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Superfund and the Evolution of Brownfields

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Environmental law broadly defined has emerged as the most fertile ground for ventilating federalism issues. Whether the issue is one of resource regulation\(^1\) or pollution control, the traditional primacy of the state police power in matters of health, safety, and welfare, counsels that the federal environmental laws operate with sensitivity to state interests. Historically, Congress has borne this in mind and pursued national interests in a way that maintained a considerable role for the states. So too, United States Supreme Court decisions in environmental law cases posing preemption of state law claims show a significant regard for state prerogatives and a commitment to a view of federalism that does not readily displace the states.\(^2\)

In the environmental field, the most discernible form of federalism is that established by the major federal pollution control statutes, the Clean Air Act\(^3\) and Clean Water Act.\(^4\) Dubbed “cooperative federalism,” the basic model is that of the national government setting standards of environmental quality or levels of pollution control and a program of regulation by which the targeted objectives are to be achieved. The national government, through the United States Environmental Protection Agency (“EPA”), stands ready to administer these laws in their entirety, but offers to the states the opportunity to take the lead role by enacting regulatory programs that the EPA finds capable of adequately implementing the national regulatory scheme. With only minor exceptions, the states have accepted the offered authority and have become the front-line administrators of programs designed to meet the federally set standards intended to assure the nation of sufficient levels of air and water pollution control.

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All of that said, however, there are environmental areas in which there
has been a different dynamic, not necessarily one of non-deference to the
states, but more aptly one of federal leadership. The federal government
seizes the initiative and legislates in ways that channel its own quite
considerable resources and influence toward an environmental concern,
leaving the states free to act in the same field in either parallel or serial
fashion. Parallel in this context is meant to denote state laws that mimic the
federal enactment with a state-oriented jurisdictional scope, while serial in
this context is meant to denote state laws that enter the field and add elements
to the federal scheme. The sentinel federal leadership example is the National
Environmental Policy Act of 1969⁵ ("NEPA") and its environmental impact
assessment requirement. Congress moved independent of the states, issuing
what is in essence a directive to the federal agencies channeling the vast
federal bureaucracy to act with environmental awareness. This law had
localized impacts insofar as the affected federal decisions almost invariably
caused effects within the several states. Taking the federal cue, many states
enacted parallel legislation at the state level, applying the model to their own
activities and those of their citizens.

I. SUPERFUND AND ITS PARALLEL AND SERIAL STATE EXPANSION

More central to present concerns, a "federal-first" pattern emerged in
responding to remediating the dangers posed by the release of hazardous
substances into the environment. The relevant federal statute, the
Comprehensive Environmental Response, Compensation and Liability Act
("CERCLA," better known as "Superfund"),⁶ is an example of Congress
seizing the initiative and committing federal resources to meet an
environmental problem. Quite plainly, Superfund’s programmatic initiative
is more intrusive than its "feds first" cousin, NEPA. Superfund reaches
deeply into the states, affecting specific parcels of land that traditionally had
been regulated exclusively by state law. In this way, although not a total
outlier, Superfund as first conceived and enacted shared almost no
commonality with the cooperative federalism of the Clean Air Act and Clean
Water Act, and bore almost no resemblance to NEPA.

The choice of a non-deferential form of federalism in Superfund

⁶ Id. §§ 9601-9675.
appears to have been deliberate. In 1980 when Congress enacted Superfund, whose popular title derives from the image of a vast fund from which the EPA pays for the staggering cost of cleanups of contaminated properties throughout the nation, Congress thought it was addressing a significantly different phenomenon than that of ordinary pollution. Superfund vested EPA with the primary role in obtaining cleanups of sites contaminated by the release of hazardous substances into the environment, leaving a role for state input within a sphere of federal control.

Explanations for the divergence from the cooperative federalism mold can be imagined. First, there are more than superficial differences between seeking remediation of toxic contamination of a site and the ongoing regulation of polluting entities. The former is more of a one-time event that is unlikely to reoccur after the cleanup and requiring no continuing oversight after its completion. Also pointing toward a dominant federal role is the expectation that EPA would develop expertise and carry it from site to site in a way that the states could not replicate. The severity and frequency of the problem also may have been a factor. Congress believed that the scope and scale of the problems faced by Superfund did not closely resemble the ordinary, widespread production of air and water effluents. When Superfund was passed, Congress seemed to think that the number of sites involved would be relatively few, but that those sites would involve serious threats to public health. Love Canal was frequently adverted to in the legislative debates. If there were relatively few sites involved and they were of vast magnitude and complexity, the resources of the national government could better address them. Toward that end, Congress established the multi-billion dollar fund aspect of Superfund. The operative premise of the law was that EPA would use the fund or its CERCLA-granted power to issue administrative orders to obtain prompt and efficacious cleanups, thereafter using the law's extremely broad liability section to recoup whatever Superfund monies were expended in the process.

Where CERCLA pioneered, state parallel replication followed in at

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8 See 42 U.S.C. § 9604(c)(2).
9 See id. § 9606(a).
10 See id. § 9607.
These parallel laws created state cleanup regimes that in most states parroted Superfund, e.g., strict, joint and several, and retroactive liability, for all of those contributing to the chain of events that led to the escape of hazardous materials into the environment. In many cases, these laws were even more aggressive than Superfund, closing loopholes in its coverage scheme such as the "petroleum exclusion" or the non-liability of the "gap owner." These laws also mimicked CERCLA's cumbersome cleanup processes. In summarizing such laws, one commentator succinctly captured their characteristics:

While there is some variation among the programs, state Superfund or cleanup programs are generally characterized by the following features: (1) procedures for emergency response actions and permanent remediation of environmental and human risk; (2) provisions for a cleanup fund or other financing mechanisms to support program activities; (3) enforcement authority to identify and compel responsible parties to pay for site assessment and cleanup; (4) authorized state agency with staff charged with responsibility for oversight of remediation activities; and (5) provisions for public participation in the remediation process.

In a similar form of parallelism, twenty-eight states enacted cleanup lien laws akin to the federal lien in CERCLA, giving those who pay for cleanup a lien on the parcel. Several of those states went even further granting their state law liens either "super coverage" by attaching to any and all of the

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11 See Elizabeth Glass Geltman, Recycling Land: Encouraging the Redevelopment of Contaminated Property, Nat. Resources & Env't 3, 5 (Spring 1996). Geltman provides a very illuminating article that delineates the degree of "parallel" and "serial" developments in the wake of CERCLA. All of the statistical material regarding state follow-on legislation cited within this article is directly attributable to her efforts. Likewise, her analysis of how state laws are evolving should be of great interest to anyone who is endeavoring to work in this field.

12 See id. at 5.


14 The gap owner falls between 42 U.S.C. § 9607(a)(1), current owner or operator, and § 9607(a)(2), owner at the time of disposal.

15 Geltman, supra note 11, at 5.

defendant’s property, or “super priority” by taking precedence over all prior liens, including mortgages.

Where CERCLA pioneered, state serial regulation followed as well. In addition to mini-CERCLAs and lien laws, approximately half of all the states enacted business transfer laws. In this area there is more variation in the state laws.

Property transfer provisions exist in the states as laws, regulations, or policies that make the transfer of real property, or ownership or control of such property, contingent on the discovery, identification, investigation, cleanup or disclosure of the existence of contamination. . . . Some simply require disclosure of the environmental conditions of a site. Others require a more advanced level of site investigation. A few states require complete or near complete cleanup before a transfer can occur.17

Also, states have gone beyond CERCLA into the underground storage tank field, extending cleanup liability and financing laws to address that ubiquitous problem. To put it tersely, the states picked up where Congress had left off and ran with the ball, thereby compounding both the number of laws affecting cleanups and greatly expanding their scope and requirements.

II. SUPERFUND (AND THE STATE LAWS) IN ACTION

Whatever the congressional conception of the likely application of Superfund may have been, the reality is that the law as written has a potential reach that includes thousands, even hundreds of thousands of sites, the vast majority of which are not severely contaminated and present only the remotest of possibilities that their contamination will become widely dispersed. The reason for this unexpected breadth lies in the statute’s intake mechanisms which can be triggered by a “release, or threatened release . . .

17 Geltman, supra note 11, at 5-6. Superfund, as amended by the Superfund Amendment and Reauthorization Act (“SARA”), created incentives that encouraged further identification of contamination in the property transfer setting. SARA created a limited “innocent purchaser” defense from liability that required due diligence in seeking to determine that a parcel was free of contamination at the time of purchase. See 42 U.S.C. § 9601(35)(B).
of a hazardous substance"\(^{18}\) that either creates "an imminent and substantial endangerment to the public health or welfare or the environment"\(^{19}\) or "causes the incurrence of response costs."\(^{20}\) The statutory terms "release"\(^{21}\) and "hazardous substance"\(^{22}\) are defined very broadly. While the imminent endangerment threshold may be high, virtually any money spent on cleanup of a contaminated parcel can lead to incurring response costs. In this aspect of CERCLA's application, there is no controlling governmental hand to impose \textit{de facto} limits on invocation of the law. Statutory liability expressly extends beyond governmental enforcement\(^{23}\) allowing recovery for "any other necessary costs of response incurred by any other person [other than EPA, a state, or an Indian Tribe] consistent with the national contingency plan."\(^{24}\)

Forcing even more sites into the ambit of Superfund's influence is the statute's deliberate effort to coerce reporting of contamination, even in exceedingly small amounts. Congress itself set the tone by requiring the reporting of releases of "reportable quantities" that were to be set by EPA, but "unless and until superceded by regulations establishing a reportable quantity . . . a quantity of one pound . . . shall [for some substances] be deemed that quantity, the release of which requires notification . . . ."\(^{25}\)

Given the \textit{de jure} breadth of the law, it should be unsurprising that over twenty thousand sites eventually came within the purview of Superfund and found their way onto a list, called the National Priorities List ("NPL"). Needless to say, Congress recognized in advance that all identified sites would not pose equivalent hazards, nor would all sites equally demand federal attention and remediation. As the name of the NPL implies, the list was to set priorities, based on a Hazard Ranking System ("HRS") that EPA would promulgate. Federal action would be devoted to the most egregious sites first, and later to the sites further down the list that posed significant risks. Rather quickly, once the size of the list became apparent, it also became patent that, at many of the sites EPA, would not be involved after the initial HRS process demonstrated the relative lack of risk involved.

\(^{18}\) 42 U.S.C. § 9606(a).

\(^{19}\) \textit{Id.}

\(^{20}\) \textit{Id.} § 9607(a).

\(^{21}\) \textit{Id.} § 9601(22).

\(^{22}\) \textit{See id.} § 9601(14).

\(^{23}\) \textit{See id.} § 9607(a)(4).

\(^{24}\) \textit{Id.} § 9607(a)(4)(B).

\(^{25}\) \textit{Id.} § 9602(b).
Importantly, however, a low HRS score did not vitiate the possibility of private cleanup and cost recovery under section 107.

Potential section 107 liability had a further significant consequence—an array of individuals and entities might be held liable for the costs incurred. This result was as expected, for Congress in CERCLA had embraced a very broad conception of the polluter pay principle of cost internalization and forged it into the breadth of the CERCLA liability section’s coverage: it was broad indeed. CERCLA section 107 created a group of liable parties called (perhaps euphemistically) “potentially responsible parties” (“PRPs”). The PRP definitions netted owners and operators, both current and at the time of release, possibly including secured lenders who got involved in the site-related affairs of their borrowers; it also netted generators and transporters of the hazardous materials that were released into the environment. It was given retroactive effect, applying to pre-1980 acts that were not liability-inducing at the time committed.\(^2\)

Because of the 1986 Superfund Amendment and Reauthorization Act’s (“SARA”)\(^2\) reiteration of CERCLA’s intent to create a broad liability scheme, a popular saying evolved that SARA had been misnamed and that her name was really RACHEL, the Reauthorization Act Confirms How Everyone’s Liable.

Not only was the statute’s jurisdiction broader than expected and its liability scheme vast, the cleanups obtained were neither quick or efficacious by most people’s standards. Cleanups were drawn out, averaging as much as a decade each. In the view of many, the cleanups were not efficacious because overly conservative standards forced parcels to be remediated to a degree that would almost literally allow children to safely eat the post-cleanup dirt. This standard raised the cost to seemingly astounding levels, where totals for a site frequently exceeded $10 million.

The real world consequences of Superfund were enormous. PRPs felt themselves victimized and unfairly ensnared in a tar baby-like process that robbed them of resources without corresponding benefits to the environment. Beyond their chagrin at being found liable for acts that were in some cases innocent at the time of being done, PRPs at the larger sites almost inevitably

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became enmeshed in a high stakes legal miasma whose transaction costs too often dwarfed the amounts required for cleanups. Again, upon a moment’s reflection, there should be no surprise in this. To begin with, the amounts involved were sufficiently large to encourage litigation in hopes of avoiding liability or shifting the lion’s share of the liability to some other PRP. Second, section 113, which expressly allowed for contribution actions in favor of PRPs who had paid more than their share, encouraged such efforts and simultaneously made them a sink for enormous transaction costs by announcing virtually no standards for cost allocation among the responsible group. Adding to the expense was the endless litigation regarding insurance coverage between PRPs and their insurance carriers who had issued Comprehensive General Liability (“CGL”) policies that contained a litigable and ambiguous (in its application to Superfund cases) “pollution exclusion” clause.

One upshot of all this Superfund-induced legal travail was that any parcels falling within Superfund’s potential reach became pariah parcels for would-be developers and lenders. Even if there was little likelihood of EPA action, there was always the threat of private section 107 or 113 action by a person who incurred response costs. With the web of liability including lenders, and in the wake of a few highly acclaimed cases of lender liability,28 the risk averse lending community reacted by making parcels having potential CERCLA claims off-limits for lending.

The experience under state mini-Superfund laws was, given their parallelism to CERCLA, roughly the same. The main differences lay in the fact that Superfund, as a matter of legislative intent, administrative execution, and private usage targeted parcels that were more seriously contaminated. The state laws, in contrast, deliberately included sites of wholly local concern, exhibiting low levels of contamination. Moreover, the state lien laws as serial additions to Superfund created additional disincentives to parcel redevelopment. Beyond the mere presence of the liens as a disincentive to investment, getting involved with a contaminated parcel put other assets at risk in states having “super” lien coverage laws and any

28 The leading case in this line is United States v. Fleet Factors Corp., 901 F.2d 1550 (11th Cir. 1990). Ironically, perhaps, the lender in Fleet Factors was not at the margin of liability and dragged in unfairly. Rather, the lender in Fleet Factors went into the property and removed the fixtures and in doing so authored a release of hazardous substances. See id. at 1560.
security value the parcel might have was thwarted by the "super" lien priority laws.

III. FEDERAL EFFORTS TO LESSEN SUPERFUND'S IMPACT ON BROWNFIELDS REDEVELOPMENT

The creation of a class of pariah parcels at which lenders and developers are deterred from investing, raises a national concern that Superfund, despite whatever good it may do at major sites of contamination, places a host of less contaminated sites in jeopardy of remaining either unused or underused, and in continuing need of remediation. This category of sites is commonly referred to as "Brownfields," a term that is in part defined as half of a paired set of terms, "Greenfields" and "Brownfields."

The two contrasting terms represent a choice of sites for development, usually commercial or industrial, in a metropolitan region. Greenfield sites are usually located on the periphery of the built-up area. Their defining characteristic is that they are previously unused land, in the sense that they have not been home to non-agricultural commerce or industry. Brownfield sites are ones that are located closer in, often within the urban core and older suburbs. They are sites that have been utilized for commerce and industry in the past and are now vacant. In imagining the scenarios at typical Brownfield sites, firms that were operating them ceased being profitable, either through market shifts, recessionary impacts, or poor management decisionmaking. Whatever the cause, the parcel of land and its stock of fixtures and any remaining machinery, came to be viewed as incapable of continued profitable operation at the time. With deterioration of the buildings and fixtures that attends the passage of time, only the land itself (due to its size and location) is likely to retain significant value. Even valuable inactive sites do not regenerate themselves. Additional investment is needed, and Brownfield sites compete for that investment with other investment opportunities that include Greenfield sites and potentially profitable investments unrelated to

29 Although it is beyond the scope of this commentary to do so, the author believes that a strong case can be made defending Superfund from its many critics when it comes to obtaining high quality cleanups at sites posing serious problems of hazardous contamination.

30 There are, to be sure, some rural brownfields sites, former homes to industries that, for one reason or another, were located outside of urbanized areas. Many of the points made herein apply equally to them, but the focus of this commentary is on sites in or near urban areas.
industrial development. (As someone once said, money is portable.)

The words “Brownfields” and “redevelopment” are inextricably intertwined. This is where Superfund comes in, not because of its effects on those responsible for past events at the site, but because of its influence on the incentive structure that faces those who would seek to redevelop a Brownfield site by investing new funds. Many Brownfields have Superfund-like histories. The sites are currently inactive, having been used industrially and/or commercially in some past era, often an era in which handling practices of materials were poor and waste disposal practices were worse. That some contamination can be found at these parcels is almost inevitable. Where found, the contamination raises direct possibilities of being caught up in the Superfund web as a current owner or a lender who gets too involved in the parcel’s operation. Even where there is no known contamination, the threat of its discovery has a similar effect.

Most Brownfields are at or beyond the outer limits of Superfund’s intended concern; the contamination at the vast majority of these sites is unlikely to be severe. First, some number of the now inactive sites were not home to industrial practices that utilized the most dangerous of contaminants or those that are most difficult to cleanup after a release. Second, even if the overall waste disposal practices of a firm were “bad,” not all such firms resorted to large scale on-site dumping of their own wastes. Superfund annals are replete with sites that contain waste trucked in from industrial firms located in nearby cities who opted against on-site disposal. As a third check on the severity of contamination at Brownfield sites, it seems likely that most inner-city firms simply could not afford the “luxury” of on-site disposal of wastes, particularly large volume wastes or liquid wastes. In urban areas, land prices served as a check on parcel size so as to prevent maintenance of slag heaps and lagoons by most firms. Nuisance law also may have played a role. Inner-city firms had (and have) more neighbors and on-site disposal raises the possibility of complaints and litigation. Going a step further, it seems reasonable to surmise that even the most benighted of operators would be unlikely to have work performed in a de facto cesspool of hazardous wastes. Finally, Superfund has now been around over fifteen years.

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31 This point is speculative. My research has found only a small number of reported cases of successful nuisance actions against inner-city firms whose on-site disposal practices were held to constitute a nuisance. Nevertheless, accommodation of neighbors is plausible, and the threat of litigation is real.
years and there is little reason to expect that more than a few sites of major
contamination remain to be discovered. Thus, looking from the perspective
of the present, for sites not already high up the NPL, the scenario of urban
parcel contamination most often is going to be one of spills and leaks, small
scale disposal of solvents, leaching from materials piles, process dust and
shavings, and, perhaps, small scale debris piles, that result in very modest
levels of contamination. These modes of contamination create problems that
require cleanup, but they are frequently different in kind from the abandoned
 quarry that became a liquid waste dump, or the landfill that mixed millions
of cubic yards of trash with discarded PCB-laden transformers and off-
specification chemical wastes. The typical Brownfield site presents local
problems that ought to be the subject of local solutions, emphatically not the
stuff warranting the “federal first” federalism of CERCLA’s original
conception.

EPA has long since disavowed any continuing interest in imposing
vast federal liability or the difficulties of meeting extraordinary federal
cleanup standards on the PRPs at typical Brownfields parcels and has done
everything that it can to counter the “unintended effects” of Superfund, and
the pall it casts on redevelopment. This effort is manifested in at least six
different programmatic efforts already well underway and in support for
legislative modification of CERCLA to encourage Brownfields
redevelopment. Three of the EPA initiatives speak directly to developers and
lenders. These are the revised lender liability rule, prospective purchaser
agreements (“PPAs”), and the issuance of “comfort letters.” The fourth,
speaks to the community generally, removing more than twenty thousand
 sites from the lower reaches of the Comprehensive Environmental Response,
Compensation and Liability Information System (“CERCLIS”) thereby
disclaiming federal interest in them. The fifth speaks to the states through
the Memorandum of Agreement (“MOA”) program under which EPA turns

32 See CERCLA Enforcement Against Lenders and Government Entities That Acquire
33 See Announcement and Publication of Guidance on Agreements with Prospective
Purchasers of Contaminated Property and Model Prospective Purchaser Agreement, 60 Fed.
Reg. 34,792 (1995).
34 A model comfort letter is on file with the William & Mary Environmental Law & Policy
Review.
35 See Amendment to the National Oil and Hazardous Substances Pollution Contingency
over primary authority to the states whose agencies adopt voluntary cleanup programs that meet certain guidelines.\textsuperscript{36} Finally, the sixth is the funding of hundreds of small demonstration projects from which successful models for Brownfields redevelopment can be drawn. These last two EPA initiatives are, from a federalism perspective, very familiar. They look like traditional cooperative federalism, programmatic delegation to state programs run in conformity with federal standards, coupled with funding for research and development of techniques (instead of technology) that can be employed in the environmental improvement effort. The federal role at these less severely contaminated sites is quite different than where Superfund started. EPA is now gleaning and sharing technical and procedural expertise\textsuperscript{37} and seed money, it is no longer the sole controlling actor.

As a behavioral matter, the time has come to exonerate Superfund, despite the impact that it had, as the obstacle that impedes present brownfields redevelopment. Rational developers and lenders no longer have anything to fear from Superfund. EPA demonstrated in unmistakably clear terms and actions its intent not to become involved at parcels exhibiting minimal risk, that is, at the precise sorts of brownfields sites that ought to be the heart of redevelopment efforts. Moreover, even a developer or lender’s fear of being the target of private actions under either section 107 or 113 cost recovery actions at a mildly contaminated site is chimerical. For private parties to successfully invoke either section 107 or 113, they have to undertake a cleanup and incur response costs that they can affirmatively prove are “consistent with the National Contingency Plan.”\textsuperscript{38} For a site of minimal contamination, it is ludicrous to anticipate that a private party will go in and enmesh themselves in the rigamarole of an NCP-consistent cleanup, where at best they end up with a drawn out, expensive cleanup, and an expensive-to-pursue cause of action under CERCLA for cost recovery. It

\textsuperscript{36} 40 C.F.R. § 300.505 (1996).

\textsuperscript{37} Superfund actions taken by EPA revealed the importance to the successful resolution of problems at a site of community involvement and acceptance. Superfund Brownfields demonstration projects, because they too involve multi-polar interests and profoundly affect the community in which the site is located, have tended to include special concern for community involvement in project design and effectuation. EPA has emphasized this facet of the demonstration projects, and the knowledge gained in them is part of the transferrable expertise that EPA is trying to develop.

\textsuperscript{38} See 42 U.S.C. § 9607(a)(4)(A) (stating that the government only needs to show that its response costs are “not inconsistent with” the NCP).
would be far easier for such parties to simply sue under a strict liability common law tort theory to obtain damages for the losses (if any) suffered as a result of the contamination. As an objective matter, Superfund has become irrelevant at the typical Brownfield site.\(^3\)

While Superfund itself has become objectively irrelevant, it remains arguable that the shadow it once cast over all contaminated parcels continues to influence behavior. What seems far more plausible, is that the present deterrent to redevelopment is not Superfund, but the parallel state law mini-Superfund enactments and property transfer laws that have yet to be scaled back in their application to small-risk sites. Without belaboring the point here, these state laws need to be changed to allow relief from the cumbersome, expensive, and uncertain process that has grown up in so many states. Without that change in state law, Brownfields redevelopment will continue to be stymied in most locations.\(^4\)

IV. THE ECONOMICS OF BROWNFIELDS REDEVELOPMENT

Assuming arguendo, that neither Superfund nor parallel and serial state laws did anything to inhibit Brownfields redevelopment. To what extent would that redevelopment spontaneously occur? There is good reason to believe that the answer would be, "Sporadically, at best."

Historically, of course, Brownfield sites existed well in advance of CERCLA and its state law imitators. In the pre-1980 period, free of the influence of cleanup legislation, numerous urban manufacturing and commercial facilities had closed down only to see the parcels languish and the structures that were present deteriorate. While some were redeveloped, many were not, and the pre-1980 period was quite plainly an era of immense growth, especially in Greenfields areas. This era may be regarded as the principal birthplace of urban sprawl, fueled by factors such as "white flight,"

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\(^3\) Lenders in particular continue to cite Superfund as a grounds for non-lending at typical Brownfields parcels. At a minimum, their belief that Superfund will snare them at such sites leaves their acumen open to question, or, less charitably, conjures up assertions that the lenders are engaging in deliberate "brownlining." Brownlining occurs when lenders either scrutinize or deny requests for funds that may be used for properties with an environmental risk. See E. Lynn Grayson & Stephen A.K. Palmer, The Brownfields Phenomenon: An Analysis of Environmental, Economic, and Community Concerns, Envtl. L. Rep. (Envtl L. Inst.) 10,337 (July 1995).

\(^4\) See Geltman, supra note 11, at 10.
transportation improvements (the interstate highway system and the construction of massive expressways), and relatively low-cost per acre, easy to assemble and develop parcels.

There do not appear to be a large number of empirical studies that identify with certainty the factors that most influence the manifest preference for Greenfields sites, both in the pre-CERCLA and post-CERCLA world. Nevertheless, both common sense and a limited sample of empirical data suggest that economics played and continues to play a dominant role. It is not difficult to imagine the cost comparison between Brownfields and Greenfields development. As a starting point, consider the simple qualitative estimates of cost and difficulty in the chart that follows:

**TABLE 1: ROUGH COST COMPARISON OF BROWNFIELDS AND GREENFIELDS DEVELOPMENT**

<table>
<thead>
<tr>
<th>Item</th>
<th>Brownfields</th>
<th>Greenfields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land cost per acre</td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td>Demolition &amp; removal of debris</td>
<td>Frequently expensive</td>
<td>None</td>
</tr>
<tr>
<td>Taxes</td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td>Insurance</td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td>Zoning approvals</td>
<td>More difficult to obtain</td>
<td>Easier to obtain</td>
</tr>
<tr>
<td>Objections by neighbors</td>
<td>More frequent</td>
<td>Few neighbors</td>
</tr>
<tr>
<td>Infrastructure costs</td>
<td>Lower</td>
<td>Higher</td>
</tr>
<tr>
<td>Transportation costs</td>
<td>Perhaps lower</td>
<td>Perhaps higher</td>
</tr>
</tbody>
</table>

The rough qualitative comparison leaves little doubt that there is likely to be a Greenfields economic preference among developers. Moreover, the comparison probably understates the non-CERCLA case in favor of Greenfields development. Still other economic factors make Greenfields the preferable choice. The first of these is subsidies. In general, exurban

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41 Difficulty, in most cases, is directly linked to transaction costs that will be incurred in the effort to overcome the problem. Thus greater difficulties will result in higher costs.
communities are able to do more in terms of tax abatements and other incentives (subsidies) to attract new development than are urban areas that face serious tax equity issues in granting excessive subsidies to would-be redevelopments. The second of these, although counter-intuitive at first glance, is labor costs. A provocative recent study reports: "The largest [private] benefit of suburban development is the low labor cost of the outer suburbs. The difference between wages in the central city and the outer suburbs is particularly large for skilled female workers."

While precisely quantifying the extent by which the private benefits of Greenfields development exceed those of Brownfields redevelopment is beyond the scope of this inquiry, understanding the magnitude of the economic incentives facing project proponents is vitally important in deciding the law’s role in influencing behavior. The greater the magnitude of the greenfields economic benefit, the less likely it becomes that the legal rules regarding parcel remediation, either current or changed, are capable of significantly influencing development behavior.

At an empirical level, it is patent that Greenfields historically enjoyed an economic advantage over Brownfields. So-called urban sprawl and the non-reuse of many Brownfield sites was a fait accompli long before 1980 when Superfund was enacted. The preceding chart suggests the reasons in support of sprawl, with the most likely culprit of the imbalance being land and demolition costs. It is virtually axiomatic that these costs will be higher for Brownfield sites than for Greenfield sites. As a historic matter, urban land prices on a per acre basis are higher than prices for farmland at the edge of the urban area. Even more obviously, the costs of demolition and disposal of a former factory site are dramatically higher than the costs of removing a farmhouse and barn or two. Still, when the costs are treated as capital costs

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42 This assertion by the author suggests an area for further research.
43 JOSEPH PERSKY & WIM WIEWEL, CENTRAL CITY AND SUBURBAN DEVELOPMENT: WHO PAYS AND WHO BENETS? 2 (1995). The estimate the cost savings per employee of greenfields over brownfields to be $2,300 to $2,900 per year. Id. at 10.
44 Without making the case for it here, an implicit premise of this commentary is that there are significant public benefits that inure from Brownfields redevelopment. As a sample, these benefits accrue in terms of reduced unemployment in the inner city, broader tax base in the inner cities, reduced congestion, commuting and associated air pollution and accident costs, and the preservation of greenspace.
45 Necessarily, an implicit assumption of the critics of Superfund is that the comparative economics of developing Greenfields and Brownfields are not too one-sided in favor of Greenfields. Otherwise, Superfund would have no significant role in shaping behavior.
and amortized over a long period, even a several thousand dollar per acre cost advantage of greenfields sites might not be prohibitive.

Anecdotal data suggest that the amount of the cost differential for large projects is beyond the “several thousand dollar per acre” range. In particular, three separate studies found the greenfields economic advantage for larger projects sufficiently great as to dwarf other issues. The first of these studies was conducted in 1971—in a pre-CERCLA world. That study, titled the “Paired Newtown Project,” called for developers to study the feasibility of placing the same development at two sites, one in-town and one out-of-town. The study found the land acquisition cost for the in-town sites to be $130,000 per acre and the out-of-town sites to be only $2,000 per acre. Detroit, Michigan has offered two recent case studies, one that is essentially pre-CERCLA and one that came a decade later. In 1980, General Motors Corporation, with extensive assistance from the City of Detroit, procured and built on a 465-acre urban site called “Poletown.” Armed with its power of condemnation, the use of which spawned litigation questioning whether the condemnation was in aid of a public purpose, Detroit spent $135 million for acquisition, demolition and site preparation. This sum translates to a per acre cost of $290,000. Finally, in building a single-family home neighborhood on 25.8 acres of mostly vacant land that was already owned by the City of Detroit, the city ended up spending $19,400,000, or $776,000 per acre, for the land, the demolition, and the preparation of the site for

46 No claim is being made here that the three studies recounted here constitute all of the data that might be found by a thorough inquiry. My familiarity with these studies is attributable to the work of a Wayne State Law School student, whose forthcoming note I reviewed. See Joseph B. Urban, Life After Michigan Public Act 307: A Look Beyond Environmental Liability as a Limit to Urban Redevelopment, 43 WAYNE L. REV. (forthcoming 1997) (on file with the William and Mary Environmental Law and Policy Review). I have not found contradictory data, but I have not made a search for additional material of this sort. Nevertheless, the consistency of these three studies in finding costs that favor Greenfields by two orders of magnitude compels attention to the fact that the economics of Brownfields redevelopment are potentially more significant than the laws regarding cleanups and liability for remediation costs.

47 See THE METROPOLITAN FUND, REGIONAL NEW-TOWN DESIGN (1971).


49 Some of the parcels that went into making the Poletown site were not abandoned; indeed they were part of a stable residential community, but large portions of the tract were vacant prior to the project.
The decided cost disadvantage of Brownfields evidenced by the three examples is both startling and a cause for concern. If the data reflect a pattern comprising more than three isolated examples, then it is very important to find ways in which Brownfields land and demolition costs can be reduced unless Brownfields redevelopment is to be relegated to being an occasional, highly subsidized event. For present purposes, assume that there is some broader phenomenon at work, that the cost of Brownfields redevelopment for projects of those types is substantially higher than a comparable Greenfields site. On that assumption, insights into why the costs are so much higher may assist in identifying strategies that will reduce the cost differential. At that point, cleanup laws come back into focus as a further stumbling block for brownfields redevelopment.

A. Land Cost Issues

Just as anecdotal data (most of it from the Detroit, Michigan area) raised grave doubts about the feasibility of Brownfields redevelopment on the economic front, different anecdotal data from the same region offers some reason for optimism. First, the reasons for the high relative cost of Brownfields parcels can be explained (and in a way that can be addressed in the longer term). Second, changes in cleanup laws do seem to kindle Brownfields redevelopment.

A factor common to the three separate studies of redevelopment cost was that all involved relatively large parcels and some constraints relating to the amount of time in which the land could be assembled and prepared for reuse. Amassing larger parcels in urban areas where the land ownership has become fractured greatly increases transaction costs, both in terms of the numbers of parties with whom negotiations must be conducted and in the impetus to strategic holdout behavior. One way in which to limit these problems is to focus on smaller projects, that involve only the purchase of two or three contiguous parcels, as the bulwarks of Brownfields


51 In the Greenfields setting, the opposite is true, most land is held in large tracts and there is potential competition among sellers who seek to capitalize by selling their land (that is becoming less well-suited to farming due to nuisance concerns, etc.) at a great profit.
redevelopment.\footnote{In terms of community acceptance, smaller undertakings have as an additional advantage the fact that they are less likely to meet with resistance.}

When larger tracts are required, the municipality or state can add the power of condemnation to the mix.\footnote{This is almost universally considered to be a proper use of the condemnation power. See, e.g., Berman v. Parker, 348 U.S. 26 (1954); Poletown Neighborhood Council v. Detroit, 304 N.W.2d 455 (Mich. 1981). Recall, however, that two of the three “expensive” land acquisition examples were cases where the parcels were amassed using condemnation as an adjunct to negotiations.} It would seem that strategic holdouts can be avoided and parcels can be amassed, paying no more than fair market value. Fair market value of brownfields property, it would seem, ought to be relatively low. First, the present disuse or underuse of the target parcels implies a low market value. Second, the fear of contamination, or presence of mild contamination that inhibits would-be-developers, is a further drag on market value.

Unfortunately for Brownfields redevelopment, prices paid in condemnation are unlikely to reflect these price-depressing factors. Consider, for example, Detroit’s current effort to amass land for a downtown dual stadium project.\footnote{The insights that follow are gleaned from conversations with my colleague, Professor John Mogk of Wayne State University Law School. Prof. Mogk has been appointed by the City of Detroit to lead its land acquisition efforts for the stadium project.} Most simply, condemnation (or the threat of condemnation) is not succeeding in limiting the land acquisition cost to anything closely resembling the actual fair market value (and significantly depressed value) of the properties involved. At a strategic level, the City of Detroit is under considerable time pressure to put the deal together and make it happen. The principals whose funds and cooperation undergird the project want the project to go forward on a relatively fast track. The exigencies of running a business in the real world demand no less. Strategically, the City is best served by negotiating successfully for the purchase of the land involved, condemnation proceedings take time and divert resources from other activities. Sellers understand this and, therefore, seek inflated prices in their negotiations. Once the City agrees to even a mildly inflated price for one parcel, an upward spiral in market price begins. In theory, the City can check the most unreasonable demands by use of condemnation. In condemnation, however, the burden of proof is on the City to establish the fair market value of the parcel. Their own recent “voluntary” purchases work
at cross-purposes with their efforts to avoid inflationary payments.

More critically, should the City attempt to use the contamination angle to reduce fair market value, it faces two distinct problems. If the City knows that the contamination is a significant factor, its proof would have to focus on the considerable expense involved in cleaning the parcel for redevelopment—at the risk of scaring off the Brownfields redeveloper. More pragmatically, that proof is not often readily available, it has to be developed by on-site testing. It is very expensive to do the needed testing to pinpoint the contamination and the remedial work needed to be done. Further, to do that sort of work usually entails long lead times that are not available in the context of the redeveloper's timetable or in the context of typical condemnation proceedings. Additionally, obtaining the needed access to do the testing, in the absence of total cooperation of the parcel owner, is problematic both as to the right of the City to obtain the information and the delay that will be encountered in confirming that the right to obtain the information exists. Taken as a whole, it is evident that the City, even if it is willing to expose the extent of the contamination, will seldom be in a position to make a sufficient record on contamination to affect the condemnation award.

There is no reason to think that Detroit's difficulty in limiting land acquisition costs will not be replicated in most large-scale redevelopment scenarios. Most development projects have a time sensitive component. The capital needed for the project, having been amassed, or at least earmarked for a project, has a time-value. Delay is, literally, costly. Cost aside, delay in consolidating the needed land and/or proof of significant contamination cleanup cost for a Brownfield site, in the paradigmatic context where the developer is in a position to be choosing among sites, work in favor of selection of one of the alternatives. Thus, like Detroit, other cities seeking to spur Brownfields redevelopment cannot act at a pace that would allow them the opportunity to defeat inflated claims of fair market value in their land acquisition efforts.

Although overpayment for land consolidation is likely to be an endemic Brownfields redevelopment problem, cities can attempt to limit their expense by what might be called "land banking." Cities can amass the contiguous parcels over time in advance of Brownfields redevelopment and market the pre-consolidated parcels to redevelopers. Though providing some relief from overpayment, this sort of banking imposes costs as well. Cities incur obvious capital costs for the acquisitions and suffer somewhat more
subtle revenue effects in terms of foregone taxes on the parcels during the period in which they are no longer among the ratables.

Returning to the broader plane for a moment, it seems patent that brownfields redevelopment will almost invariably be more costly, in terms of tangible project costs, than greenfields development. The economists' "rational maximizer" developer will, accordingly, opt for the latter unless there are other incentives at work. There are other incentives, some economic and some intangible. On the economic front, incentives can be added, ranging from outright subsidies and to creative forms of tax abatement such as enterprise zones that grant forbearance of a portion of the anticipated future tax receipts from new, industrial commercial, or residential ventures. Intangibles include matters of environmentalism, good public relations, civic pride, or a desire to invest in areas of economic need. For present purposes, however, the point to be made is that the economics of Brownfields redevelopment is a significant, possibly overriding, factor that operates to deter redevelopment projects.

B. State Law Issues

The parallel state mini-superfund laws and their serial extensions into the areas of super liens and property transfer restrictions create real legal disincentives to Brownfields redevelopments where Superfund's impediments are chimerical. No certain measure of the effect of these state laws is available, but using recent Michigan experience as a guide, it appears that the effect is substantial.

Michigan was a state that promptly enacted parallel mini-superfund legislation in the wake of CERCLA's passage. That legislation, titled the "Michigan Environmental Response Act" ("MERA"), was very similar to Superfund. It created strict, joint and several, retroactive liability for environmental response and remediation costs. As with several other state laws of this type, it closed gaps in Superfund, having no petroleum exclusion and holding liable all in the chain of title from the time of release onward. Cleanup standards under the old act were cumbersome and stringent, although there were variable standards that allowed for three different levels

56 See id.
of cleanup depending on future land use and the public recording of ongoing institutional controls. Redeveloping even mildly contaminated property required extensive negotiation with the Michigan Department of Natural Resources ("MDNR") and other stakeholders to win approval of remedial action plans. It was a gauntlet that few developers chose to run.

In 1994, Michigan's Governor John Engler realigned the MDNR's functions by executive order, shifting MERA functions to the environmental wing of the agency, the newly created Michigan Department of Environmental Quality ("MDEQ"). Concurrently, the governor, through his appointment power installed new leadership at the agency, staffing the policymaking posts with persons having a more pro-development orientation than had prevailed in the past. Concurrently, the governor appointed a task force chaired by a pro-development attorney, to suggest amendment and codification of all the state's environmental laws. In 1995, that later initiative bore fruit. Importantly for present purposes, the environmental law that was most significantly altered in the process was MERA, which reemerged substantially amended and bearing the nondescript name of Part 201.57

Part 201 bears a fundamental structural resemblance to MERA and CERCLA; it remains a liability-for-cleanup law that provides express causes of action to recover cleanup costs from an array of liable parties,58 but almost everything else underwent change. Liability now depends on the property involved being a "facility," a term that is now defined in a way that requires not only the release of a hazardous substance, but contamination at the site must exceed a certain concentration to be within the statutory definition.59 Strict liability is eliminated for owners insofar as proof is required that the owner is responsible for causing the release—the mere fact of a release at the facility does not render an owner liable.60 The law does, however, erect a presumption of responsibility for contamination in the event that anyone who becomes an owner after June 5, 1995, does not establish a level of pre-existing contamination through a "Baseline Environmental Assessment"

59 Mich. Comp. Laws Ann. § 324.20101(l). The concentration is that set as the standard for a residential quality cleanup level by another part of the amended statute. See id. § 324.20120a.
60 See id. § 324.20126(1)(a)-(b).

A covenant not to sue under MERA was the administrative mechanism that allowed would-be redevelopers of property to receive assurances that they would be able to limit their MERA liability at the site to a negotiated fixed.
191 sites will be removed from Michigan’s inventory of Sites of Environmental Contamination in 1996 because they no longer meet the revised definition of a contaminated parcel or because all necessary cleanup activities have been completed.

It is almost assuredly over-generous to Part 201 to attribute to it all of the favorable reports of increased Brownfields activity. The overhaul of MERA coincides in time with an improvement of the state’s economy. Concurrently, the changes in the state’s administrative structure fostered changes in administrative policies regarding encouragement of Brownfields redevelopment at the state level. There were also some changes at local levels of government that made cooperation with MDEQ more likely. Nevertheless, even if the observed signs of increased Brownfields activity are partially attributable to other factors, the magnitude and timing of the observed change suggests a strong correlation of the change in law with revitalized interest in Brownfields.

Almost nothing, of course, in CERCLA or EPA policy bounds the states to alter their parallel and serial responses to CERCLA. The states remain free to retain their laws that act as an obstacle to Brownfields redevelopment or to alter those laws. The gain in Brownfields activity that Michigan already has experienced, especially if it is replicated in other states that relax their cleanup laws, ought to catalyze other states to consider changes in their mini-superfunds and other redevelopment-inhibiting laws.

V. BROWNFIELDS FEDERALISM

Initially, a major focus of this commentary was to examine the role, if any, that the EPA and CERCLA play in inhibiting Brownfields redevelopment. The thesis has been that CERCLA is not a core problem, nor even a significant problem. The far more significant stumbling blocks are (1) the economics disadvantages of Brownfields in comparison to Greenfields sites and (2) the impediment to redevelopment posed by state mini-Superfund laws and their extensions. The brief examination of each of these areas undertaken in this commentary did little to dispel concerns that Brownfields

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66 Detroit, in particular, underwent a change in administration with the election of Dennis Archer as Mayor. Mayor Archer has established a far better rapport with state officials than that enjoyed by the more confrontational administration of former Mayor Coleman Young.
redevelopment, especially when larger tracts are involved, is a viable competitor when cost is a vital concern.

Having reached those tentative conclusions, however, is not tantamount to saying that there remains no benefit to CERCLA amendment and restructuring Brownfields federalism. Albeit a function of unnecessary fear of liability on the part of lenders and developers, the present state of the federal law is acting as a deterrent to the viability of widespread efforts at nationwide Brownfields redevelopment. That misperception ought to be affirmatively eliminated by legislation that disclaims federal interest in minimally contaminated sites. That renunciation, however, should not, and need not, come at the expense of a continuing core federal interest in ensuring a level national playing field when it comes to setting public health and safety standards for remedial cleanups wherever they may be needed.

In giving a fuller shape to proposals for CERCLA reform, it is important simultaneously to isolate and prescribe affirmative actions that the federal government should take under the aegis of CERCLA to protect health while encouraging Brownfields redevelopment. The quest for such an affirmative federal role best begins by revisiting the “traditional” federalism that has pervaded so much of environmental law since Earth Day in 1970. This “cooperative federalism” formula is well understood—uniform national standards that ensure against the race of laxity in the protection of health and the environment, and local implementation and application of the national norms in a way that allows the state to be at the forefront in solving its own environmental problems. This relationship not only preserves the states’ traditional primacy in police power protection of health and the environment, it does so without sacrificing economies of scale in the technically sophisticated scientific area of standard setting. An additional national benefit accrues through federal review and limited oversight of state programs. The federal government is in a position to serve as a clearinghouse for the generation and dissemination of information on Brownfields redevelopment experience. Additionally, the traditional cooperative federalism models have long proven the value of using the deeper pocket and greater cost spreading ability of the federal government to offer funding that
assists with demonstration projects that frequently are crucial to innovation.\textsuperscript{67}

Applying those general precepts to CERCLA reform in the Brownfields context is a task that the legislative process is well suited to perform. Even so, it may be helpful to provide a series of lists of the areas and of specific steps that ought to be considered in crafting legislation.

To disavow federal interest in Brownfields sites as a remedial and/or liability matter:

1. Establish by statute a jurisdictional lower limit to CERCLA liability (§§ 106, 107, and 113) based on HRS scores in all states that establish qualifying state cleanup programs.
2. Expressly delegate authority to EPA to promulgate its lender liability rule, or issue the rule in statutory form.
3. Expressly authorize and encourage EPA to enter into prospective purchaser agreements that include contribution protection with Brownfields redevelopers having no past involvement at a site, thus protecting them from federal liability for preexisting contamination at these sites without regard to HRS score.
4. Expressly authorize and encourage EPA to enter into prospective purchaser agreements that include contribution protection with all Brownfields redevelopers protecting them from federal liability for preexisting contamination at sites having sufficiently low HRS scores.

To establish cooperative federalism as the norm in regard to cleanups:

1. Expressly require EPA to establish standards for state cleanup programs by a certain date, that will trigger the jurisdictional renunciation of CERCLA for low HRS scoring sites.
2. Expressly require EPA to include in standards for program qualification, national safety standards for cleaned sites that are sufficiently health protective but that allow for the states to take subsequent land use and institutional controls into account in assessing residual risk.

\textsuperscript{67} Moving CERCLA in this direction is, it would seem, in keeping with the times and mood of Congress and the EPA. Relying on centralized standard setting and localized implementation is a politically palatable formula that is well suited to achieving results in the field.
Expressly authorize states to adopt and apply more restrictive state safety standards than the minimum needed to qualify for federal program qualification.

**To facilitate innovation and experimentation in redevelopment methods:**
1. Expressly require EPA to create a clearinghouse for information relating to site-specific Brownfields experience.
2. Expressly grant EPA authority and establish sufficient funding for EPA to help facilitate a significant number of Brownfields redevelopment demonstration projects.  
3. Expressly authorize EPA to recommend limited site-specific legislation granting federal tax benefits to encourage Brownfields redevelopment of the relevant site.

**To investigate the remaining obstacles to Brownfields redevelopment:**
1. Expressly grant EPA authority and establish sufficient funding to study the obstacles to brownfields redevelopment, including, but not limited to, the remaining impact of CERCLA itself, the comparative economics of Brownfield and Greenfield site selection decisions, and the impact of state laws on development behavior.

VI. CONCLUSION

For me, this commentary has been an informative journey. I began believing that CERCLA did cast a significant shadow on Brownfields redevelopment. That was the standard fare in the journal literature, even though there was some lack of specificity of exactly how and why the deterrent to redevelopment was so great at sites where EPA was clearly never going to get involved. I thought that by explicating the means by which CERCLA generated the unintended consequence of hindering Brownfields redevelopment, I would be able to suggest means for reducing the magnitude

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68 This is essentially a call for Congress to lend its support to the demonstration projects program that EPA has established.

69 Scope of the study could include consideration of the desirability of federal preemption of various state laws that inhibit Brownfields redevelopment (e.g., state mini-Superfund laws, state super-lien laws, and state property transfer laws). As noted previously, without elaborate consideration of the ramifications of that preemption I think it is an unwise step. That is not, however, a reason to preclude a thoughtful study of the possibility.
of the problem. As a secondary issue, the fact that CERCLA was having unintended consequences on state and local Brownfields initiatives would insert a federalism concern, recently made more pointed by *United States v. Olin Corp.* In that decision, Judge Hand of the United States District Court for the Southern District of Alabama asserted that cleanups of contaminated parcels were essentially local problems having no discernible interstate content or context and, accordingly, were beyond the power of Congress to control. Given my steadfast belief that CERCLA, warts and all, is an essential element of national regulatory policy having immense economic consequences, addressing that issue appeared to be useful, but not particularly difficult.

What emerged was a quite different reality. Through imaginative administrative actions, EPA had so significantly reduced the scope of Superfund’s impact on redevelopment of minimally contaminated sites, that the failure of most Brownfields redevelopment efforts demanded another explanation. It was forthcoming in the form of a comparative benefit cost analysis that found Greenfields to hold a far greater than expected economic advantage, and the fact that state laws had entered the field in almost precisely the way that CERCLA was conventionally thought to operate—as a huge source of potential legal liability and travail for Brownfields developers and their lenders. Together this part of the exercise leads to two conclusions, to wit: (1) that Superfund is not a major problem, but state law is; and (2) whatever the strategy for reducing the legal inhibitions may be, it cannot be considered alone without addressing the considerable economic incentives disfavoring Brownfields in competition with Greenfields.

Having said that, in turning to the prescription for action, the federalism concerns offer a beacon. CERCLA, rightly or wrongly, was not modeled on the cooperative federalism that had been employed in the Clean Air Act and Clean Water Act. As time and experience provided a better guide of the nature of hazardous contamination and its remediation, the problem began to more closely resemble more conventional pollution. The stakeholders were, in the main, local, even if the generic problem had national public policy and economic overtones. The role well played by the federal government in such cases is not that of micro-manager, but that of policymaker and facilitator. EPA can set standards, generate ideas, collect information, fund demonstration projects, and more, but in the end, the states

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are most in touch with the people and firms who have to make Brownfields redevelopment a reality in their locale. The *de jure* responsibilities ought to be adjusted to reflect those capabilities.