>82</sup> Addressing brownfields, therefore, requires simultaneously tackling myriad other factors – social, economic, physical, and political – that accompany urban decay. Some of the environmental justice principles relating to brownfields are as follows:

- Brownfield redevelopment should avoid displacing poorer groups (i.e., gentrifying a neighborhood), as so often happens with urban revitalization efforts, and instead provide opportunity for the people who live nearby.
- Opportunity should be fostered through the creation of jobs, job training programs, and career development strategies.
- Opportunity should be further encouraged through the establishment of locally owned businesses and other community-initiated projects (i.e., projects spearheaded by community development corporations).
- From the outset the community must be informed about – and included in – decisions regarding the brownfield site risk assessment, cleanup alternatives, and end uses.
- State and local officials should find ways to help community members understand complicated issues associated with environmental risk and cleanup.
- Communities should develop a “vision” for their neighborhood and ensure that new development conforms with, or does not detract from, this vision.
- Communities need support and resources to develop such a vision; assistance from state and local agencies, the private sector, and nonprofit groups is vital.
- New businesses should incorporate pollution prevention measures into their operations to ensure that they are as “clean” as possible.

While they are used frequently, PRGs have three notable limitations. They do not take into consideration effects on groundwater or wildlife, or cumulative human health impacts. As such, DTSC officials assert that PRGs should be limited to use at less complex sites and for removal actions – not at all properties.

Some localities are attempting to develop area-wide cleanup standards. The cities of Oakland and Emeryville, for example, are developing risk-based look-up tables for contaminants that may be used throughout the city, not just on individual sites. Some state and local officials believe that these tables could be successfully “exported” to other cities in California. DTSC representatives disagree.

While risk-based cleanups are currently conducted in California, it remains to be seen whether a formal RBCA-like protocol with generic standards could ever be officially adopted in the Golden State. While such a framework would probably move cleanups along faster and more easily, it may be too politically divisive to pursue at this time. In April 1996, the SWRCB tried to incorporate RBCA into official policy but, facing strong opposition from environmental groups, eventually abandoned the effort.

### Cleanup Standards and the Community

Many community groups are concerned about the trend among states towards less stringent brownfield cleanup standards. In addition to allowing more creative ways to achieve remediation, some states have lowered the acceptable threshold for cancer risk that must be attained from  $10^{-6}$  (1 additional cancer death per 1,000,000 persons) to  $10^{-5}$  or  $10^{-4}$  (1 additional cancer death for every 100,000 or 10,000 people).

The increasing use of institutional controls, such as deed restrictions, and engineering controls, such as clay caps to contain site contamination, has many communities concerned. The fear is that contaminated sites could inadvertently be used for housing or recreation at some point in the future, seriously jeopardizing public health. State officials call this unlikely as deed restrictions run with a property's title. But could crucial information potentially slip through the cracks at some point? Perhaps.

Environmentalists point out that the 1978 Love Canal incident in New York, which catapulted toxic waste mismanagement into the national spotlight, involved an area of known contamination that was later reused for residential homes, despite safeguards that should have prevented such use. The DTSC works to avoid such mistakes by writing up long-term operation and maintenance agreements or orders for property owners to sign.

According to a 1997 U.S. General Accounting Office study, California is actually one of the strictest states when it comes to monitoring restrictions that have been placed on properties. Indeed, its requirements parallel those of the federal Superfund program.<sup>80</sup> When there is ongoing operation and maintenance of a groundwater treatment system, for example, the owner must submit progress reports for the life of the system and formally evaluate the cleanup every five years. In contrast, states such as Wisconsin, Illinois, New Jersey, and Minnesota, require no active operation and maintenance activities.

A bill passed by the California legislature in 1998 supports community right-to-know provisions regarding deed restrictions. AB 871 (Wayne) requires the DTSC to generate a list of properties that have deed restrictions and make the list available to the public electronically. This expands on an existing law (SB 562, Thompson) requiring the state and regional water boards to make public a registry of UST sites that have been closed with residuals left in place.

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## PREVENTING THE "MOTHBALLING" OF BROWNFIELDS

Michigan's "Affirmative Remedial Obligations for Current Site Owners" program requires owners of a certain class of industrial properties to investigate property conditions and, if contamination is discovered, to complete any necessary remediation within a specified time period. This anti-mothballing measure aims to return idle properties to local government tax rolls while ferreting out any lingering contamination problems that might jeopardize public health. Failure to comply with this law results in fines and penalties.

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Another concern for communities is the potential that a remedy will fail. What if contamination that is supposedly being contained on a site happens to migrate onto surrounding properties or percolate into drinking water wells? This is exactly the type of long-term management nightmare question that prompted CERCLA to favor permanent, rather than ongoing, hazardous substance cleanup solutions. In some instances, however, permanent solutions are not technically or financially feasible. State agencies, therefore, have had to find a "middle ground" between safeguarding environmental and public health and allowing economically and technically feasible cleanups.

The dilemma for communities is that brownfield cleanup projects often translate into economic revitalization, new jobs, and a cleaner environment on sites that might otherwise sit idle, presenting ongoing health problems for a community. So while community groups might want to insist on remediation to background levels, they also recognize that requiring such stringent cleanup might ward off potential development. Is some cleanup and development better than none at all? Many groups are struggling to answer that question.

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## PREVENTING BROWNFIELDS

In 1996, Ohio developed the Cessation of Regulated Operations (CRO) program to prevent owners from abandoning properties where hazardous substances and petroleum have been used, stored, or treated. In short, it is a brownfield prevention program. The CRO applies to the 11,000 Ohio facilities that are required to submit an annual Chemical Inventory Report to the state. Within 30 days of the closure of a regulated facility, the company must state in writing that all hazardous substances have been lawfully disposed of and/or removed from the site and that proper security or fencing has been put in place. This would be an excellent program to import to California to discourage the abandonment of contaminated properties.

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Southfork Timber Industries mill site, North Fork, California

## Cleanup Technologies

Parties setting out to implement cost-effective cleanup technologies, particularly for groundwater contamination, will find relatively few to choose from. The limitations of many conventional cleanup technologies are now widely recognized by environmental engineers, scientists, regulators and others involved in waste site remediation.<sup>83</sup> In 1994, the National Research Council (NRC) evaluated the performance of conventional pump-and-treat systems for groundwater cleanup at 77 sites and found that only 10 percent had met regulatory standards.

In its 1997 “Innovations in Groundwater and Soil Cleanup” report, the NRC offered two solutions to the problem of inadequate cleanup technologies: lower cleanup standards so that they are attainable given current technologies, or explore new, innovative cleanup technologies that make stricter cleanup standards possible. The council reports that across the nation, states are pursuing the former strategy – relaxation of cleanup standards based on risk and end use – despite the opposition of many groups. “We should be putting our resources into meeting strong cleanup standards,” contends the Planning and Conservation League, “instead of trying to walk away from health-based requirements.”<sup>84</sup>

DTSC officials claim that they are increasingly using new technologies, such as soil vapor extraction and thermal desorption, and innovative methods for conducting field assessments. The San Francisco Bay RWQCB has tried such innovative technologies as reactive walls and the use of molasses to bioremediate hexvalent chromium. But the fact is that these technologies have an uncertain future. Waste site managers and regulators often steer away from new technologies that could significantly enhance soil and groundwater quality with the worry that they might fail.<sup>85</sup> Existing techniques are used because they are

what people know. As a result, the market for developing innovative cleanup techniques remains poorly developed.

On a programmatic level, state law requires the DTSC to implement an ongoing program of “full-scale demonstrations” to evaluate innovative treatment technologies. While this is an excellent program, DTSC officials say there is often a lack of information-sharing and dissemination of lessons learned once the demonstrations are completed. The state should actively address this problem within the context of reenacting chapter 6.8 of the Health & Safety Code in 1999.

### Groundwater Issues

For years, California has struggled with how best to clean up sites where fuels and solvents have contaminated the groundwater.<sup>86</sup> Separate cleanup standards for nondrinking groundwater do not exist; one must meet or exceed state water quality objectives (expressed in Maximum Contaminant Levels [MCLs]). Experience has shown, however, that it is often technically difficult and economically infeasible to meet MCLs. And perhaps it is not even necessary. Site-specific risk assessments frequently indicate that exceeding MCLs is acceptable as long as no potential for human exposure exists.

Several State Water Resources Control Board (SWRCB) policy directives have attempted to at least partially address groundwater cleanup issues. In December 1995, the board’s executive director, drawing on a Lawrence Livermore National Laboratory study, issued guidance to the regional water boards for low-risk UST fuel hydrocarbon cleanups. The guidance called for removing the tank source, closing cleanups that involved soil contamination only, and initiating long-term monitoring at sites with groundwater contamination. For these low-risk sites, the guidance notes, passive bioremediation is as effective a cleanup strategy as traditional pump-and-treat methods. This approach was confirmed

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The city of Emeryville is designing a program – the “Risk Management Model for Accelerating Brownfields Redevelopment” – that will advance the application of containment zones from a site-specific to a more area-wide approach to groundwater monitoring and cleanup. The strategy involves encouraging redevelopment by providing developers with predictability when investigating, cleaning up, and monitoring soil and groundwater.

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Master Plating Company is located in the Barrio Logan neighborhood of San Diego, California

**Environmental groups argue that implementing the containment zone policy could result in a wholesale “write off” of groundwater resources to pollution, with the prospect of widespread cleanup correspondingly waning.**

later by a legislative scientific review committee as well as independent analysis by the State of Texas on their UST fuel leaks.<sup>87</sup>

With regard to cleanups involving volatile organic compounds, in late 1996, following a two-year, highly contested rulemaking process, the SWRCB adopted a policy that concluded that in cases in which water quality objectives cannot be reasonably achieved due to economic or technical feasibility constraints, contaminants may be managed by containment in place – in “containment zones.” In other words they do not require additional removal and remediation.<sup>88</sup>

The containment zone policy has proven to be exceedingly controversial. It is opposed by numerous environmental groups and some state legislators who believe that the policy is so broad and open-ended, gives so much discretion to regional water board officials, and imposes so few requirements on dischargers and so few safeguards on the environment, that leaving contamination in the ground may become the rule rather than the exception.<sup>89</sup> Environmental groups argue that implementing the containment zone policy could result in a wholesale “write off” of groundwater resources to pollution, with the prospect of widespread cleanup correspondingly waning.

In response to these concerns, State Senator Jack O’Connell (D-Carpinteria) introduced SB 661 in 1997, a bill that, in its original form, would have limited the circumstances under which containment zones could be created and would have established a range of other containment zone parameters. The legislation emerged from O’Connell’s experience with two contaminated Unocal Corporation sites in his district, San Luis Obispo County. At the first site, the Guadalupe Dunes oil field, O’Connell claims that 8 to 20 million gallons of kerosene-like oil thinner were released into the ground, contaminating 600 acres. At the second site, more than 300,000 gallons of oil leaked from the Unocal storage tanks and moved under much of the small coastal community of Avila Beach. In both cases, Unocal apparently intends to take advantage of the state’s containment zone policy and leave the contamination in place – a prospect that troubles Senator O’Connell and several environmental groups.

Although SB 661 was eventually gutted of its containment zone provisions, the controversy surrounding these zones in California remains very much alive and unresolved. Indeed, only a handful of containment zones have been established since the policy was adopted two years ago.

## Recommendations – Assessment and Cleanup

- **The California legislature should make funding available to community groups so that they can hire consultants or other experts to help explain brownfield-related issues.** In its original form, SB 913 (Calderon), introduced in 1997, would have made \$50,000 in technical assistance grants available to communities for this purpose. This provision was ultimately removed from the bill.
- **The Cal/EPA should promote the use of innovative cleanup technologies** by a) improving communication and public information dissemination about such technologies, and b) offering financial incentives (perhaps reduced oversight costs) for people who use them.

- **The Cal/EPA should create a “brownfields prevention” program similar to Ohio’s Cessation of Regulated Operations Program.** The Ohio program requires regulated industrial facilities to notify the state (within 30 days of closing) that all hazardous substances have been lawfully disposed of and/or removed from the site and that proper security or fencing is in place.
- **The California legislature should discourage “mothballing” of industrial facilities** by launching a program similar to Michigan’s “Affirmative Remedial Obligations for Current Site Owners Program,” which requires owners of certain industrial properties to investigate property conditions and, if contamination is discovered, to complete necessary remediation within a specified time period. Since owners are required to complete the remediation regardless of whether the property is reused, the program ultimately encourages the reuse or sale of cleaned-up properties.

#### Issues Needing Further Exploration

- **Should the preference for “permanent remedies” and “treatment” be retained in the state’s Health and Safety Code,** or should the law specifically recognize ongoing cleanup measures, such as engineering and institutional controls, as adequate and final site remedies? This was one of the more controversial questions surrounding Superfund reauthorization in California.

Although the state superfund law was not reauthorized in 1998, this issue of how to treat site contaminants is far from being resolved.

- **Should the legislature amend the state’s Health and Safety Code to formally incorporate risk-based decision making into state cleanup operations?** And should state law specifically allow consideration of a site’s end use to determine appropriate cleanup remedies? This would require the DTSC and the regional water boards to develop numeric cleanup standards, or “look-up tables,” a task that could be achieved with legislative adoption of the EPA Region 9’s Preliminary Remediation Goals (PRGs).

PRGs are conservative cleanup numbers based on consideration of what the site will be used for (i.e., as a residential complex or a commercial/industrial plant). Some of the EPA’s PRGs are not applicable in California, which has stricter benzene and vinyl chloride dose rates and concentrations than EPA, for example, and a different method for addressing polyaromatic hydrocarbons and lead. Furthermore, while PRGs are commonly used by state and local regulators as a “launching-off point” to determine whether future site assessment is needed, the idea of codifying them has proven highly controversial, with environmental and community groups continuing to assert that each site must be individually assessed.



# V. Brownfields Finance: The Key Role of the Public Sector

This chapter written with assistance from Elizabeth Ward, Washington Advisors

## Background

The list of reasons for why lenders and developers avoid brownfield projects is long. Conflicting and overlapping regulations often create unacceptable levels of risk and uncertainty. The demand for cleaned-up sites may be limited or unknown. Open-ended cleanup costs can make redevelopment a precarious prospect. And many brownfield sites are located in poor, crime-ridden neighborhoods with deteriorating infrastructure – all qualities that make them unattractive to potential developers.

But by far the most critical hurdle to brownfield redevelopment is lack of financing. Projects unable to obtain initial financing commitments rarely move to the point of resolving other regulatory and liability issues.<sup>90</sup> Indeed, financing is essential for hiring outside consultants who can help developers work through regulatory and liability obstacles later on.<sup>91</sup>

According to the San Francisco-based Development Fund, public and private sources are not serving a major portion of the market for impaired lands. Banks and private investment programs limit their involvement to established borrowers, larger projects, and deals with relatively high rates of return. Commonly passed over are:

- projects backed by smaller and less established property owners without sufficient collateral and other resources to qualify for conventional financing.

- smaller projects for which the transaction costs required to underwrite the deal, including environmental due diligence, are relatively high.
- projects with low or marginal returns that despite positive cash flow are insufficiently profitable to interest conventional financing sources.
- projects that require special attention because of their complexity or location, such as those needing multiple layers of financing to make them viable, those with unusual contamination issues, and those in low-income areas for which there is uncertainty (actual or perceived) regarding economic success.<sup>92</sup>

One of the main reasons why banks are reluctant to get involved with the smaller, marginal brownfield projects is the potential for loss of collateral. Although California lenders were given broad liability protection in 1996 under SB 1285 (Killea) and amendments to Superfund and the Resource Conservation and Recovery Act, banks are not protected if the value of their collateral – the brownfield property – plummets due to the discovery of contaminants. Further, banks know that when borrowers get stuck with surprise cleanup costs, their ability to repay loans drops significantly. This obvious concern on the part of lending institutions is further complicated by the so-called “single action rule.”<sup>93</sup>

For these brownfield sites where development is less viable, the role of the public sector is critical. Certain states and cities around the

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## STATES THAT HAVE RISEN TO THE BROWNFIELD FINANCE CHALLENGE

|                      |  |
|----------------------|--|
| <b>Pennsylvania:</b> | \$43.2 million for brownfield activities thus far                                    |
| <b>Michigan:</b>     | \$73 million, various bond issues; \$30 million annually through state general funds |
| <b>Minnesota:</b>    | \$7.8 annually in state appropriations; \$6.5 in earmarked property taxes revenues   |
| <b>Ohio:</b>         | more than \$20 million annually from a variety of sources                            |
| <b>New Jersey:</b>   | \$55 million total in bonds and state appropriations thus far                        |
| <b>New York:</b>     | \$200 million total in bonds thus far  |
| <b>Connecticut:</b>  | \$30 million total in bonds thus far   |

## COMPARISON

|                    |   |
|--------------------|---|
| <b>California:</b> | Up to \$5 million total but this money only covers 10 orphan sites under ERAP |
|--------------------|---|

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country have been successful in setting up finance programs that ease the costs and terms of borrowing, augment private funds, and fill funding gaps that the private sector will not bridge.<sup>94</sup> California, however, has not joined this trend.

Other than the \$5 million the legislature authorized to cover 10 orphan sites under the ERAP, there are no state-level financial incentive programs in place to promote brownfield reuse. While a number of the larger sites have moved forward without such assistance, smaller parcels in urban cores and other economically depressed areas are languishing. The legislature must focus on channeling resources to these areas to attract and leverage all-essential private capital. For maximum support and to truly defray brownfield-related costs, these financial incentives must be coupled with measures to simplify the regulatory environment, provide heightened liability relief, and clarify cleanup standards.

## Common Ways to Manage Risk

The financial risk created by contamination falls into three broad categories: remediation-based risks, property value impairment risks, and personal injury risks.<sup>95</sup>

### Remediation-Based Risks

- cost of identifying and characterizing site contamination
- cost of remediation
- cost of complying with federal and state regulations governing remediation
- potential cost of legal fees to defend against lawsuits brought by regulators and/or third parties

### Property Value Impairment Risks

- payments to third parties for nuisance caused to a neighboring property, such as noise during remediation
- payments to third parties for diminution of a neighboring property's value
- payment required due to the decreased security interest of a neighboring property's lender (e.g., contamination – or the perception thereof – causes the value of a foreclosed neighboring property to decline)

### Personal Injury Risks

- payment required because of migrating contaminants that cause personal injury off-site
- payment required because of contamination causing personal injury on-site

The above risks can be mitigated or eliminated in several ways. One common strategy involves drawing up a land lease – that is, separating the future use of the property from the underlying land and groundwater. This allows a financially viable responsible party to maintain ownership of the land while leasing it (with or without an option to buy) to a developer or end user. The main hitch with a land lease is that the lessee cannot be certain satisfactory remediation will

take place. The lease agreement must include an indemnification from the property owner that protects the lessee in the event that the site cannot be occupied due to unforeseen environmental contamination.

Another strategy for managing risk involves having the seller provide the purchaser with a legally binding indemnification agreement. The agreement could stipulate that the seller will cover the purchaser's costs stemming from specified problems, such as the need for on-site remediation for contamination not discovered at the time of the sale. However, the efficacy of such an agreement hinges on the financial strength of the seller over time, which is something that cannot be fully guaranteed without funds being set aside in escrow, a letter of credit being issued, or some other financial assurance being provided.

A third strategy involves the seller reducing the price of the property based on an agreed-upon level of risk incurred by the purchaser. For example, consider a \$5 million property with known contamination that faces remediation costs of \$1 to \$3 million; because of the risk that remediation could cost as much as \$3 million, the seller might reduce the purchase price to \$2 million, with the purchaser then performing the cleanup. This scenario would require that the buyer indemnify the seller. The drawback to this strategy is that "surprise" assessment and cleanup costs might substantially exceed what the buyer originally anticipated.

### Environmental Insurance

One final way to manage environmental risk is with insurance. For many years, it was difficult for buyers and sellers of brownfield sites to obtain coverage for environmental risks; insurance companies were reeling from astronomical environment-related claims made during the 1980s. Standards and Poor's in 1995 estimated that the industry's exposure under the



The former Damson Oil site is located near Venice Beach in Los Angeles, California

**Insurance companies often will not issue policies on projects that seem too risky, and the premiums frequently exceed what developers are willing to pay.**

Superfund program was \$40 billion (discounted present-value basis).<sup>96</sup>

According to a survey conducted by the U.S. EPA, however, insurance companies are once again delving into the environmental arena. They have collected enough data to understand and feel comfortable underwriting the financial risks associated with many contaminated sites. Company officials report increasing demand for coverage of brownfields, particularly in states that have found ways to circumvent brownfield redevelopment barriers with VCPs or simplified cleanup procedures.

Insurance is not a perfect solution, however. Insurance companies often will not issue policies on projects that seem too risky. And the premiums frequently exceed what developers are willing to pay. Some observers note that there is a lingering hesitancy in the marketplace to accept these policies as stand-alone solutions where residual contamination remains at a site. More and more lenders are requiring that a

borrower buy an insurance policy as a condition for receiving a loan (the borrower pays the premium but the bank is the insured party).

Typically, the minimum that insurance companies will offer in coverage is \$1 million per policy, with maximum coverage ranging anywhere from \$10 million to \$40 million.<sup>97</sup> Premiums generally run approximately \$5,000 per each million dollars of coverage, depending on the coverage type. The three most common policies applicable to brownfields are:

**1. Property transfer insurance and third party liability coverage for bodily injury.**

This type of policy combines environmental remediation insurance with liability protection against third party claims for bodily injury or property damage that occur off-site.<sup>98</sup> The following remediation insurance options are typically offered:

- protection against on-site cleanup of unknown, pre-existing conditions, discovery of new contamination, or third party claims
- protection against third-party claims for off-site cleanups costs resulting from on-site pollution conditions that commenced prior to or following the insurance coverage

**2. Cleanup cost cap (stop loss) insurance.**

This type of policy protects an insured against cleanup project costs that run substantially over budget. Many companies offer insurance against cleanup costs exceeding a self-insured retention equal to the expected costs of the cleanup plus a “buffer” or “fudge factor.”<sup>99</sup> For example, if the expected cleanup cost is \$1 million and the buffer is \$250,000, the company will assume the risk of the costs exceeding \$1.25 million. Coverage typically runs \$35 million per occurrence and \$35 million in the aggregate, subject to a minimum premium of \$25,000.<sup>100</sup>

**3. Owner-controlled insurance.**

This type of policy enables an owner or prime contractor undertaking a cleanup to protect themselves against the acts or omissions of other parties involved in the cleanup. It includes protection against the failure of consultants, contractors, and subcontractors to perform as anticipated, protection against their aggravation of site contamination, and protection against claims on the part of contractors’ employees or other third parties for bodily injury arising from site contamination. Owner-controlled insurance can provide coverage for remediation-based risks, value-impairment risks, and personal injury risks.

**California's Tools for Financing Brownfield Redevelopment**

To make the economics of a brownfield deal feasible, financial incentives generally need to be designed to reduce the costs associated with a property, such as through lowering property taxes. Alternatively, incentives can be tailored to reduce the overall cost of redeveloping a property. Connecticut and Pennsylvania, for example, can directly cover remediation and redevelopment costs. Or more realistically, the public sector can make grants and loans available to developers/prospective purchasers; many states have done this with great success.

While California lacks any brownfield-specific grant or loan programs, it does have some traditional economic development tools available at the local level, including tax increment financing and tax abatements. As discussed below, however, they have not been widely used. The state needs to embark on an outreach and education campaign to inform local officials about these tools. In addition, new sources of money must be secured, either by expanding existing programs or creating new brownfield-specific initiatives.

## California's Tax History

To properly weigh workable options for brownfield redevelopment finance, it is essential to understand the state's tax situation. The most important tax landmark is Proposition 13, passed by voter initiative in 1978, which put a limit on property taxes and thus curtailed the main source of funding for local governments and school districts. The new formula established that property taxes would represent no more than 1 percent of the market valuation of property (plus the amount of any voter-approved special taxes), with annual increases not exceeding 2 percent. Proposition 13 effectively slashed local property tax revenues by 50 percent statewide. It also specified that any local tax imposed to pay for a specific program – a “special tax” – must be approved by a two-thirds majority vote. The net effect of this initiative was to undermine the taxing authority of local governments and to limit their ability to support general obligation bonds.<sup>101</sup>

Since 1978, local governments and school districts have had to pursue other funding sources, relying increasingly on assessments, property-related fees, and a variety of small general purpose taxes (e.g., hotel, business license, and utility use fees) to fill the financial gap.

Californians further clamped down on local revenue sources in November 1996, with the passage of Proposition 218. This constitutional amendment requires a two-thirds voter approval prior to imposing any general taxes, assessments, or certain property-related user fees at the local level. Proposition 218 essentially imposes on these new taxes the same voter approval requirements that were placed on “special taxes” in 1978 and, in so doing, radically changes the way that local governments can raise revenue. From now on, according to the Governor's Office of Planning and Research, the revenue-raising process will be slower, the overhead

**The most important tax landmark is Proposition 13, passed by voter initiative in 1978, which put a limit on property taxes and thus curtailed the main source of funding for local governments and school districts.**

greater, and – with the new ability of the electorate to repeal or reduce taxes, assessments, fees, and charges by initiative – there will be less certainty of a continuous revenue stream.<sup>102</sup>

Locally elected officials no longer have the ability to make certain taxing decisions in support of public projects unless 66 percent of voters support them. The irony here is that in order for voters to fulfill this new responsibility, they will need to be armed with a much broader understanding of local government affairs – and finance – than most currently have or probably want to have.

Some important taxes pertaining to brownfields are not affected by Proposition 218, including Mello-Roos bonds, 1915 Act Bonds, redevelopment revenues, and developer fees. (A number of these are discussed later on.) Nonetheless, the power of local governments to finance brownfield projects has been sharply reduced in recent years.

### Redevelopment Agencies and Tax Increment Financing

Around the country, tax increment financing (TIF) has been used for decades to pay for infrastructure and public works projects, usually in poorer neighborhoods. In California, the authority to establish tax increment financing rests with redevelopment agencies, quasi-governmental entities formed to revitalize economically depressed, blighted areas. When a redevelopment area is established, all taxes (county, city, school, special district) are frozen at their current level. Most of the subsequent

**Increasingly, local governments nationwide are using TIF to fund brownfield assessment and remediation activities, but California cities have been reticent to do so.**



This site was formerly used by the city of Emeryville, California, for a variety of industrial purposes.

increase in property taxes due to development and higher property valuation – the tax increment – reverts to the redevelopment agency, not to the city or the taxing entities. Under California law, 20 percent of a redevelopment agency’s tax increment must be spent on housing for low- and moderate-income people, although this requirement is not always met. The future tax increment also may be used to repay bond holders if bonds were issued up-front to finance activities.

Increasingly, local governments nationwide are using TIF to fund brownfield assessment and remediation activities. California could join this trend but, according to DTSC officials, most of the state’s redevelopment agencies have been reticent to do so. It seems that many locales are not familiar with – or comfortable with – the idea of using TIF for hazardous waste cleanup. Moreover,

officials are reluctant to give away any part of their tax base that could be used for other purposes. A clear way to solve this problem would be to find ways to convince local officials of the importance of making brownfield redevelopment a public spending priority.

**Using TIF to offset property taxes**

Using TIF, redevelopment agencies can grant developers future reductions in property taxes as a way to repay the cost (or a portion of the cost) of remediation. The developer needs to generate the up-front cash flow, but the economics of the transaction fall into place given future tax reductions.

In 1995, the Chiron Corporation was looking to add 2 million square feet of buildings for research and office space. The company was interested in expanding in Emeryville, California, but had serious reservations about the need for toxic cleanup on nearby parcels. These concerns prompted the company to consider more suburban settings for its expansion, such as Vacaville, Pleasanton, or Livermore.

To attract the project, the Emeryville Redevelopment Agency proposed an innovative solution. It agreed to reimburse the company a majority of its cleanup costs by drawing on future tax increment from the site. The arrangement is structured as follows: If Chiron constructs 550,000 square feet of buildings on its properties, it will be reimbursed \$35 million in future tax increment over the next 30 years; if the company builds up to 1.5 million square feet, it will be reimbursed \$70 million over the same time period.<sup>103</sup>

How tax increment from the Chiron site is being disbursed:

- **20 percent** to affordable housing projects
- **40 percent** to the Emeryville Redevelopment Agency
- **40 percent** to the Chiron Corporation to reimburse for cleanup costs

To date, Chiron has built two buildings totalling approximately 250,000 square feet, and is contemplating a third which would get the company to its first 500,000-square-foot mark.



The remediated Emeryville site now houses Chiron Corporation's new headquarters

### Mello-Roos Bonds

Another brownfield financing tool available to local entities is Mello-Roos bonds. The 1982 Mello-Roos Community Facilities Act enables cities, counties, and special districts (e.g., redevelopment agencies, water districts) to establish Community Facilities Districts (CFDs). CFDs may in turn issue Mello-Roos bonds and levy special taxes to support a variety of services.<sup>104</sup> Mello-Roos bonds traditionally have been used to finance new infrastructure, including the installation of utilities and sewer and water lines. New owners, it was hoped, would move into these homes and pay higher property taxes in order to service the Mello-Roos debt. In practice, many Californians have proven reluctant to buy houses encumbered with these taxes.

In 1990, the Mello-Roos law was expanded to allow the issuance of bonds for toxic cleanup, including brownfield-related activities. Mello-Roos bonds can now be used to finance the purchase, construction, expansion, improvement, and rehabilitation of real or other tangible

### MICHIGAN: BROWNFIELD REDEVELOPMENT FINANCING AUTHORITIES.

In 1996, Michigan passed a law allowing local governments to establish Brownfield Redevelopment Financing Authorities (BRFAs)—zones in which various state financial incentives are extended to redevelopers, provided they did not cause the site contamination. Thirty-six zones have been created so far. The main financing tool available is TIF but, unlike traditional TIF districts which capture the increase in taxes from an entire zone, BRFAs only capture taxes on specific sites (possibly limiting its effectiveness to larger redevelopment projects).

The BRFAs also may:

- Set up revolving loan funds (capitalized by the state funds)
- Capture both state and local property taxes (as opposed to local taxes only)
- Offer companies a single business tax credit equal to 10 percent of the redevelopment costs spent at the site.

### ENTERPRISE ZONES IN CALIFORNIA

|   |                                       |
|---|---------------------------------------|
| Agua Mansa (Riverside, Rialto, Colton)                    | Los Angeles, Eastside                 |
| Altadena/Pasadena   | Los Angeles, Northeast Valley         |
| Angelope Valley (Palmdale, Lancaster, Los Angeles County) | Madera                                |
| Bakersfield/Kern  | Merced / Atwater                      |
| Calexico  | Oakland                               |
| Coachella Valley (Coachella, Indio, Thermal)              | Oroville                              |
| Delano  | Pittsburg                             |
| Eureka  | Porterville                           |
| Fresno  | Richmond                              |
| Kings County (Hanford, Lemoore, Corcoran)                 | Sacramento                            |
| Lindsay   | San Diego, San Ysidro / Otay Mesa     |
| Long Beach  | San Diego, Southeast / Barrio Logan   |
| Los Angeles, Central City                                 | San Francisco                         |
|   | San Jose                              |
|   | Santa Ana                             |
|   | Shafter                               |
|   | Shasta Metro Area (Redding, Anderson) |
|   | Shasta Valley (Yreka, Weed)           |

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## FLORIDA'S BROWNFIELDS PROGRAM

In May 1997, Florida passed a brownfields law that allows local governments to establish special "Brownfield Areas" – contiguous zones comprised of one or more brownfield sites – that are eligible for a wide range of economic incentives, including TIF, enterprise zone tax exemptions for businesses, tax abatements, and low-interest loans. The Brownfield Areas may include all or portions of existing community redevelopment areas, state and federal enterprise zones and empowerment zones (discussed later in this chapter), and other specially targeted areas. The bill also includes an important community involvement component: it requires that local neighborhoods be informed about cleanup and redevelopment plans and be given a voice in deciding what the site will be used for.

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**One stop shop facilities lower the cost of brownfield deals because much of the expensive and time-consuming front-end work, including site assessments and investigations, is conducted by the local agency.**

property, whether publicly or privately owned, for the purposes of removing or cleaning up hazardous materials. However, to date only a few cities, such as Los Angeles, Carson, and Emeryville, have considered using Mello-Roos bonds for brownfield purposes.<sup>105</sup>

The main reason for this tepid response to Mello-Roos bonds is that the bonds involve taxing innocent future landowners to pay for the "sins" of former owners. The concern is that new owners will be unwilling to assume higher taxes if there are other, non-toxic sites with lower carrying costs available. Indeed, Mello-Roos bonds may only be feasible when a property is sold at a discount from its current market value.

### State Enterprise Zones

California has 39 Enterprise Zones (EZs), all in distressed communities throughout the state. Operated by the California Trade and Commerce Agency, the EZ program offers businesses tax and other incentives to encourage private sector revival of the local economy. Many of these incentives could help make brownfield projects more economically attractive.

Businesses in EZ areas are eligible for such tax credits and benefits as:

- up to 100% net operating loss carry-forward for 15 years
- \$23,400 or more in sales tax credits for every qualified employee hired
- sales tax credits on purchases of \$20 million per year of qualified machinery and machinery parts
- up-front expensing of certain types of depreciable property
- preference points on state contracts
- a net interest deduction for lenders to zone businesses
- a right to apply unused tax credits to future tax years, thus stretching out the benefit of the initial investment

### **One Stop Shop (OSS) Facilities**

Another strategy locales can use to help reduce brownfield redevelopment costs is through the promotion of OSS facilities. Developers can go to OSS facilities to learn key information about specific brownfield sites, such as zoning ordinances, land use history, environmental conditions, and state-recommended testing. Such facilities lower the cost of brownfield deals because much of the expensive and time-consuming front-end work, including site assessments and investigations, is conducted by the local agency. Truly proactive agencies can even prepare and assemble odd-shaped parcels so that they are essentially “market-ready.” According to a 1998 U.S. Conference of Mayors survey, however, lack of funds is the biggest barrier cities face in performing this up-front work.<sup>106</sup>

### **What Other States Are Doing**

Around the country, many states and localities are using tax credits and abatements to stimulate brownfield cleanups. Incentives can be offered in conjunction with a range of taxes, including income, property, and business taxes.

#### **Income Tax Credits**

Most states link eligibility for brownfield tax credits to enrollment in the state’s voluntary cleanup program. This is a model that California should follow. In Ohio, for example, sites enrolled in the voluntary program and which have received a covenant not to sue are eligible for a tax credit equal to 10 percent of remediation costs (maximum of \$500,000). In designated poverty areas, the tax credit equals 15 percent of remediation costs (maximum \$750,000). Virginia also offers tax credits for sites that have gone through the VCP and been issued a certificate of completion. In July 1997, Illinois Governor Jim Edgar signed legislation giving developers a 15 percent income tax credit on their cleanup costs (up to \$600,000 per site) after the developer spends the first \$100,000.

Maryland offers a unique tax credit option for VCP participants. Parties can get a 50 percent property tax credit on the site’s increased value due to remediation, but the municipality must contribute the remaining 30 to 50 percent of the share to the state. Municipalities can choose whether or not to participate. Some may even hike the tax credit up another 20 percent – to a total 70 percent tax credit – if they are willing to pick up the state’s remaining share.

The Massachusetts legislature enacted a new brownfields law in July 1998 that offers tiered tax credits depending on the type of cleanup remedy selected. If the property has residual contaminants left in place and a future use restriction on it, the state will offer tax credits worth 25 percent of the total cleanup cost. For properties remediated to unrestricted use standards, however, the tax credit rises to 50 percent of the cleanup costs. This provides an economic incentive for developers to select more stringent cleanup standards.

Other states link tax credits to the number of jobs created. Delaware, for example, offers tax credits of \$650 per year for each new job created (\$900 in targeted poverty tracts) up to the full cost of the cleanup. This may not be the best approach for California as it should encourage a wide range of end uses – housing, open space, recreational – not just new jobs.

It should be noted that in February 1998, the chair of the California Assembly Committee on Natural Resources, Deborah Bowen, introduced AB 2165, a bill that would have mirrored the recently enacted federal tax incentives at the state level. This legislation, which died in the Assembly Appropriations Committee, would have allowed parties to fully deduct their brownfield cleanup costs in the year in which they were incurred rather than requiring that the costs be capitalized over many years, as the law now requires. Thus each project would need slightly less capital to move forward.

### Property Tax Incentives

Several states use property tax abatements as a way to encourage brownfield projects. In Idaho, when parties receive a covenant not to sue, the state permits a 50 percent tax abatement on the property's increased value due to redevelopment. Texas has proposed tax abatement legislation for parties that have completed the VCP and received sign-off. The bill calls for a 4-year tiered abatement: 100 percent in the first year, 75 percent the second year, 50 percent the third year, and 25 percent by the fourth year. Ohio also offers tax abatements for up to 10 years and VCP participants may negotiate further abatements.

### Grants and Loans

Many states provide grants and low-interest loans to businesses to encourage the cleanup and reuse of potentially contaminated sites. As with tax incentives, some tie eligibility for grants and loans to involvement in economically distressed areas or to enrollment in a state's VCP. Some limit access to public funds to local government entities (e.g., cities and redevelopment agencies). Here is an overview of what is being offered:

- **Delaware.** Delaware offers loans for up to 90 percent of cleanup costs (maximum \$250,000) and grants for up to 50 percent of cleanup costs (maximum \$25,000). The money comes from the state's Hazardous Substance Cleanup Fund.
- **Iowa.** The Iowa legislature has appropriated \$12 million for loans, loan guarantees, cost-shares, and indemnification of costs. The money is available for public infrastructure projects, including brownfield activities. Contaminated property is transferred from the owner to a nonprofit development agency and finally to the buyer. The state gives the development agency indemnification and the agency, in turn, gives the buyer a "hold-harmless" agreement.
- **Minnesota.** Minnesota provides grants for remediation and certain site assessment work, but the municipality must share half the cost. The grant awards are based on "beneficial net effect," which includes consideration of factors such as job creation, extent of cleanup, tax base expansion, and community improvement.
- **Missouri.** Missouri offers loans, grants, and loan guarantees, but only if the site has been purchased from a political subdivision of the state, such as a city or county, and if the state Department of Natural Resources has overseen the remediation.
- **New Jersey.** In New Jersey, private parties can receive grants and loans for up to \$1 million – public entities can receive up to \$2 million – for brownfield activities when other funds are not available. The money comes out of New Jersey's Hazardous Discharge Site Remediation Fund, a revolving fund capitalized by state appropriations, loan repayments, and interest. Grants and loans may be given to those who caused the contamination as well as those who were not responsible for it.
- **New York.** New York extends grants and loans to municipalities who did not cause contamination for up to 75 percent of assessment and remediation costs.
- **Ohio.** Ohio offers a number of impressive programs:
  - grants to nonprofit economic development corporations in "distressed communities" for land acquisition, installation of infrastructure, and building renovations. The maximum grant amount is \$500,000 with a 25 percent local match required; to claim the grant the economic development agency must have received a covenant not to sue from the state.
  - loans for brownfield site assessment and cleanup that result in water quality benefits, available through the Ohio Water Pollution Control Loan Fund; \$3 million is the maximum loan amount.
  - low-interest loans to companies that

incorporate pollution prevention into site development and employ fewer than 500 employees; the maximum loan is \$350,000.

- a revolving loan fund (the Competitive Economic Development Program) in which loans are extended to “non-entitlement” cities or counties, who, in turn, loan money to businesses for expansion or retention that will create and/or retain jobs. The maximum loan amount is \$500,000. The interesting thing about this program is that it is funded through Community Development Block Grant (CDBG) dollars (through the Department of Housing and Urban Development) and, as such, could have real applicability in California.
- **Pennsylvania.** Pennsylvania has three programs:
  - grants and loans for public and private entities not responsible for causing the contamination. Parties may get assistance for 75 percent of their assessment costs (\$200,000 maximum) and 75 percent of their remediation costs (\$1 million maximum). Fifteen million has been set aside for this program.
  - grants for local government agencies (including nonprofit redevelopment agencies) to conduct environmental assessments and some cleanup in designated “distressed communities.”
  - loans for site clearance, remediation, and new construction.

### Mechanisms for Guaranteeing Private Loans

Several states, including Massachusetts and Connecticut, are exploring the use of insurance-like tools to reduce the risk associated with lending on brownfield sites. A variety of approaches may be pursued. Consider the following two:

- **Massachusetts.** Massachusetts has recently enacted a brownfields law addressing two key concerns of lenders: that cost overruns due to cleanup will impair a borrower’s ability to

**Several states, including Massachusetts and Connecticut, are exploring the use of insurance-like tools to reduce the risk associated with lending for brownfield redevelopment.**

repay the loan, and that if land is found to be contaminated, the bank’s collateral (usually the land) will be significantly reduced.<sup>107</sup> The Massachusetts Redevelopment Access to Capital (RAC) program caps payments for unanticipated cleanup costs and preserves the borrower’s ability to continue the cleanup and repay the loan. Here is how it works: the borrower and lender contribute equal amounts to the RAC reserve fund, which the state then matches and places in the reserve fund. The reserve fund is used to purchase environmental insurance and guarantee the loans. State officials estimate that \$15 million in appropriations will support 1,000 loans of approximately \$250,000 each, potentially leveraging \$250 million in private investment.

- **Connecticut.** Connecticut established a “Special Contaminated Property Remediation Fund” in 1996 to make loans to municipalities and private entities to cover the expense of environmental assessment, site demolition, and administrative costs. Bond approval to launch the fund is pending. Under the plan, 20 percent of the increased value of property tax obligations is deposited into the fund for the first five years after a property has been cleaned up and received state sign-off. This pool is then used to back future loans.

### Potential Sources of Public Sector Money in California

States have had to be creative in finding public dollars to support brownfield activities. A strategy that many states have tried is to tweak existing programs to make them applicable to brownfields. Several California programs could be broadened in this fashion.

| Underground Storage Tank (UST) Cleanup Fund Priority Ranking System |                           |  |
|---|---------------------------|--|
| First Priority  | Class A                   | USTs located on residential property   |
| Second Priority   | Class B: \$5,000 premium  | USTs owned by small businesses, local government entities, and nonprofit organizations with less than \$7 million in total annual revenues.  |
| Third Priority  | Class C: \$5,000 premium  | USTs owned by slightly larger businesses (fewer than 500 employees) that are independently owned and not dominant in their field of operation, and cities and non-profit organizations that exceed Class B limits. |
| Fourth Priority   | Class D: \$10,000 premium | USTs owned by all other groups – including large, commercial oil companies.  |

**Underground Storage Tank Funding**

**The Replacing Underground Storage Tank (RUST) Program**

For the past eight years, the California Department of Trade and Commerce’s Office of Small Business has operated the RUST loan program, a program that extends loans to small business owners and operators of underground petroleum tanks who are trying to comply with state and federal laws.<sup>108</sup> Eligible loan activities include upgrading, replacing, and removing these tanks, but not cleanup work. Parties may qualify for low-interest \$10,000 to \$350,000 loans, with a 10-year loan term if the loan will

be collateralized by business assets, and a 20-year loan term if it will be secured by real estate holdings. The party must be ineligible for conventional financing.

The RUST program is primarily financed through state appropriations; the legislature appropriated \$12 million in 1997, and the governor has requested \$8 million for 1998. The 72 sites enrolled in the state-wide program have approximately \$11 million in loans. Over the past 8 years, the Office of Small Business has made 293 loans exceeding \$50 million.

**Underground Storage Tank (UST) Cleanup Fund.**

Since 1993, the State Water Resources Control Board (SWRCB) has operated an UST Cleanup Fund to pay for the cleanup of soil and groundwater contamination caused by leaking underground fuel tanks.<sup>109</sup> The fund also covers third party claims for bodily injury or property damage resulting from an unauthorized petroleum release. The maximum amount of per occurrence funding available is \$1 million, less the claimant’s required “premium.” Funds are disbursed only after costs are actually incurred or paid. Claims are processed according to a four-tiered priority scheme.

Money for the fund is generated by a per-gallon fee (based on gallonage delivered) paid by owners who have gotten a permit to own or operate an UST. The SWRCB reports that there are more than 32,000 leaking underground tanks in California, only half of which have been cleaned up to date.

**California Pollution Control Finance Authority (CPCFA)**

The CPCFA’s mission is to promote private business investment in pollution control technologies, hazardous waste control projects, resource-recovery techniques and other environmentally beneficial technologies. Located within the Office of the State Treasurer,

CPCFA provides financing to large businesses through the issuance of bonds, and to small businesses through bond financing and other programs. To date the agency has not financed remediation activities per se, but has supported many activities related to brownfield projects, such as the construction of new facilities. A bill passed by the state legislature (AB 1909, Wayne) in 1998, however, amends CPCFA's eligible activities to specifically include remediation of contaminated sites.

#### **Small Business Assistance Fund (SBAF) Tax-Exempt Bond Program.**

This CPCFA program issues tax-exempt bonds to support private business capital costs. Through this type of financing, the CPCFA can pass the lower interest costs and longer repayment terms found in the tax-exempt financial market to private borrowers. To be eligible, businesses must either meet the limitations set forth under the U.S. Small Business Administration guidelines (Title 13 of the Code of Federal Regulations) or employ fewer than 500 individuals. Loans range from \$1 to \$20 million.

CPCFA's tax-exempt bonds can be used for all capital costs, including the construction of new facilities, the expansion or replacement (of all or part) of existing ones, and installation of new equipment. They also may cover "soft costs," such as architectural drawings, engineering and surveying services, and expenses related to regulatory permitting. While the SBAF typically has been used to finance the installation of new pollution control devices, solid waste control, and recycling activities, AB 1909 adds brownfield cleanup activities to the list. However, because federal law does not allow tax-exempt bonds to be issued for contaminated property, the federal tax code will need amending as well.<sup>110</sup>

#### **California Capital Access Program (CalCAP).**

A second program operated by the CPCFA is the California Capital Access Program (CalCAP). Created in 1993, CalCAP was specifically designed to assist small businesses that fall just outside of conventional underwriting standards; they may be undercapitalized, have poor credit caused by rapid growth and/or lack of working capital, or have insufficient collateral to secure business loans, for example.

Unlike a typical loan guarantee program, the CalCAP offers insurance coverage on a portfolio of loans rather than on specific ones. Lenders set up a special loss reserve account that is funded by the borrower, the lender, and CPCFA to cover losses from the lender's portfolio of CalCAP loans.<sup>111</sup> These three payments are deposited into the lender's loss reserve account each time a loan is enrolled in the program. This means the loss reserve account grows with each of the bank's loans. If loan losses are not incurred, reserves grow, creating more incentives for banks to make additional CalCAP loans. The maximum loan amount is \$2.5 million. Since the start of the program 5 years ago, 11 banks have disbursed 1,514 loans, totaling more than \$200 million.

In the past, CalCAP loans generally were not used to support cleanup activities. They were typically used to finance the acquisition of land, the construction or renovation of buildings, the purchase of equipment, other capital projects. With the passage of AB 1909, however, remediation activities are now specifically eligible for CalCAP financing.<sup>112</sup>

The CalCAP provides additional risk coverage for loans that are made to businesses in economically distressed communities, such as state-designated Enterprise Zones, where brownfields are typically located. In these areas, the CPCFA may contribute up to 150 percent of the combined loan premium payments made by the lender and borrower.

**Investors, lenders, and insurers generally have grown less apprehensive about getting involved with brownfields and, in some cases, view them as lucrative business opportunities.**

#### **Industrial Development Bonds (IDBs)**

The California Industrial Development Financing Advisory Commission (part of the Office of the State Treasurer) issues IDBs. These bonds can be used for assembling, fabricating, manufacturing, processing, or warehousing activities that create products for sale, as long as the owner demonstrates that these activities have the potential to create or retain jobs. The maximum face amount of a bond issue is \$10 million per applicant, per public jurisdiction. One job must be created for every \$50,000 of bonds issued.

IDBs may be issued by any public agency, including state and local agencies. Technically they are “revenue bonds,” meaning that the company is responsible for repaying the debt. The bonds are payable from and secured by the revenues of the projects they finance; if the company defaults, the bondholders – not the local taxpayer – support the loss.<sup>113</sup>

The law that created the commission does not allow tax-exempt redevelopment bonds to be used for brownfield remediation activities. However, state law could be amended to specifically add “remediation” to the list of eligible activities. Federal law would also need to be changed.<sup>114</sup>

#### **Hazardous Waste Cleanup Bond Issue (1984) & Creation of Hazardous Substances Cleanup Financing Authority (HSCFA)**

In 1984, the California legislature enacted the Johnson-Filante Hazardous Substance Cleanup Bond Act.<sup>115</sup> This law approved a \$100 million general obligation bond issue whose proceeds the Department of Health Services (now the Department of Toxic Substances Control) used to conduct cleanup at state Superfund sites. That same year the legislature also approved \$100 million in revenue bonds (bonds that were not backed by the state but instead by the projects they supported) and created the HSCFA in the Office of the State Treasurer to issue the bonds.

Both of these financing efforts became the target of considerable criticism in subsequent years. Many parties complained that the lion’s share of the \$100 million general obligation bond issue was used to hire DTSC staff and pay lawyers’ fees rather to fund actual cleanups.<sup>116</sup> The HSCFA never issued a note and financed no hazardous substance remediation projects in its seven years of existence. There are two primary reasons for the HSCFA’s dismal performance: first, revenue bonds were unattractive to investors because of financial concerns about the credit worthiness of companies engaging in remediation projects; secondly, the interest on the revenue bonds was taxable under the federal income tax laws.<sup>117</sup>

Supporters of new brownfield financing efforts in the California Pollution Control Financing Authority – particularly proponents of AB 1909 – are somewhat nervous that history may repeat itself. They fear that, as with the bonds, the private sector will not embrace this new financing vehicle. Many observers note, however, that investors, lenders, and insurers generally have grown less apprehensive about getting involved with brownfields and, in some cases, view them as lucrative business opportunities.

## Creative Funding Mechanisms in Other States

### Bottle Deposit Revenues

Michigan's Cleanup and Redevelopment Fund supports a range of activities (including a brownfields revolving loan fund) and is partially capitalized by unclaimed bottle deposit revenues. The deposit revenues will provide \$15 million annually over the next 3 years, and \$4 million thereafter. The fund will be further bolstered by state appropriations (Governor John Engler has committed \$30 million), money from an environmental protection bond issue, and \$20 million in state funds that were formerly appropriated for other purposes.

### Clean Water Act State Revolving Funds

Eighty percent of Ohio's Water Pollution Control Loan Fund, which finances brownfield activities, was originally financed by capitalization grants under the federal Clean Water Act State Revolving Fund program. The remainder was financed by general state revenues.

### Municipal Recycling Fund

Wisconsin officials are hoping to tap into \$20 million of the state's Municipal Recycling Fund to help pay for brownfield cleanup activities. The fund was created through small business taxes levied to develop a market for municipal waste recycling.

### Motor Vehicle Transfer Fees

In Minnesota, proposed legislation would divert money from the state's Motor Vehicle Transfer fund to sites with petroleum contamination as long as it is not tank-related.

## Federal Financing Options

### Tax Incentives

The Taxpayer Relief Act that President Bill Clinton signed on August 5, 1997, includes a new tax incentive for redeveloping brownfields in distressed urban and rural areas. The law

**The Brownfields National Partnership calls for a \$300 million federal investment in brownfields on the part of more than 15 federal agencies over 2 years.**

allows parties to fully deduct brownfield-related cleanup costs in the year in which they were incurred. To take advantage of these tax deductions, sites must be located in one of the following areas:

- U.S. EPA Brownfield Pilot areas designated prior to February 1997
- Census tracts where 20 percent or more of the population lives below the poverty level
- Census tracts that have a population under 2,000, have 75 percent or more of their land zoned for industrial or commercial use, and are adjacent to 1 or more census tracts with a poverty rate of 20 percent or more
- Any federally designated Empowerment Zone or Enterprise Community.

### U.S. EPA's Brownfields Action Agenda

The agency has distributed \$28 million in \$100,000 - to \$200,000 - grants for site assessment and other brownfield-related activities. There are now 157 pilot sites nationwide and 9 in California: Santa Barbara County, San Francisco, Sacramento, Richmond, Emeryville, Oakland, Stockton, Colton, and East Palo Alto. Another 64 pilot site grants will be awarded in 1998. The agency additionally has started offering \$350,000 - grants to capitalize state and local revolving loan funds which will, in turn, finance brownfield cleanup activities.

### Brownfields National Partnership

In May 1997, President Bill Clinton expanded the administration's brownfields initiative by announcing the establishment of a new Brownfields National Partnership. The

partnership is to provide a framework for cooperation among government, business, and nongovernmental organizations. It calls for a \$300 million federal investment in brownfields on the part of more than 15 federal agencies over 2 years. Examples include:

- EPA to fund \$125 million in site assessment, cleanup, and job training
- The U.S. Department of Housing and Urban Development (HUD) to provide \$155 million in redevelopment and housing funds and \$165 million in loan guarantees
- The Economic Development Administration to provide \$17 million for redevelopment of distressed areas
- The Department of Transportation to provide \$4.2 million for transportation projects in brownfield areas
- The National Oceanic and Atmospheric Administration (Department of Commerce) to grant funds for revitalization of coastal communities
- The Departments of Health and Human Services, Labor, and Education to support brownfields job training
- The Department of Treasury to help implement the newly enacted \$1.5 billion brownfield tax incentive.

In March 1998, the Clinton Administration announced 16 nationwide “Showcase Communities” that will receive about \$28 million in funding and coordinated technical assistance from the 15 agencies involved in the Brownfields National Partnership. Two California communities were named: East Palo Alto was awarded \$1.6 million and Los Angeles was awarded \$3.3 million.

#### **U.S. Department of Housing and Urban Development (HUD) Programs**

HUD is becoming an increasingly prominent player in the brownfields redevelopment arena. A number of cities, including Chicago and Bridgeport, have dedicated a portion of their

annual Community Development Block Grant (CDBG) funds to brownfield activities. CDBG money is distributed to cities each year according to a formula and may be used for loans, loan guarantees, grants, and technical assistance activities.<sup>118</sup> Eligible activities include neighborhood revitalization projects, economic development work, and community facility and service upgrades.

HUD’s Section 108 loan guarantee program is another important brownfields tool available to local governments. Section 108 allows parties to finance physical and economic development projects that are too large for front-end financing with single-year CDBG grants.<sup>119</sup> Eligible activities include economic development initiatives, housing rehabilitation and public facility projects, and large-scale construction projects. In Fall of 1998, HUD will be awarding \$25 million in Brownfield Economic Development Initiative grants in conjunction with Section 108 loan guarantees to a select number of applicants.

The main hitch to using annual HUD money for brownfield redevelopment work is that it can be enormously difficult to pull money out of existing programs for this purpose. Nonetheless, Los Angeles recently established a \$1.4 million Brownfields Revitalization Fund (drawing on its CDBG funds) to support brownfields work. Other cities in California could – and should – do the same. HUD officials report that localities have not yet made brownfield redevelopment a top priority, however. “There’s still so much land available in California,” says Mary Teemley of HUD’s Los Angeles office. “People are in the mindset of expanding, not recycling land.” This underscores an important point: if widespread brownfield reuse is to occur in California, limits must somehow be placed on development and growth at the urban fringe.

In conjunction with the U.S. Department of Agriculture, HUD operates the federal

Empowerment Zone (EZ) and Enterprise Community (EC) programs. These programs offer special treatment and incentives to geographic areas in which the government wants to encourage private investment. In California, there is one EZ (Los Angeles) that receives \$100 million in social service grants and five ECs (Oakland, San Diego, San Francisco, Los Angeles, and Watsonville) that each receive approximately \$3 million. In January 1999, 20 new EZs (5 of them rural) will be selected, provided Congress appropriates the \$1.7 billion that President Clinton requested for this program. The government incentives available in these EZs and ECs can – and should – be used to promote brownfield reuse.

#### The Small Business Administration (SBA)

The SBA has three programs in particular that could be used to support California brownfield projects. While these programs do not specifically cover environmental cleanup, they do apply to many brownfield-related activities, including the purchase of real estate to house business operations, the construction and renovation of buildings, and the acquisition of machinery and equipment. However, as is the case with conventional lenders, the SBA is reluctant to extend loans secured by potentially contaminated real estate. Loss of collateral and potential liability are its two main concerns (although, it should be noted, the SBA does qualify for lender liability relief under federal law).

The Section 7(a) Loan Guaranty Program is one of SBA's primary lending vehicles. It provides loans to small businesses unable to secure financing on reasonable terms through conventional lending channels. The program operates through private-sector lenders whose loans are, in turn, backed by the SBA (the agency has no funds for direct lending or grants). With some exceptions, the SBA can guarantee up to 75 percent of a loan, with the maximum guaranty being \$750,000.

**Los Angeles recently established a \$1.4 million Brownfields Revitalization Fund (drawing on its CDBG funds) to support brownfields work. Other cities in California could – and should – do the same.**

| How Section 504 loans are typically structured |                    |             |
|--|--------------------|-------------|
| Conventional loan                              | \$500,000          | 50%         |
| 504 loan (2nd)                                 | \$400,000          | 40%         |
| Owner cash                                     | \$100,000          | 10%         |
| <b>Total project</b>                           | <b>\$1,000,000</b> | <b>100%</b> |

The SBA's LowDoc program was designed to increase the availability of loans under \$100,000 to small businesses and to simplify and expedite the SBA loan review process. LowDoc offers a simple, one-page application form and rapid, two-to three-day turnarounds on loans. Terms, interest rates, and uses are the same as for any 7(a) loan.

The third program, the Section 504 Program, was created in 1980 to provide long-term financing of fixed assets for healthy, expanding but still small (generally less than 500 employees) businesses.<sup>120</sup> Unlike the 7(a) program, it is administered through 1 of 400 SBA-licensed certified development companies (CDCs) around the country. The CDCs issue SBA-backed debentures. They then offer borrowers low-interest, 20-year loans with a fixed interest rate. Constituting up to 40 percent of any given project's cost, SBA loans may range from \$350,000 to \$6 million. The loans have a typical loan-to-value ratio of 90 percent, so the project's down payment can be as low as 10 percent.

Section 504 funding has some clear advantages. For the borrower, access to 90 percent financing is often the key to moving a project forward. Many small business owners cannot afford the 25 to 30 percent down-payment required by conventional real estate underwriting criteria.<sup>121</sup>

However, there are drawbacks to using SBA funds for brownfield activities. As previously noted, federal law does not allow for the financing of remediation activities, a situation that could be changed through legislative action. Second, SBA officials are very reluctant to lend on projects involving any type of environmental impairment, whether real or perceived. According to Ed

Loescher, senior vice president of the SBA-certified Bay Area Community Development Company, “the SBA wants clean property as collateral so there’s no threat of liability, period.” The fact of the matter is, however, that the SBA does qualify for lender liability relief under CERCLA, pursuant to 1996 amendments. Therefore, it is essential to conduct education and outreach: SBA officials need to be aware of, and comfortable with, this new liability protection.

## Recommendations – Financing

- **California should consider developing a “Brownfield Zones” program, using the Michigan and Florida programs as models.** Such a program would allow local governments to designate special brownfield areas that would be eligible for a wide array of financing incentives, including those used in state Enterprise Zones, redevelopment areas, and other special economic development areas.
- **The California legislature should create a grant/loan program for brownfield site assessment and cleanup.** The grants/loans could be targeted to public entities, such as redevelopment agencies and specially designated “brownfield zones,” for the purpose of inventorying and assessing sites for which no viable responsible party can be identified. The money could help locales establish one stop shop facilities that make brownfield sites more attractive to potential developers.
- **The California legislature should create a fund that the Cal/EPA could use for assessing and cleaning up abandoned brownfield sites or sites where no responsible party can be identified.** The fund could be financed through a special appropriation, an industry tax, or a bond issue.
- **The California legislature should implement an income tax credit (for some percentage of assessment and remediation costs) for parties not responsible for site contamination.** Higher tax credits could be available in redevelopment areas or specially designated “brownfield zones.” These credits could be linked to enrollment in California’s

Voluntary Cleanup Program and/or the equivalent State Water Resources Control Board program.

- **The California legislature should amend the California Industrial Development Financing Act to specifically allow “remediation” as an eligible activity for tax-exempt bond financing.** Federal law would need to be changed as well to make this possible.
- **California should consider local property tax abatements for brownfield redevelopment.** This would involve reducing property taxes until all (or a portion of) the remediation and redevelopment costs have been recovered.
- **California cities should draw on HUD Community Development Block Grant (CDBG) funds and Section 108 loan guarantees to support brownfield activities.** Cities should follow the lead of Los Angeles which recently established a Brownfields Revitalization Fund with the help of CDBG funds. Both HUD and local officials should be made aware of the benefits of allocating funds to brownfields.
- **Local officials should be made more aware of brownfield financing tools currently available in California.** In particular, they need more information on how tax increment financing and tax abatements could help promote brownfield reuse and neighborhood revitalization.
- **Outreach and education efforts should be extended to Small Business Administration (SBA) officials.** SBA field officers and licensed community development companies need to be aware that lenders received broad liability protections under 1996 amendments to both CERCLA and the state Superfund law.
- **The California legislature could amend the Underground Storage Tank Cleanup Fund Program and give priority to sites in typical brownfield areas.** For example, within the program’s four-tiered system, sites located in certain areas (Enterprise Zones, redevelopment areas, Mello-Roos Community Facilities Districts) could be given priority within their respective class. Currently state funding allocations have reached Class C sites with a mandatory 15 percent in Class D sites funded annually.<sup>122</sup>
- **The California legislature should restrict the use of Mello-Roos financing to brownfield locations.** This would discourage greenfield development, which is frequently financed through Mello-Roos bonds.



## VI. Conclusions and Recommendations



A vacant lot in a residential neighborhood, Oakland, California

**Reusing brownfield sites not only revitalizes depressed inner cities, cleans up contamination, and creates jobs, but can be harnessed as a powerful tool for curbing urban sprawl – an increasingly pressing issue as California braces for explosive population growth in the next century.**

Brownfields are a growing and troubling phenomenon in California. At least 38,000 contaminated sites appear on public lists across the state. Many of them sit idle or abandoned, stagnating local tax bases and contributing to urban blight. Unlisted sites may far outnumber listed ones. Addressing these sites ought to be a top priority of state lawmakers. Reusing brownfield sites not only revitalizes depressed inner cities, cleans up contamination, and creates jobs, but can be harnessed as a powerful tool for curbing urban sprawl – an increasingly pressing issue as California braces for explosive population growth in the next century.

In recent years, a number of important programs have been created to encourage the cleanup of brownfields in California, and many larger sites with viable responsible parties have successfully been redeveloped. Remaining are the “problem sites,” typically smaller lots, properties located in undesirable areas, and sites lacking viable responsible parties. These less viable properties demand our attention now.

Creating a climate that is favorable to these deals will be no easy task. The obstacles that impede cleanup and redevelopment are many: legitimate concerns about liability, a complex and confusing regulatory environment, lack of public and private sector financing, and uncertain cleanup standards, among others. To effectively promote reuse of these sites, these challenges need to be tackled in a coordinated manner. Specifically, California needs a comprehensive policy package that:

- provides greater liability relief for prospective purchasers and other innocent parties
- clarifies and simplifies the regulatory environment in order to attract urban redevelopment, minimize costs, and reduce the time needed to complete projects
- creates meaningful public sector financial incentives (at the state and local level) that will leverage private sector dollars
- provides clear, achievable endpoints to cleanup (i.e., answers the question “how clean is clean?”) while ensuring that public health and the environment are safeguarded.

The following policy recommendations support each of the previous points.

### **Liability Relief**

Concerns about environmental liability are a formidable obstacle to brownfield redevelopment. Federal and state Superfund laws declare owners and operators of brownfield sites “responsible parties,” regardless of whether or not they actually caused the contamination. Developers and lenders, fearful of being saddled with cleanup costs and third-party law suits, shy away from sites that have even a hint of possible contamination. The U.S. EPA and the state of California have tried to alleviate these concerns by crafting administrative policies and enacting laws that offer limited liability relief, but the broad specter of Superfund liability nonetheless serves to deter widespread site reuse. Following are some solutions:

- **The U.S. Congress should create explicit exceptions to Superfund liability for innocent parties** (bona fide prospective purchasers, property owners whose land overlies contaminated aquifers, and neighboring landowners not responsible for site contamination) while maintaining CERCLA’s strict, joint, and several liability scheme.
  - **The U.S. EPA should certify states whose voluntary cleanup programs meet specific criteria, and should provide either a federal no-action assurance or a CERCLA liability release for sites that successfully complete the cleanup program.**
  - **Alternatively, the Cal/EPA and the U.S. EPA could enter into a Superfund Memorandum of Agreement (SMOA) that provides a federal no-action assurance for sites that have successfully completed a state’s cleanup program.**
  - **When the California legislature reconvenes in January, 1999, it should either reenact Chapter 6.8 of the Health & Safety Code, the state Superfund law, or replace it with a new, comprehensive brownfield’s law. Without such a law in place,**
- the ability of the DTSC to order and enforce hazardous substance cleanups is diminished, as is protection of public health and the environment. In addition, many of California’s innovative, flexible cleanup programs, such as the Private Site Management program, will cease to exist.
- **The California legislature should consider codifying the Cal/EPA’s prospective purchaser agreement (PPA) process.** Immunity would be provided to prospective purchasers in cases in which the purchaser or some other party is willing to clean up the site. The law should also include contribution protection against third parties seeking future state and federal Superfund cleanup costs.
  - **The California legislature should establish a statutory right to a PPA rather than leaving it to the Cal/EPA’s discretion.** Under such a plan, the state would be required to process a PPA within a certain period of time (60 to 90 days). This would give purchasers and lenders an important measure of certainty about a project’s timeline. A contingency fund would need to be established to pay for any future cleanup costs at sites where prospective purchasers have been given immunity and the parties responsible for the contamination are absent or insolvent.
  - **The California legislature should codify the DTSC’s 1990 policy that provides limited liability relief for land owners whose property overlies contaminated aquifers.**
  - **The California legislature could provide broader liability protection to local agencies and counties who acquire brownfield properties involuntarily (e.g., through tax liens, abandonment, or foreclosure) and perhaps even voluntarily (e.g., through eminent domain).** Local agencies are given immunity for involuntary acquisitions of contaminated sites under state and federal Superfund laws, but there is no such protection afforded under underground storage tank laws or the Porter-Cologne Water Quality Act.

- **The California legislature could amend the 1990 Polanco Act to explicitly apply to cities as well as redevelopment agencies.** This would give cities the same sweeping powers that redevelopment agencies have to order and conduct brownfield cleanups, as well as to secure immunity for themselves and subsequent site purchasers. However, a cautious approach to this strategy would be imperative as some cities, facing funding limitations and strong local development pressure, might abuse this power and perform less-than-satisfactory cleanups.
- **To provide more security to parties enrolled in the voluntary cleanup program, the Cal/EPA could offer covenants not to sue in conjunction with voluntary cleanup agreements;** presently they are available only in conjunction with prospective purchaser agreements. The Cal/EPA could target such covenants to high priority groups, such as municipalities.
- **The DTSC should issue guidance, or the legislature should enact legislation, that clearly spells out the circumstances under which the department will pursue reopeners with parties who have received official sign-off under the voluntary cleanup program.**

#### Liability Issues Needing Further Exploration

- *Should California adopt a proportional liability scheme?* There has not been enough experience with California's ERAP program, and with proportional liability in general, to gauge its effectiveness. The legislature should study the merits of the DTSC's proposed allocation system which is designed to reward "good actors" with proportional liability and punish "bad actors" with enforcement of the CERCLA liability scheme. However, to cover orphan shares under a proportional liability scheme, the legislature would need to appropriate funds for this purpose. Whether this is politically feasible remains unclear.
- *Presently, cleanup standards in California are negotiated on a site-specific basis. Should California could follow the lead of Pennsylvania, which has developed risk-based "look-up tables" for cleanup*

*and now ties liability release to compliance with those standards?* Such a system would provide brownfield redevelopers with a great deal more certainty about site cleanup levels and corresponding limits to liability. However, it would be vigorously opposed by environmental groups.

- *Should the legislature explore ways to separate environmental liability for groundwater contamination from soil contamination?* The state could require that prospective purchasers only remediate soils, while requiring responsible parties to address any underlying groundwater contamination. In lieu of responsible parties paying for cleanup, the state would need to establish a fund to shoulder these costs (financed through state appropriations, an industry tax, or a bond issue).

#### Regulatory Environment

California's regulatory climate vis-à-vis brownfields is downright confusing. When conducting a cleanup, parties often have to work with a myriad of local, state, and federal agencies. Although California has tried to streamline the administrative process, more needs to be done to attract private sector interest and investment in brownfield redevelopment. Following are some strategies:

- **The California legislature should provide funding to local entities for the creation of "one stop shop" facilities,** using the city of Emeryville's program as a model. With the help of such facilities, local governments could more readily accomplish essential up-front activities including area-wide site assessments, assemblage of multiple parcels, and remediation, all of which help make brownfield sites "market-ready" for potential developers.
- **The California legislature should strengthen the Unified Agency Review Program (AB 2061) which allows "lead agencies" to oversee cleanup.** Any amendments to the program should be designed to deter nonlead

agencies from interfering with cleanups – or reopening cleanup agreements – once such a lead agency has been formally designated.

- **The Cal/EPA should launch an initiative to unify and streamline the disparate brownfield programs that the DTSC and the regional water boards operate by either a) naming one as the “lead brownfields agency,” b) establishing uniform cross-agency brownfield policies, or c) preserving the current regulatory set-up but improving information and outreach to the general public.**
- **The California legislature should implement the proposed public participation measures set forth in AB 851, which died in the California Senate in 1998.** These provisions would have required DTSC to develop workplans to coordinate public involvement at contaminated sites, and to create two Community Assistance Centers, one in the south and one in the north, for the purpose of communicating with the public.

### **Cleanup Standards**

As previously discussed, cleanup standards in California are negotiated on a site-specific basis. This is a time-consuming and costly process that creates uncertainty for developers because the question “how clean is clean?” is never fully answered. Fifteen states have moved to clarify the cleanup process by adopting risk-based “look-up tables” for contaminants under specific exposure scenarios (e.g., ingestion, dermal contact, and inhalation), in different environmental media (e.g., soil, air, groundwater), and for designated end-uses (industrial/commercial, residential). While these look-up tables offer much-needed comfort to developers, they are opposed by many environmental and community groups who believe that site-specific risk assessments are essential in terms of safeguarding public health. What follows are some modest recommendations for improving the cleanup process in California.

- **The California legislature should discourage “mothballing” of industrial facilities by launching a program similar to Michigan’s “Affirmative Remedial Obligations for Current Site Owners Program.”** This initiative requires owners of certain industrial properties to investigate property conditions and, if contamination is discovered, to complete necessary remediation within a specified time period. Since owners are required to complete the remediation regardless of whether the property is reused, the program ultimately encourages the reuse or sale of cleaned-up properties.
- **The California legislature should make funding available to community groups so that they can hire consultants or other experts to help explain brownfield-related issues.** Had it not been amended significantly, SB 913 (Calderon) would have made \$50,000 in technical assistance grants available to communities for this purpose.
- **The Cal/EPA should promote the use of innovative cleanup technologies by a) improving communication and public information dissemination about such technologies, and b) offering financial incentives (perhaps reduced oversight costs) for people who use them.**
- **The Cal/EPA should create a “brownfields prevention” program similar to Ohio’s Cessation of Regulated Operations Program.** The Ohio program requires regulated industrial facilities to notify the state (within 30 days of closing) that all hazardous substances have been lawfully disposed of and/or removed from the site and that proper security or fencing is in place.

### **Cleanup Issues Needing Further Exploration**

At the core of the state Superfund reauthorization debate in 1998 were such questions as:

- *Should the California legislature amend Chapter*

6.8 of the Health and Safety Code (the state Superfund law) to formally incorporate risk-based decision making into cleanup operations?

- Should the law specifically allow for consideration of a site's end use in determining cleanup remedies?
- Should the law's current preference for "treatment" of contaminants be expanded to give other cleanup strategies, such as ongoing engineering and institutional controls, equal consideration?
- Should the legislature require that the DTSC adopt numeric cleanup standards similar to the Region 9 Preliminary Remediation Goals (PRG) tables?

These questions sparked intensely heated debate in the California legislature throughout 1998. In the end, they proved to be the pivotal issues that precluded reauthorization of the state Superfund law. The debate on cleanup standards is far from over, however. When the legislature reassembles in 1999, lawmakers will once again consider whether the Superfund law should be reinstated, and if so, to what extent it should be changed in the process.

## Financial Incentives

Lack of financing is one of the single greatest impediments to brownfield reuse in California. Even with recent state and federal legislation clarifying lender liability, many banks simply are not willing – or able – to back potentially risky brownfield projects. This leaves many brownfield sites in limbo. Many of them will need some form of public-sector assistance – in terms of assembling parcels and paying for assessment and cleanup – to move forward. California cities may not be able to shoulder these costs alone due to steep reductions in tax revenues over the past 20 years. The state, therefore, must step forward and assume a central role.



- **The California legislature should consider developing a "Brownfield Zones" program, using the Michigan and Florida programs as models.** Such a program would allow local governments to designate special "brownfield areas" that would be eligible for a wide array of financing incentives, including those used in state enterprise zones, redevelopment areas, and other special economic development areas.
- **The California legislature should create a grant/loan program for brownfield site assessment and cleanup.** The grants/loans could be targeted to public entities, such as redevelopment agencies and specially designated "brownfield zones," for the purpose of inventorying and assessing sites for which no viable responsible party can be identified. The money could help locales establish one stop shop facilities that make brownfield sites more attractive to potential developers.

- **The California legislature should create a fund that the Cal/EPA can use for assessing and cleaning up abandoned brownfield sites or sites where no responsible party can be identified.**  
The fund could be financed through a special appropriation, or an industry tax, or a bond issue.
- **The California legislature should implement an income tax credit (for some percentage of assessment and remediation costs) for parties not responsible for site contamination.** Higher tax credits could be made available in redevelopment areas or specially designated “brownfield zones” These credits could be linked to enrollment in California’s Voluntary Cleanup Program and/or the equivalent State Water Resources Control Board program.
- **The California legislature should amend the California Industrial Development Financing Act to specifically allow “remediation” as an eligible activity for tax-exempt bond financing.** Federal law would need to be changed as well to make this possible.
- **California should consider local property tax abatements for brownfield redevelopment.** This would involve reducing property taxes until all (or a portion of) the remediation and redevelopment costs have been recovered.
- **California cities should draw on HUD Community Development Block Grant (CDBG) funds and section 108 loan guarantees to support brownfield activities.** Cities should follow the lead of Los Angeles which recently established a Brownfields Revitalization Fund with the help of CDBG funds. Both HUD and local officials should be made aware of the benefits of allocating funds to brownfields.
- **Local officials should be made more aware of brownfield finance tools currently available in California.** In particular, they need more information on how tax increment financing and tax abatements could help promote brownfield reuse and neighborhood revitalization.
- **Outreach and education efforts should be extended to Small Business Administration (SBA) officials.** SBA field officers and licensed community development companies need to be made aware that lenders received broad liability protections under 1996 amendments to both CERCLA and the state Superfund law
- **The California legislature should amend the Underground Storage Tank Cleanup Fund Program and give priority to sites in typical brownfield areas.** For example, within the program’s four-tiered system, sites located in certain areas (Enterprise Zones, redevelopment areas, Mello-Roos Community Facilities Districts) could be given priority within their respective class. Currently state funding allocations have reached Class C sites with a mandatory 15 percent in Class D sites funded annually.
- **The California legislature should restrict the use of Mello-Roos financing to brownfield locations and in this way discourage greenfield development, which is frequently financed through Mello-Roos bonds.**

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The package of coordinated policies presented in this report will help promote the cleanup and reuse of California brownfield sites. These policies clarify brownfield regulatory procedures, establish liability relief for innocent parties, bring more certainty to the cleanup process, and provide badly needed financial incentives. If implemented, they will go a long way toward making cities more attractive places for private sector investment. However, if they are launched without companion policies aimed at discouraging urban sprawl and greenfield development, they will have only a minimal impact at best.

Unlike some states, such as New Jersey, Florida, and Maryland, California has yet to implement a statewide strategy for slowing urban sprawl and preserving greenfields. It must do so now. “Inner city disinvestment and suburban sprawl are two sides of the same coin,” observes Maryland

Governor Parris N. Glendening. “By curbing sprawl, we can save farmland and forests while simultaneously revitalizing our older suburbs and urban centers.”

In simplest terms, brownfield reuse represents a tool for empowering cities; for infusing hope and economic opportunity into neighborhoods gripped by poverty, despair, and blight. The health and vitality of California cities is critical to the state’s wellbeing. Strong cities are the essential building block for vibrant regions, and regions are widely recognized as the dominant players in the new global economy. As such, for the sake of California’s future, brownfield reuse must be a top priority of state decisionmakers in the coming years.



# Appendix A. California Brownfields Legislation and Policy Initiatives

## BROWNFIELD LAWS

**Private Site Managers Program.** Created in 1996 (AB 1876, Richter), this program allows certified private site managers to oversee the investigation and cleanup of low-level hazardous substance sites. It is slated to begin in 1998 with the promulgation of regulations.

**Recognition of Local Agency Cleanups.** (SB 1248, O'Connell). This 1996 law allows local health agencies to enter into written agreements with site owners to supervise cleanups at contaminated sites, establish cleanup standards, and issue a letter of completion or other document stating that the cleanup was completed. This and the California Private Site Managers Program described above are part of the Cal/EPA's attempt to "outsource" site cleanup and oversight work.

**Expedited Remedial Action Program (ERAP).** (SB 923, Calderon) This pilot initiative, launched in 1994, was intended to offer developers and site owners a "fast track" brownfields cleanup program characterized by flexibility and streamlined permitting procedures. Importantly, unlike the voluntary cleanup program which relies on traditional joint and several liability, the ERAP uses proportional liability. Some funding is reserved for "orphan shares" – portions of a site cleanup for which no viable responsible party can be identified. The program, limited to 30 sites, has 17 enrolled so far.

**Polanco Act for Redevelopment Agencies.**

(AB 3193 and SB 1425) The 1990 Polanco Act allows redevelopment agencies to enter into Remedial Action Plans with the DTSC, the Regional Water Quality Control Boards, and other local agencies for the purpose of cleaning up brownfield sites. The redevelopment agency can receive limited liability relief under state and local laws; this relief can be extended to subsequent site owners as well as lenders.

**Mello-Roos Community Facilities Districts.**

(AB 2610) This law enables public and private property owners to secure long-term financing of hazardous substance cleanups. Community Facilities Districts are authorized to levy special taxes, implement tax increment financing, and issue bonds to generate funds for site cleanups. The first Mello-Roos legislation was enacted in 1982, but eligibility for brownfields was only added in 1990.

**United Agency Review of Hazardous Materials Release Sites.** (AB 2061, Umberg)

This 1994 law was designed to streamline the brownfield site investigation and remediation process. It allows parties responsible for contamination to request that California EPA's Site Designation Committee select a single state or local agency (commonly known as the "lead agency") to oversee site activities. This lead agency can issue a certificate of completion when cleanup is satisfactorily finished.

**Hazardous Materials Liability Lenders and Fiduciaries.** (SB 1285, Killea) Enacted in 1996, this law provides limited liability protection to lenders and fiduciaries on properties for which they have a legal interest but did not directly cause or contribute to a hazardous substance release. The law mirrors federal lender liability legislation enacted the same year, but is even broader because it covers all hazardous substance cleanups, not just those conducted under CERCLA. While providing some legal comfort, SB 1285 fails to assuage another key concern of lenders – the potential loss of collateral if newly discovered contamination significantly reduces a site’s value.

#### **BROWNFIELD-RELATED ADMINISTRATIVE POLICIES AND PROGRAMS**

**DTSC’s Voluntary Cleanup Program (VCP).** California’s VCP was created in 1993 under the existing legal authority of the Health and Safety Code. Over the past four years, the program has gradually matured through the addition of related legislation and policy directives.

**Spills, Leaks, Investigations, and Complaints (SLIC) Program.** The SLIC program is similar to the DTSC’s voluntary cleanup program, except that it is administered by the regional water quality control boards. SLIC addresses contamination of water and groundwater from sources other than leaking underground storage tanks (LUST). LUST cleanups are regulated by their own water board program.

**Approval of a Partial Site Cleanup.** This 1992 policy allows parties to receive a certificate of completion for cleanup that has occurred on portions of a site. This, in turn, enables the parties to obtain incremental financing for site activities – they need not wait until the entire site is clean.

**Prospective Purchaser Agreement (PPA).** In 1996, the DTSC and the state water board adopted a PPA policy (EO-96-005-PP). Although the DTSC had entered into such agreements in the past, the new policy clearly outlined eligibility criteria, contained an application, and provided a model agreement/covenant not to sue. When the DTSC issues a prospective purchaser a covenant or certificate of completion, the appropriate regional water board may also issue a “comfort letter,” and vice versa.

**CalSites Validation Program:** From 1993 to 1996, the DTSC reviewed the more than 26,500 sites in its “CalSites” database – a catalogue of sites with potential hazardous substance contamination – and released over 21,000 listings for which the department determined there was no evidence of a release. This review was similar to the U.S. EPA’s 1993 release of 25,000 sites from the federal superfund database that were designated “No Further Remedial Action Planned.”

**Responsible Party-Ownership of Property Over Contaminated Groundwater.** (Management Memo #90-11, 1990) This policy ensures owners of property onto which a plume of contaminated groundwater has migrated that they will not become a target of state enforcement or cost recovery action, provided they did not cause or contribute to the contamination.

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## ENDNOTES

- 1 Demographic Research Unit, California Department of Finance. <http://www.dof.ca.gov>.
- 2 American Farmland Trust, *Alternatives for Future Urban Growth in California's Central Valley: The Bottom Line for Agriculture and Taxpayers* (Washington DC: American Farmland Trust, 1995), 8.
- 3 Bank of America, California Resources Agency, Greenbelt Alliance, and The Low Income Housing Fund, *Beyond Sprawl: New Patterns of Growth to Fit the New California* (San Francisco: Bank of America et al, 1995), 2.
- 4 Barbara Coler and Steve Koyasako, "Redevelopment and Revitalization of Brownfields: Department of Toxic Substances Control (DTSC) Initiatives," (Berkeley: DTSC, October, 1995), 1.
- 5 U.S. Conference of Mayors, *Recycling America's Land: A National Report on Brownfields Redevelopment* (Washington DC: U.S. Conference of Mayors, January 1998), 5.
- 6 Robert Simons, *Turning Brownfields into Greenbacks: Developing and Financing Environmentally Contaminated Urban Real Estate* [book draft] (Washington DC: The Urban Land Institute, 1997). Appendix IV, Table 4-1; The Development Fund, Financing Initiative for Environmental Remediation (FIER) Report of Research Phase, (San Francisco: The Development Fund, 1998), 23.
- 7 U.S. Senator Barbara Boxer, in U.S. Congressional testimony before the Committee on Environment and Public Works, Subcommittee on Superfund, Waste Control, and Risk Assessment. Washington DC: March 4, 1997.
- 8 Simons, *Turning Brownfields into Greenbacks*, 9.
- 9 Mark Reisch, *Superfund and the Brownfields Issue*. Congressional Research Service (CRS) Report for Congress. (Washington, DC: The Library of Congress, July 22, 1997), 4.
- 10 James M. Strock, secretary for the California Environmental Protection Agency, in U.S. Congressional testimony before the House Transportation and Infrastructure Committee, Subcommittee on Water Resources and the Environment. Washington DC: March 5, 1997.
- 11 Eric Newman, Pahl/Kownall and Associates, in a speech at the Planning and Conservation League's Annual Legislative Symposium. Sacramento, March 14-15, 1998.
- 12 Alan Freedman, "Negotiations for Superfund Bill Hinge on Budget Agreement," *Congressional Quarterly* (May 1997): 1070.
- 13 Karen Florini of the Environmental Defense Fund, in U.S. Congressional testimony before the Senate Committee on Environment and Public Works, Subcommittee on Superfund, Waste Control, and Risk Assessment. Washington DC: March 5, 1997.
- 14 The definitions listed are drawn from "State Superfund Reauthorization," a background paper prepared for a joint hearing on reauthorization of California's Superfund law before the Senate Committee on Environmental Quality (SEQ) and the Assembly Committee on Environmental Safety and Toxic Materials Committee (AESTM). (Sacramento, December 1997), 3-4.
- 15 Charles Bartsch and Elizabeth Collaton, *Coming Clean for Economic Development* (Washington DC: Northeast-Midwest Institute, 1996), 7.
- 16 Bartsch and Collaton, *Coming Clean*, 7.
- 17 U.S. Environmental Protection Agency (EPA), Brownfield-Related Liability Law and Guidance (Washington DC: Office of Solid Waste and Emergency Response [OSWER], August 1997). <http://www.epa.gov/swerosps/bf/gde.htm#risk>.
- 18 U.S. EPA, "Guidance on Agreements with Prospective Purchasers of Contaminated Property," (Washington DC: Office of Enforcement and Compliance Assurance, May 24, 1995). Criteria include the following: 1) an EPA action at the facility has been taken, is ongoing, or is anticipated; 2) the agency should receive substantial benefit, either in the form of a direct benefit (cleanup) or indirect public benefits (creation of jobs, elimination of blight); 3) the continued operation of the facility or new site development will not aggravate or contribute to the existing contamination or interfere with EPA's response action; 4) the continued operation or new development of the property will not pose health risks to the community; and 5) the prospective purchaser is financially viable.
- 19 Reisch, *Superfund and the Brownfields Issue*, 11.
- 20 California Senate Committee on Environmental Quality (SEQ) and the Assembly Committee on Environmental Safety and Toxic Materials Committee (AESTM), "State Superfund Reauthorization." (Sacramento, December 1997), 6.
- 21 Kathleen Johnson, acting chief of the hazardous waste branch, EPA Region 9. In testimony before a joint hearing of the California Senate Environmental Quality Committee and the California Assembly Environmental Safety and Toxic Materials Committee. Sacramento: December 3, 1997.
- 22 For an analysis of AB 851, see <http://leginfo.ca.gov/bilinfo.html>
- 23 Two other major differences are that in California there is not a funding source available to pay for hazardous waste cleanups (other than a \$100 million bond issue in 1984, which has been spent), so in a sense this program is erroneously named. Also, state law is not retroactive, meaning that liability only applies to hazardous substance releases occurring after the law's 1982 enactment.
- 24 Overhaul of the Superfund statute was being championed by the Cleanup California Campaign, a Sacramento-based industry coalition whose members include the California Chamber of Commerce, the California County Supervisors Association, General Electric, Dow Chemical Co., and the Western States Petroleum Association.
- 25 Strock, testimony, 1997.
- 26 Johnson, testimony, 1997.
- 27 Cal/EPA, "Simple, Proportionate Cost Recovery for Non-NPL Hazardous Substance Release Sites," (Berkeley: Department of Toxic Substances Control December 24, 1997), 1.
- 28 Cal/EPA, "Simple, Proportionate Cost Recovery," 1.
- 29 Strict liability still pertains to generators and transporters of the hazardous materials at a contaminated site.
- 30 Jennifer Hernandez and Katherine B. Reilly, "New Developments in Brownfields," *The Environmental Counselor* 112 (December 15, 1997): 4.
- 31 California SEQ and AESTM, "State Superfund Reauthorization," 30.
- 32 Cal/EPA, "Redevelopment and Revitalization of Brownfields," 2.
- 33 The activities of the regional water boards are governed by the Porter-Cologne Water Quality Control Act of 1970

- and certain chapters of the Health and Safety Code. The state's LUST program was officially incorporated into state law in 1990.
- 34 California Senate Office of Research, "Options for Promoting Revitalization of Contaminated Properties" In press. (Senate Office of Research, January, 1998).
- 35 Hernandez and Reilly, "New Developments in Brownfields," 9.
- 36 Kenneth Emanuels, legislative advocate, in discussion at a meeting of the California Redevelopment Association Brownfields Subcommittee. Sacramento: May 16, 1998.
- 37 Cal/EPA, #EO-96-005-PP (Sacramento: 1996).
- 38 The DTSC and the water boards may enter into PPAs provided the following conditions are met: 1) the prospective purchasers do not exacerbate or contribute to the existing contamination; 2) their operation will not result in health risks to persons at the site; 3) they are not a responsible party (or affiliate of a responsible party) with respect to the existing contamination; 4) they allow access for, and do not interfere with, remediation activities; 5) unauthorized disposal is not occurring on the site; and 6) there are viable responsible parties who are willing to conduct any necessary remediation.
- 39 Site Mitigation Update (SMU) Advisory Group, "Initial Memo." (Berkeley: California Department of Toxic Substances Control, February 1997), 7.
- 40 Bartsch and Collaton, *Coming Clean*, 73.
- 41 Cal/EPA, #EO-96-005-PP (Sacramento: 1996).
- 42 The Environmental Financial Advisory Board (EFAB), "Expediting Cleanup and Redevelopment of Brownfields: Addressing the Major Barriers to Private Sector Involvement - Real or Perceived," (Washington DC: Environmental Financial Advisory Board, December 1997), 5.
- 43 EFAB, "Expediting Cleanup and Redevelopment of Brownfields," 6.
- 44 DTSC, Management Memo #90-11 (Sacramento: 1990).
- 45 SMU Advisory Group, "Recommendations to Update and Improve the Site Mitigation Program". (Sacramento: Department of Toxic Substances Control, August 29, 1997), A-13.
- 46 Clement Dinsmore, "State Initiatives on Brownfields," *Urban Land* (June 1996): 39.
- 47 Brownfields Forum, Final Report and Action Plan. (Chicago: City of Chicago Department of Environment & Department of Planning and Development, November 1995), 87. Designated section illustrates the Superfund Memorandum of Agreement between the Illinois Environmental Protection and the United States Environmental Protection Agency (Region V) entered into in April 1995.
- 48 Charles Bartsch, Elizabeth Collaton, and Ann Goode, "Federal Legislative Proposals to Promote Brownfield Cleanup and Redevelopment: Status in the 105th Congress." (Washington DC: Northeast-Midwest Institute, January 26, 1998). See <http://www.nemw.org>.
- 49 SMU Advisory Group, "Recommendations to Update and Improve," C-4.
- 50 SMU Advisory Group, "Recommendations to Update and Improve," C-26.
- 51 California Redevelopment Association, Brownfields Subcommittee, "Draft Memo: Summary of Redevelopment Agency Proposals for 1998 Brownfields Legislation," (Sacramento: California Redevelopment Association, December 1997).
- 52 Pennsylvania Department of Environmental Protection (DEP), "Pennsylvania's Land Recycling Program: Understanding Act 2 of 1995," (Harrisburg: Pennsylvania DEP, July 1995): 9.
- 53 In terms of state financing for groundwater cleanup, there is one notable precedent: the state's underground petroleum storage tank cleanup fund, which is financed through a statewide gasoline tax. Still unclear is whether brownfields are a high enough priority in the eyes of lawmakers and voters to support such a tax.
- 54 Steve Morse of the San Francisco Bay Regional Water Quality Control Board, in written comments to the author, May 1998.
- 55 U.S. General Accounting Office (GAO), "Superfund: State Voluntary Programs Provide Incentives to Encourage Cleanups" (Washington DC: U.S. GAO, April 1997, Document #GAO/RCED-97-66), 36.
- 56 SMU Advisory Group, "Initial Memo," 5.
- 57 SMU Advisory Group, "Recommendations to Update and Improve," B-2.
- 58 The California Assembly Committee on Environmental Safety and Toxic Materials in a bill analysis for AB 871, as amended January 5, 1998. See <http://www.leginfo.ca.gov/bilinfo.html>.
- 59 SMU Advisory Group, "Recommendations to Update and Improve," A-5.
- 60 Mark Lifsher, "Battle Begins Over Fate of Superfund," *Wall Street Journal* (31 December 1997): CA1; Gary Patton, the Planning and Conservation League, in written comments to the author, November 1997.
- 61 SMU Advisory Group, "Recommendations to Update and Improve," B-25.
- 62 Strock, testimony, 1997.
- 63 California SEQ and AESTM, "State Superfund Reauthorization," 20.
- 64 U.S. GAO, "Superfund: State Voluntary Programs," 43-45.
- 65 U.S. GAO, "Superfund: State Voluntary Programs," 43-45.
- 66 SMU Advisory Group, "Recommendations to Update and Improve," B-2.
- 67 SMU Advisory Group, "Recommendations to Update and Improve," B-25.
- 68 Nancy Lindsay, associate director for Superfund, U.S. EPA Region 9. In testimony before a joint hearing of the California Senate Environmental Quality Committee and the California Assembly Environmental Safety and Toxic Materials Committee. Sacramento, December 3, 1997.
- 69 In California, deed restrictions run with the land and are binding on future land owners, which is not the case in all states. It should be noted that some developers would rather clean their site to residential levels to avoid deed restrictions since they carry a stigma that can make reselling the property difficult.
- 70 Newman, written materials for Planning and Conservation League's Annual Legislative Symposium, March 14-15, 1998.
- 71 Patton, written comments to the author, November 1997.
- 72 Patton, written comments to the author, November 1997.

- 73 California SEQ and AESTM, "State Superfund Reauthorization," 12.
- 74 California SEQ and AESTM, "State Superfund Reauthorization," 12.
- 75 EFAB, "Expediting Cleanup and Redevelopment of Brownfields," 3.
- 76 Hernandez and Reilly, "New Developments," 4.
- 77 A Site Conceptualization Model is an important aspect of RBCA. It is essentially an agreement on the sources, pathways, and receptors of concern for investigation and remediation of a site. Using a SCM provides an ongoing focal point for site information, heightens certainty and cost-effectiveness regarding assessment and cleanup, and serves as a contract between regulators and responsible parties.
- 78 U.S. EPA Region 9, "Region 9 Preliminary Remediation Goals, 1996," (San Francisco: U.S. EPA, August 1996), 2.
- 79 SMU Advisory Group, "Initial Memo," 7.
- 80 U.S. GAO, "Superfund: State Voluntary Programs," 38-40.
- 81 The Institute for Community Development, "Environmental Justice: No Picture, No Justice" (Columbia, MD: Institute for Community Development, undated), 1.
- 82 National Environmental Justice Advisory Council (NEJAC), Waste and Facility Siting Subcommittee, *Environmental Justice, Urban Revitalization, and Brownfields: The Search for Authentic Signs of Hope* [executive summary] (Washington, DC: NEJAC, undated).
- 83 National Research Council, "Innovations in Groundwater and Soil Cleanup: From Concept to Commercialization," prepublication copy, (Washington DC: National Academy Press, 1997), 1.
- 84 Patton, written comments to the author, November 1997.
- 85 National Research Council, "Innovations," ix.
- 86 Solvents include volatile chlorinated hydrocarbons such as trichloroethylene (TCE), a degreaser commonly used in the electronics industry, and tetrachloroethylene (PCE or "PERC") commonly used by dry cleaners.
- 87 Steve Morse, telephone conversation with the author, May 1998.
- 88 On October 2, 1996, the State Water Resources Control Board adopted Resolution No. 96-79, which amended Resolution No. 92-49, the "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Section 13304 of the Water Code" to incorporate the "Containment Zone Policy."
- 89 Drawn from a bill analysis for SB 661 (as amended on July 9, 1997), found at <http://leginfo.ca.gov/bilinfo.html>.
- 90 The Development Fund, "Financing Initiative for Environmental Restoration," 4.
- 91 The Development Fund, "Financing Initiative for Environmental Restoration," 4.
- 92 The Development Fund, "Financing Initiative for Environmental Restoration," 4.
- 93 This California rule establishes that when a bank holds a deed on a property and forecloses (without judicial foreclosure), it is precluded from going after the rest of the company's assets.
- 94 Bartsch and Collaton, *Coming Clean*, 48.
- 95 U.S. Environmental Protection Agency, *Potential Insurance Products for Brownfields Cleanup and Redevelopment* (Washington DC: Office of Emergency and Remedial Response, June 1996), 1-8.
- 96 Clement Dinsmore, "State Initiatives," 38.
- 97 U.S. EPA, *Potential Insurance Products*, A2-5.
- 98 Dinsmore, "State Initiatives," 38.
- 99 Dinsmore, "State Initiatives," 38.
- 100 Dinsmore, "State Initiatives," 38.
- 101 Legislative Analyst's Office, *Understanding Proposition 218* (December 1996), [http://www.lao.ca.gov/understanding\\_prop218\\_1296.html](http://www.lao.ca.gov/understanding_prop218_1296.html).
- 102 Governor's Office of Planning and Research (OPR), State of California, *A Planner's Guide to Financing Public Improvements* (Sacramento: Governor's Office of Planning and Research, June 1997), 2. <http://www.ceres.ca.gov/planning/financing>.
- 103 Ignacio Dayrit of the Emeryville [California] Redevelopment Agency, in personal communication with the author, May 1998.
- 104 OPR, *A Planner's Guide*, Chapter 2, page 3. <http://www.ceres.ca.gov/planning/financing>.
- 105 Michael Marois, "Brownfield Drive in California May Feature Mello-Roos," *The Bond Buyer*, 18 July 1997, p. 28-29 (520-521).
- 106 U.S. Conference of Mayors, *Recycling America's Land*, 6.
- 107 Massachusetts Executive Office of Environmental Affairs, "Summary of An Act Ensuring Environmental Cleanup and Promoting the Redevelopment of Contaminated Properties." Report submitted to the Massachusetts House of Representatives by the Department of Environmental Protection (Boston: October 15, 1996), 60.
- 108 State and federal laws require that all underground storage tanks installed before 1984 be removed, replaced or upgraded to meet current standards by December, 1998.
- 109 The U.S. EPA issued regulations on October 26, 1988 (section 280.90, subpart H, part 280, 40 Code of Federal Regulations) requiring owners and operators of USTs to demonstrate that through insurance coverage or other acceptable mechanisms they could pay for cleanup and third party damages resulting from leaks that may occur from their USTs. On June 9, 1993, the EPA approved California's fund as a mechanism for meeting the federal financial responsibility requirements.
- 110 Two bills were introduced in the 105th Congress that would have allowed tax-exempt bonds to be issued for contaminated properties: H.R. 523 introduced by Rep. William Coyne (D-Pennsylvania) on February 4, 1997, and H.R. 996 introduced by Rep. Jerry Weller (R-Illinois) on March 6, 1997. Neither bill has passed to date.
- 111 California Pollution Control Financing Authority (CPCFA), *The California Capital Access Program Status Report* (Sacramento: CPCFA, October 1993), 3.
- 112 CPFA, *The California Capital Access Program*, 3.
- 113 Bartsch and Collaton, *Coming Clean*, 51.
- 114 H.R. 523 was introduced by Rep. William Coyne (D-Pennsylvania) on February 4, 1997; H.R. 996 was introduced by Rep. Jerry Weller (R-Illinois) on March 6, 1997.
- 115 California Health and Safety Code, Section 25385 et seq.
- 116 Newman, written materials at the Planning and Conservation

League's Annual Legislative Forum, March 14-15, 1998.

117 California Senate Committee on Environmental Quality, bill analysis for AB 1909, June 10, 1998. <http://leginfo.ca.gov/bilinfo.html>.

118 Bartsch and Collaton, *Coming Clean*, 48-49.

119 Bartsch and Collaton, *Coming Clean*, 49.

120 Scott Davis and Kent Moon, "An Answer to the Crunch?"

*The American Bankers Association (ABA) Banking Journal* (October 1991): 110.

121 Davis and Moon, "An Answer," 110.

122 Morse, in person communication with the author, May 1998.