Bad Policy: CERCLA’s Amended Liability for New Purchasers

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I. INTRODUCTION

One of the most significant environmental issues facing the United States today is the abandonment or underutilization of land feared to be contaminated by hazardous materials. Such sites, known as "brownfields," are blamed for a variety of ills. Beyond posing risks to human health, their disuse also contributes to the loss of municipal tax bases and helps fuel both urban sprawl and the destruction of open space.\(^1\) A number of people and institutions have sought to identify ways to encourage the clean-up of brownfields and return them to productive use.\(^2\)

Many commentators have concluded that one of the most significant impediments to brownfield redevelopment has been the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"),\(^3\) commonly called "Superfund."\(^4\) Congress enacted CERCLA in 1980 to address the consequences of decades of careless hazardous waste disposal practices. CERCLA aimed to: (1) prevent further contamination and release of hazardous material by requiring prompt clean-up of existing hazardous sites and (2) deter future hazardous materials releases by

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2. 3 United States Conference of Mayors, supra note 1, at 3 (2000) ("[F]or years the redevelopment of brownfields has been a top priority for the Conference of Mayors.").


4. 3 United States Conference of Mayors, supra note 1, at 7 (2000); Jacobs, supra note 1, at 267; Paul Stanton Kibel, supra note 1, at 598–99.
imposing high liability costs on careless waste management practices.\(^5\) Congress advanced these two aims by creating a broad class of jointly and severally liable parties. Liability attached not only to those who were directly involved in the production, transportation, or management of the waste released; it also attached to the owner of the property from which a release of hazardous materials was taking place or at least threatened. Thus, a property owner would be liable even if the hazardous materials were deposited on the site long before he took title to the property.\(^6\)

This broad CERCLA liability alone would have deterred the purchase of any property potentially subject to CERCLA. But reality proved even worse for prospective brownfields purchasers. Cleaning up a given CERCLA site turned out to take more time and money than most people expected. Predictably, this further deterred acquisition and development of brownfields.

Some commentators and policy makers argued that amending CERCLA was the only way to render brownfields attractive to developers. Among other things, they contended that the Act should be amended to relieve prospective property purchasers from liability.\(^7\) The reasoning was straightforward enough: if developers shied away from brownfields because of fear of CERCLA liability, remove that liability. Only then would significant brownfield development take place. Congress eventually endorsed the idea. In early 2002, President Bush signed the Brownfields Revitalization and Environmental Restoration Act of 2001\(^8\) ("BRERA") into law. Among other things, BRERA amended CERCLA to relieve a certain class of property owners from liability under the Act (the "Amendment"), namely those owners who were not otherwise liable under the Act (as operators, arrangers, etc.) and who took title after January 11, 2002.\(^9\)

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This article challenges the Congressional and commentator wisdom that changing CERCLA to relieve prospective property purchasers from liability is good policy. I will argue that the Amendment is actually bad policy. Previous commentators have touched on earlier proposals to free prospective purchasers from CERCLA liability. Instead, this article offers the first focused and sustained analysis of the current liability relief. Rather than addressing the subject as a proposal in the abstract, this article analyzes liability relief as it has now been enacted into law.

Amending CERCLA to shield prospective purchasers from liability was a mistake. The Amendment removed an important disincentive to the release of hazardous materials. It gave a windfall to property owners who acquired title with knowledge of their potential liability after CERCLA’s 1980 enactment. This windfall is unfair because it is arbitrary. It is also potentially inefficient. Further, the Amendment increases the likelihood that future clean-ups will be performed not by a private party, but by the government, probably at higher cost. The Amendment purports to justify these costs by pointing to the virtue of its end: to increase the development of brownfields. But significant brownfields acquisition and development activity was already taking place before CERCLA was amended. Any additional encouragement of such activity brought by the Amendment does not justify the cost.

This article aims more broadly than just to persuade Congress to correct its mistake by amending CERCLA again. Shortly after Congress’ original enactment of CERCLA in 1980, many states used it as a model to enact their own hazardous waste contamination legislation. These so-called “mini-Superfund” laws are now at risk of being changed to conform to the post-
Amendment version of CERCLA. Thus, this article is also addressed to state policy makers to dissuade them from following Congress's lead.

My criticism of the Amendment has implications for other rulemaking as well. The pre-Amendment version of CERCLA held buyers of contaminated property liable for the waste management practices of prior owners (as well as operators, arrangers, and transporters). This is an example of derivative, or successor, liability, which is a common feature of liability regimes created by statute and the common law. By freeing property buyers from liability, the Amendment has engaged in a kind of derivative liability relief. Many of the same criticisms of the unfairness and inefficiency of the relief provided by the Amendment may also be applied against derivative liability relief in other contexts.

Part I of this article recounts the pre-Amendment CERCLA and brownfields debate. It discusses the brownfield problem, the perception that CERCLA was to blame, the structure and practice of the pre-Amendment version of CERCLA, and how the Amendment altered the Act's liability scheme.

Part II then argues that the Amendment is bad policy because it is costly and unfair for three principal reasons. First, the Amendment will encourage the release of hazardous materials. Under the pre-Amendment version of CERCLA, property owners were deterred from mishandling toxic substances. In part, this was because they could be held directly liable under CERCLA. In addition, because any subsequent property owner could also be held liable, this reduced the price the owner could fetch for the property if they chose to sell it. The Amendment removed this deterrent to releasing hazardous materials by freeing property buyers from liability.

Second, the Amendment gives a windfall to anyone who bought potentially contaminated property with knowledge of the risk of a toxic release after the enactment of CERCLA. Presumably such owners bought their property at a discount that reflected the risk of CERCLA liability. Freed from liability by the Amendment, prospective purchasers will bid up the price of these properties. The sellers will enjoy a windfall. This windfall is both unfair in its arbitrariness and potentially inefficient. While the Amendment does have a provision putatively designed to prevent windfalls to property owners, it is too narrow in scope to make a significant difference. By holding buyers derivatively
liable for the environmental mismanagement of their predecessor owners, the pre-Amendment version of CERCLA helped deter such mismanagement. By granting derivative liability relief, the Amendment makes derivative liability schemes in other parts of CERCLA and in other legal regimes seem more susceptible to change. This makes the threat of derivative liability less credible and weakens the deterrent posed by these other regimes. To maintain the same level of deterrence, government will have to make potentially costly changes in other regimes or in their levels of enforcement.

Third, the Amendment is bad policy because it will make clean-ups more expensive. The Amendment has reduced the chances of finding a liable party financially able to pay for the clean-up of CERCLA sites. This will leave more clean-ups to be performed by the government. Experience proves that government-run clean-ups are substantially more costly than those run by private, liable parties.

Part III then argues that the costs described in Part II outweigh the benefits provided by the Amendment. Thanks in large part to market-led forces, brownfield acquisition and development were becoming increasingly attractive before the Amendment was enacted. To the extent the Amendment added a welcome inducement to help support this trend, it could have been accomplished with a narrower enactment. Many of the costs identified in Part II could therefore have been avoided.

The foregoing criticisms also shed light on proposals to amend statutory programs outside of CERCLA that have used successor or derivative liability as a regulatory tool. The dangers of diminished deterrence, arbitrary and inefficient windfalls, and increased regulatory costs are just as real.

II. BROWNFIELDS AND CERCLA: THE DEBATE

Congress enacted CERCLA in 1980 in the wake of public outcry over a few properties from which hazardous substances were being released into the environment, thereby posing risks to human health. Existing laws were perceived to be inadequate for holding those responsible for creating these sites—the generators, transporters, and site operators—liable for the costs of cleaning them up. CERCLA was enacted to bridge this gap. The basic concept was to make the responsible parties liable for
cleaning up these sites. Further contamination would be prevented by prompt clean-up and future releases would be deterred by high liability costs for sloppy waste management practices.

CERCLA purported to accomplish this by applying to any site, or "facility," from which there has been a release or threatened release of hazardous material. The Act established a scheme in which a member of any one of four classes of potentially responsible parties might be held liable for clean-up costs: (1) current owners and operators of the site; (2) owners and operators at the time of disposal; (3) persons who arranged for disposal of the waste; and, (4) persons who transported hazardous waste to the site. However, liable parties included not only those who generated the hazardous materials at the site, transported them there, or owned or operated the property at the time of disposal. The net of liability also encompassed the current owner of the property, even if the hazardous materials were disposed on the property long before this owner took title. In a very real sense, the current owner was made responsible for the sins of others. Compared to most civil statutes, liability attached quite easily. It still does today. For example, there are very limited defenses to liability. It is retroactive, strict, and in many cases joint and several. Liable parties who incur response costs may bring contribution actions against other potentially liable parties.

CERCLA in practice has not quite lived up to its goals. The number of properties that came under its purview was much larger than expected. This caused more people to fear being held liable under CERCLA. Further, the costs associated with CERCLA liability were larger than expected. Parties complained that the costs of clean-up were unpredictable and could be substantial, frequently exceeding $10 million for a single

16. Anderson et al., supra note 13, at 964.
17. Id. at 964–65.
19. Id.
In addition, these costs have historically been difficult to predict. The uniqueness of each site and the parties involved in studying the problem and designing and implementing a remedy all contributed to uncertainty in projecting costs. These costs in turn drove up associated costs. When the serious consequences of CERCLA liability became clear, parties rationally decided to spend more money on due diligence prior to acquisition of a property. It also became rational to spend substantial sums on investigation and litigation in efforts to find other liable parties. Commentators complained that these clean-up costs and transaction costs far exceeded the true cost of the release that prompted the clean-up to begin with.

The result of all this was that, for properties that possibly fell within the scope of CERCLA, demand dropped considerably. Because the consequences of CERCLA liability were so substantial, property potentially subject to CERCLA became much less desirable even in situations where the risk of liability was quite small. Even remote chances of contamination meant potential liability that was quite large. Many lenders reacted by refusing to finance the purchase of properties having potential CERCLA claims.

All this is not to say that CERCLA shut down the market for all properties with potential CERCLA liability. Buyers were still able to negotiate price reductions to account for the risk. Alternatively, buyers could shift the risk of CERCLA liability. For example, a buyer might negotiate a partial or full indemnity from the seller or obtain third party liability insurance. However, for many years the insurance industry was reluctant to insure against losses due to environmental contamination. The policies that

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22. PROBST ET AL., supra note 20, at 20-21; Abrams, supra note 11, at 271-72; Kibel, supra note 1, at 601.
have historically been available were both limited in coverage and very expensive. Increasingly today, however, environmental insurance is more readily available and reasonably priced. Nonetheless, in part due to fears of CERCLA liability, demand for property with potential contamination—brownfields—has been less than demand for property with no such potential.

Until CERCLA's recent amendment, any party who purchased a brownfield property ran the risk of being held liable for the release or threatened release of hazardous materials. These costs could be substantial and difficult to estimate in advance. This risk was no secret to the real estate development community. The high and unpredictable costs of CERCLA liability have been well publicized in the popular and professional press. Some commentators dismissed this fear of CERCLA liability as irrational, claiming that other factors were more important deterrents to the acquisition and development of brownfields. Nonetheless, the perception that CERCLA was to blame persisted. Many commentators and policy makers advocated that CERCLA be amended to relieve property purchasers from liability.

Congress responded to the call in January 2002 by enacting BRERA. BRERA amended CERCLA to encourage brownfield development. It aims to accomplish this by two principal means. First, it provides funding to state and local government programs that encourage the acquisition and development of brownfields.

Section 222(b) of BRERA—what I have called the "Amendment"—modifies CERCLA to absolve from liability any "bona

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28. See generally Abrams, supra note 11, at 276 (arguing that Superfund no longer constitutes an obstacle to brownfields development); Heidi Gorovitz Robertson, One Piece of the Puzzle: Why State Brownfields Programs Can't Lure Businesses to the Urban Cores Without Finding the Missing Pieces, 51 Rutgers L. Rev. 1075 (1999) (arguing that non-environmental issues loom large in the development of brownfields).
29. Powell, supra note 7, at 130-131 (characterizing legislative proposal to relieve prospective purchasers of brownfields from CERCLA liability as a "better proposal"); Rimer, supra note 7, at 83 (supporting legislative proposal to relieve prospective purchasers from CERCLA liability).
31. §§ 9601, 9607.
fide prospective purchaser.” Essentially, this is anyone: (1) that acquired ownership of a property subject to CERCLA after BRERA’s enactment and the disposal of hazardous substances on the property, and (2) whose liability under CERCLA is based solely on the purchaser being considered an “owner or operator” under the Act. The Amendment also provides for the imposition of a lien on the property under certain circumstances. A lien would be allowed if there were unrecovered response or clean-up costs incurred by the United States in any case where an owner is not liable due to the Amendment. This lien cannot exceed the facility’s increase in fair market value attributable to the response action.

III.
THE CERCLA AMENDMENT IS BAD POLICY

The Amendment aims to encourage the purchase and development of brownfields. While this may be a laudable goal, the means chosen are both quite costly and unfair. By freeing purchasers of property subject to CERCLA from liability, the Amendment creates a number of potential evils. First, it removes an important disincentive to the creation of properties subject to CERCLA, commonly known as “CERCLA Sites” or “Superfund Sites.” The Amendment will thereby engender more releases of hazardous materials. Second, it gives property owners a windfall. This is not only unfair, but also it threatens to increase the cost of government regulation. Third, it will increase the costs of performing clean-ups under CERCLA. Each of the Amendment’s undesirable consequences is explored in detail below.

A. The Amendment Encourages the Creation of Superfund Sites

One of the avowed purposes of the Amendment is to increase demand for brownfields—properties possibly subject to CERCLA. It seeks to accomplish this through liability relief; the scope of this relief is broad. Purchasers are excused from liability for all types of properties subject to CERCLA. These include not only the “cleanest” brownfield, for which designation as a

32. § 9607.
33. §§ 9601, 9607.
34. § 9607.
CERCLA site is entirely speculative, but also the "dirtiest" hazardous waste facility, for which CERCLA designation is quite likely or has already taken place. By increasing demand for these properties indiscriminately, the Amendment encourages their creation. Freed from CERCLA liability, buyers will be more willing to buy properties otherwise subject to the Act. As demand increases, so too will the price these properties command. And as the price increases, potential "suppliers," that is property owners, will be relatively more encouraged toward (or at least less discouraged from) creating properties subject to the Act. In brief, the Amendment may contribute to the creation of more properties from which there is a release or threatened release of hazardous materials. That this result is not only perverse, but also plausible, will be demonstrated presently.

Now that prospective property purchasers are free from CERCLA liability, their expected costs of owning property subject to the Act are less. Demand for such properties will increase: the dirtier the property, the greater the Amendment's expected impact on demand. One consequence of increasing demand is that the price of such properties will increase. Potential buyers will bid up the price until, in the long run, it is equal to the price of properties currently without CERCLA liability risk. In other words, increased demand for properties subject to CERCLA will drive up property prices until they approach the price of properties that have no chance of being designated a CERCLA site—properties often labeled "greenfields." 35

At first glance this seems to be a good outcome. By freeing "innocent" purchasers from CERCLA liability, underused properties potentially subject to CERCLA are made more valuable and developed into productive use. However, one problem is

35. Rimer, supra note 7, at 69. Even if a property owner is not liable under CERCLA for clean-up, that does not mean that the owner will suffer no costs from the presence of hazardous materials on the property. The presence of the hazardous materials may limit the owner’s use and development of the property. The owner may still be liable to third parties under other theories of liability, such as nuisance. See, e.g., Branch v. W. Petroleum, Inc., 657 P.2d 267, 274–76 (Utah 1982) (holding that judgment arising out of pollution of wells by toxic formation water emanating from defendant’s property could be upheld under a theory of strict liability for either abnormally dangerous activities or nuisance per se). Further, if the property is designated as a Superfund site, the clean-up of the property may also interfere with the owner’s use and development of the property. See RANDALL BELL, REAL ESTATE DAMAGES: AN ANALYSIS OF DETRIMENTAL CONDITIONS 8-10 (1999) (describing the costs associated with detrimental conditions during their assessment and repair, as well as on an ongoing basis).
that each “innocent” purchaser is connected by the market to the “guilty” owner or operator who engaged in the activity that caused the property to become a potential CERCLA site to begin with. Pre-BRERA, an innocent purchaser would have been subject to CERCLA liability, and thus would have demanded a discount to buy the property. By virtue of this discount property owners would face a tangible cost for sloppy hazardous waste handling practices when they sold the property. This operated as an important deterrent to the creation of Superfund sites by property owners. The Amendment has removed this disincentive. Freed from liability, innocent purchasers pay closer to top dollar for properties potentially subject to CERCLA. This cash goes into the pocket of the guilty seller who engaged in the activity that caused the property to become a potential CERCLA site to begin with. The guilty seller gets to pollute the property and still fetch a price for the property nearly equal to what it would have commanded if it were pristine and unsullied.

This is not to say that the Amendment will cause property owners to go out of their way to create Superfund sites. Those who own or operate the site at the time of disposal are still liable under CERCLA. Moreover, liability still attaches to such owners or operators even after they sell the property. So there remain significant reasons to avoid the release of hazardous materials. Nonetheless, by eliminating one disincentive for polluting by property owners—the discount to be suffered on resale—the Amendment has removed an important deterrent to the creation of Superfund sites.

Consider the following hypothetical. A person buys a piece of property and builds a factory. Through the “Owner/Operator’s” operation of the factory, there is a risk that hazardous material will be released into the environment. Under the pre-Amendment version of CERCLA, this would create a risk that the property would become a CERCLA site or “facility,” rendering the Owner/Operator potentially liable for the cost of cleaning up the site. This article calls the cost associated with this CERCLA liability “Liability Costs.” In addition to Liability Costs, the pre-Amendment version of CERCLA assessed additional costs against the Owner/Operator. Anyone who subsequently purchased the property would also be subject to liability under

36. § 9607(a).
37. §§ 9601(9), 9607(a)(1).
CERCLA. The purchaser would be liable even if they did not continue to operate the factory or otherwise engage in activities contributing to a release of hazardous materials. Further, by virtue of CERCLA's regime of joint and several liability, the purchaser would be liable for the entire cost of clean-up.\(^{38}\) As a result, the amount of money a prospective purchaser would be willing to pay to buy the Owner/Operator's property would be reduced by the expected cost of potential liability. The Owner/Operator simply could not sell the property for as much as he could have if the Owner/Operator's activities had caused no risk of CERCLA liability. Thus, the Owner/Operator would also suffer the cost of decreased property value. This pre-Amendment CERCLA cost of liability is referred to in this article as the "Resale Cost."

One of CERCLA's central objectives is to deter future hazardous material releases. It does this by imposing high costs on poor hazardous material management and disposal practices.\(^{39}\) The Resale Cost was an important part of the deterrence regime in the pre-Amendment version of CERCLA. If a landowner with poor waste management and disposal habits wanted to sell the property, she could do so only if she were willing to accept less than full price. Imposing these resale costs helped deter the creation of potential CERCLA sites.

The Amendment will encourage the creation of CERCLA sites by eliminating that deterrence. Because purchasers will no longer be liable under CERCLA, they will bid up the price of CERCLA sites. Current site owners will capture these increased prices. Having removed one of the costs of creating a CERCLA site, the Amendment eliminates one major disincentive to their creation. Stated another way, incentives to engage in activities that risk releasing hazardous materials under CERCLA have been increased. This is a perverse incentive.

Of course, just because an incentive is perverse does not necessarily mean that it is also undesirable. It may in fact be wanted because it is, for example, efficient.\(^{40}\) Many critics contend that

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38. § 9607(a)(1).
40. The enactment of CERCLA in 1980 could be viewed as an attempt to increase economic efficiency. If a market is perfectly competitive and is peopled by rational, self-interested actors, it will lead to a Pareto-optimal, or efficient, allocation of resources. One of the conditions of a perfectly competitive market is that there are no external costs or benefits to each actor's activities. That is, each actor enjoys the full benefit, and bears the full cost, of their activities. Mark Seidenfeld,
CERCLA has wrongfully discouraged the purchase and development of any property that falls within the potential reach of the statute. The Amendment's freeing prospective purchasers of brownfields from CERCLA liability also appears to rest on the same premise. Implicit in this contention, or at least consistent with it, is the notion that CERCLA is inefficient, in the sense that it both: (1) deflects the economy from its optimal allocation of resources, and (2) involves significant transaction costs in administering the Act. Arguably, the sum of allocative and transaction costs imposed by the Act exceeds its benefits. Specifically, CERCLA imposes on parties subject to the Act certain costs associated with their conduct, the idea apparently being to force actors to internalize the cost of their activities—that is, the damages caused by them—that would otherwise remain external to those actors. CERCLA also imposes on society as a whole certain costs associated with resolving disputes under CERCLA. According to CERCLA's detractors, the sum of these costs far exceeds the damage to third parties caused by the waste disposal activities on the properties. There is a mismatch between the costs of CERCLA on the one hand and the actual damages caused by the liable parties on the other.

Eliminating this mismatch is one of the aims of the Amendment. Part of the problem was allegedly that the costs of being held liable under CERCLA (the "CERCLA Costs") exceeded...
the actual damages caused, and otherwise not internalized (the "Actual External Costs"), by the activity sought to be deterred. Those who merely own the property were among those liable under the former version of CERCLA. This deterred real estate developers from buying and developing properties even where the total (internal and external) benefits of the development would exceed its actual total costs, including the Actual External Costs. The liability of real estate developers also deterred property owners from engaging in activities, such as the operation of a factory that might cause a release of hazardous material. This is because any real estate developer subsequently bidding on the factory property would, in light of the risk of being held liable under CERCLA, demand a substantial discount. This Resale Cost would deter the property owner from operating a factory to begin with, even when the total (internal and external) benefits exceeded the total costs, including the Actual External Costs. This is because the CERCLA Costs were far in excess of the Actual External Costs. In fact, according to this line of criticism, the CERCLA Costs were so high that they wrongly deterred an activity whose benefits exceeded its actual total costs. By freeing purchasers from CERCLA liability, the Amendment purports to remove this inefficiency.

This reasoning may, however, be wrong. It is quite possible that the former version of CERCLA was efficient with respect to the allocation of resources. One way to look at CERCLA is to say that it does not intend to prohibit releases of hazardous materials. Instead, it just seeks to minimize the total costs to society of the activities that cause such releases. The optimal level of an activity that results in releases is not necessarily zero. Hence, CERCLA seeks an efficient level of deterrence. If a firm's marginal benefit from engaging in the activity that generates the external harm exceeds the marginal costs to society, then it is socially desirable for the firm to engage in that activity. The costs of CERCLA liability should not be set so high as to discourage that activity. Instead, the costs associated with CERCLA liability should match the costs imposed on third parties by the liability-generating activity. In this way an efficient allocation of resources will result.43

This analysis, though, assumes perfect enforcement. It assumes that every activity giving rise to CERCLA liability will be discovered and the costs paid by the responsible party. This is not in fact the case. There has never been perfect enforcement of CERCLA, and it is unlikely that there will ever be. The costs of perfect enforcement are simply too high. The "release" that gives rise to CERCLA liability is often difficult to detect. Not all persons and entities that sent waste to a site may be identified with ease. Parties who are liable under CERCLA may be bankrupt, and may never be forced to internalize the full cost of their activities. As a result, enforcement of CERCLA is imperfect. Some parties who should be held liable avoid liability altogether.

One way to take imperfect enforcement into account would be to increase the cost of CERCLA liability in excess of the damage caused. Instead of charging a liable party the actual third-party costs imposed by their activity, CERCLA would be justified in charging more than that. For example, if a release bore only a 50% chance of detection, the liable party should pay out double the actual external costs. A polluter would, on average, expect to pay 100% of the external costs of their activities. This would lead to an improved allocation of resources. This improvement in allocative efficiency due to CERCLA might exceed the administrative costs of resolving disputes under the Act.

Is this in fact the case? What have been the odds of detection of a CERCLA release? To what degree did the costs of CERCLA liability exceed the actual external costs of that activity under the pre-Amendment version of the Act? The answers to these questions are far from certain. It is at least plausible to assume, however, that under the pre-Amendment version of CERCLA: (1) the high costs of CERCLA liability at individual sites was balanced by imperfect enforcement; and (2) allocative efficiencies resulting from this exceeded the higher administrative costs of resolving disputes. In other words, taking into account administrative costs, the pre-Amendment CERCLA regime may have either optimally deterred the external harms subject to the Act, or it may have under-deterred them. Either way, freeing property purchasers from CERCLA liability will take society further away from optimal deterrence and lead to a less efficient allocation of resources. On balance, the benefits of the Amendment may be exceeded by its costs.
B. *The Amendment Gives Property Owners a Windfall*

The Amendment absolves property purchasers from CERCLA liability. The intent is to make brownfields no less attractive than greenfield properties. However, one problem with the Amendment is that the means chosen to accomplish this provides a substantial windfall to owners of potential CERCLA sites. Freed from potential CERCLA liability, purchasers will bid up the price of possible brownfields. In other words, the benefit to buyers of property will be capitalized into the price of that property. This price inflation will be enjoyed by the seller and constitutes a windfall for any seller who acquired the property with knowledge of the risks of liability after the enactment of CERCLA in 1980.

The Amendment does have a provision that appears to be aimed at preventing windfalls. If the government incurs clean-up costs for which it has not recovered, it can enforce a lien on the property to the extent that unrecovered clean-up costs increase property value. This provision—the "Lien Provision"—may be intended solely to make the government whole with respect to costs incurred in clean-up. In that respect it may be effective. But to the extent that it seeks to prevent windfalls to property owners, it falls short. The Lien Provision simply will not prevent windfalls to property owners.

1. Relieving Buyers From Liability Also Gives Sellers a Windfall

The windfall may be demonstrated by the following hypothetical. "O," a property owner, purchased the property knowing: it had earlier been used as a dumpsite; it contains hazardous materials; and, it potentially constitutes a "facility" under CERCLA. When operated as a dumpsite, the property was owned by "D," who accepted hazardous materials from three parties: "H1," "H2," and "H3." These three parties arranged for the disposal of hazardous materials at the property. O is now in negotiations to sell the property to a prospective buyer, "B." B has the same information as O concerning the hazardous materials at the site. No government authority has yet designated the property as a facility or ordered a CERCLA clean-up of the site.

Even aside from the risk of CERCLA liability, there are certain costs associated with owning and developing the contaminated property. These costs may be imposed by the owner/developer's concern about other sources of liability, such as the law of nuisance or occupational safety and health laws. These
costs could include, for example, assessing the contamination, taking corrective steps, and continuous monitoring of the contamination. Such activities may limit the use of the property on a temporary or ongoing basis, thereby creating an additional cost. All of these costs may be grouped under the heading, "Owner's Non-CERCLA Costs Of Contamination."

There are also liabilities associated with brownfield properties by virtue of CERCLA. A government ordered CERCLA clean-up involves direct and indirect costs. Direct costs include those direct, related, and contingent costs resulting from a CERCLA clean-up and responsibility for payment of those costs. These include the money that must be expended to assess the contamination, design and implement a remedy, and monitor the operation and maintenance of the remedy on an on-going basis.

Direct costs are the responsibility of the parties held liable under CERCLA. The pre-Amendment version of CERCLA cast the liability net broadly. Potentially liable parties included not only D, who operated the property as a dumpsite, but also H1, H2, and H3, who arranged for hazardous materials to be disposed there. In addition, solely because O was the current owner of the property, O was potentially liable.

Designating a CERCLA site also imposes on the property owner indirect costs. Generally speaking, these costs are the opportunity costs of property use during the CERCLA clean-up process. The chosen method of clean up may also result in a permanent limitation on the use of the property.

Because of these direct and indirect costs of CERCLA liability, O devalued the property relative to those properties that had no risk of being designated CERCLA sites. O likely bought the property at a lower price than O would have paid if there were no possibility that the property was potentially a facility under CERCLA. Part of this discount is measured by the expected cost of CERCLA liability. The costs O bears if the site were designated a CERCLA site would be summed. Then those costs are multiplied by the probability of the property being designated a CERCLA site. That yields O's expected cost of CERCLA liability.

44. See Bell, supra note 35, at 8-13.
45. See id.
46. See id. at 10.
47. See id. at 9-10.
48. See id. at 9-10, 13.
But the expected cost of CERCLA liability does not fully measure the discount O took in purchasing the property. Because CERCLA liability is uncertain, the value or disvalue that O attributed to that eventuality was also influenced by risk. Risk is related to the spread or dispersion of the possible outcomes.\textsuperscript{49} In this case, that is the difference between the cost if the property were designated a CERCLA site and the cost if it were not. Because most people are risk averse, we assume O is.\textsuperscript{50} O placed an additional disvalue on the purchase because of this risk. Accordingly, the discount O took when he purchased the property reflected not only the expected cost of a CERCLA designation, but also the risk associated with that designation.

The discount O took when he purchased the property may be divided into two parts. One part is attributed to O's costs of CERCLA designation that are \textit{indirect}, i.e. the inconvenience to O of having a clean-up performed on the property by anyone. The other part is attributed to those costs of a CERCLA designation that are \textit{direct}, i.e. those costs due to O being held liable for clean-up costs. Herein, a "CERCLA Liability Discount" represents the purchase price difference attributable to direct CERCLA costs.

The purchase price's reflection of the risk may be expressed as follows. Taking into account the risks of CERCLA liability, O calculated the purchase price consistently with the following formula:

\[ P = X - G - Wst - Yst \]

where

- \( P \) is the purchase price;
- \( X \) is the market value of the property if there were no contamination (the "Unimpaired Market Value");
- \( G \) is the cost the owner, O, expects to incur due to contamination apart from any liability under CERCLA (the "Owner's Non-CERCLA costs of contamination");

\textsuperscript{49} SEIDENFELD, \textit{supra} note 40, at 69-70 (1996).

\textsuperscript{50} It is unlikely that O could buy insurance completely to shift this risk onto a third party, what may be referred to as "perfect" or "complete" insurance. Because of the problems of moral hazard and adverse selection, complete insurance is not available. Any insured, including O, must typically bear a portion of risk, through a deductible, for example. \textit{Id.} at 73-75; POLINSKY, \textit{supra} note 43, at 53.
• X - G is the market value of the property if there is no risk of a CERCLA clean-up being ordered (the “No-CERCLA-Risk Market Value”);
• W is the indirect cost the owner, O, expects to incur if the property is designated a CERCLA site by the government (the “Owner’s Expected Indirect CERCLA Costs”);
• Y is the direct cost the owner, O, expects to incur if the property is designated a CERCLA site by the government (the “Owner’s Expected Direct CERCLA Costs”);
• W + Y is the “Owner’s Total Expected CERCLA Costs;”
• s is a fraction representing the odds of the property being designated a CERCLA site by the government (the “CERCLA Risk”);
• t is a number representing the value the Owner places on the risk of the property being designated a CERCLA site (the “Risk Value”). A value of 1 represents risk neutrality. A value greater than 1 represents risk aversion. The more risk averse O is, the greater the value of t;
• Yst is the “CERCLA Liability Discount.”

A hypothetical demonstrates how this formula works. Assume the following:
• The No-CERCLA-Risk market value of the property is $100.
• O’s Expected Direct CERCLA Costs are $50.
• O’s Expected Indirect CERCLA Costs are $20.

51. These costs may be divided among three stages: assessment, repair, and ongoing. BELL, supra note 35, at 9. The assessment stage is when the nature and extent of the contamination are evaluated. Id. Examples of such activities include a preliminary site assessment (known as a “Phase I study” in industry parlance), intrusive, subsurface investigation (“Phase II study”), and systematic testing to characterize the waste (“Phase III study”). Id. at 138–39 (1999). The repair stage is when steps are actually taken to clean-up the contamination. Id. at 10,139. The ongoing stage is after the repair stage, and involves continuing issues associated with the contamination. Id. An example of such an issue would be ongoing responsibility for oversight and monitoring. Id. The costs during each of the three stages of assessment, repair, and ongoing may be further divided into three types of costs: (1) direct, related, and contingent costs and responsibility for payment of those costs; (2) losses resulting from impacts and restrictions on use of the property; and (3) risks and uncertainties associated with (1) and (2). Id. at 10–14. Of course under CERCLA, an owner’s liability for these costs will be reduced to the extent they are apportioned among other solvent, liable parties.
The CERCLA Risk is 10%.
O's "Risk Value" is 2 (i.e. O is risk averse).
The purchase price is therefore determined as follows:
\[ P = \$100 - (\$20)(.10)(2) - (\$50)(.10)(2) \]
\[ P = \$100 - \$4 - \$10 \]
\[ P = \$86 \]
The direct costs of CERCLA liability, taking into account both
the risk of the site being designated a CERCLA site and O's risk
aversion, is $10. This is the CERCLA Liability Discount. The
indirect cost of CERCLA liability, taking into account the risk of
CERCLA liability, is $4. Thus, the price O would pay for the
property is $14 less than the No-CERCLA-Risk Market Value of
$100. O would buy the site for $86. This is the CERCLA Dis-
counted Market Value.\textsuperscript{52}

Suppose O later enters into negotiations with B to sell the
property. Continue to assume that the pre-Amendment version
of CERCLA still governs. In its analysis of how much to pay for
the property, B will also assess the risk of the property being
designated a CERCLA facility, because if it goes through with
the purchase, B will become potentially liable under CERCLA
as an owner. B will assume the direct costs of the property being
designated a CERCLA facility. B will also have to face the indirect
costs of CERCLA designation—those stemming from loss of use.
O, whose liability was premised only on being the owner of
the property, would no longer be potentially liable. Likewise, O
would no longer have to face the indirect costs of CERCLA lia-
bility. In other words, O would pass the risk of CERCLA liability
to B. Because of this, if B purchases the property, she will
likely pay less than she would have if there were no risk of liability.
Assume that B has all the same information O does about
the waste and CERCLA risks. Further assume that B's attitude
toward the risk of CERCLA liability is the same as O's. It is
expected that B will receive the same CERCLA Liability Dis-
count that O received when O bought the property. O will not
be able to keep the CERCLA Liability Discount for himself as profit. Instead, O will have to pass on the CERCLA Liability Discount to B if B buys the property. Using the same figures
from the preceding hypothetical, if O paid $86 to acquire the

\textsuperscript{52} Motiuk & Pritchard, \textit{supra} note 24, at 448 ("The seller may chose not to conduct the cleanup itself but rather dispose of the property as is, adjusting the price to reflect the site’s environmental condition. The site assessment and cost estimates can be used to form the basis for negotiating any offset from the asking price.").
property, B would also pay $86. The Total CERCLA Discount of $14, including the CERCLA Liability Discount of $10, that O received at the time of his own purchase would be passed from O to B.

The Amendment significantly changes this result, and gives O a $10 windfall. B no longer bears a CERCLA liability risk. B's potential liability for release or threatened release was premised solely on the fact that if she went through with the purchase, she would be an owner of the facility. Accordingly, under the Amendment, B would be absolved from liability.

Absolving B would affect the negotiations between O and B for the purchase and sale of the property. Because there is no longer any risk of liability for costs of a CERCLA clean-up, B would have much less reason to demand a CERCLA Liability Discount in her purchase of the property. As the owner of the property, B would still bear the indirect costs of CERCLA designation. But the direct costs—that is, the money spent on the clean-up ordered by the government—would be borne by others. What would be the consequence as far as the price paid by B for the property? It is expected that B would take no CERCLA Liability Discount on its purchase and pay full price for the property. This would result in a windfall to O.

Recall that when O purchased the property, he took into account the risk that it would be held liable under CERCLA. The property would have been worth X minus G with no risk of CERCLA liability. Because of the risk of CERCLA liability, the property would have been worth Wst less due to potential indirect CERCLA costs, and Yst less due to potential direct CERCLA costs. When O purchased the property, he deducted the cost associated with that risk from the purchase price, paying X minus G minus Wst minus Yst. Yst is the CERCLA Liability Discount. Assuming a competitive market for property, under the Amendment B would not be able to negotiate this CERCLA Liability Discount on her own purchase of the property. If B could negotiate such a discount, it would result in the property having a higher expected rate of return than other properties. Attracted by this higher rate of return, other potential buyers would bid up the price of the property until the CERCLA Liability Discount disappeared. In other words, B or some other buyer
would buy the property without the discount.\textsuperscript{53} O would pocket the difference. B would pay $X$ minus $G$ minus $Wst$ for the property, and O would enjoy a gain of $Yst$ on the sale.

Stated another way, under the pre-Amendment version of CERCLA, any buyer of the property—both O and B—would pay an amount $P$ for the property, where

$$P = X - G - Wst - Yst$$

This may be described as the “CERCLA Discounted Market Value.” After the Amendment, the buyer will likely pay more for the property. The buyer B may pay an amount $P'$, where

$$P' = X - G - Wst$$

This may be described as the “CERCLA Liability-Free Market Value.”

This disparity may be demonstrated by using the same figures from the preceding hypothetical. Assume again that the No-CERCLA-Risk market value of the property would be $100, the Owner’s Expected Direct CERCLA Costs are $50, the Owner’s Expected Indirect CERCLA Costs are $20, the CERCLA Risk is 10\%, and the Risk Value for both O and B is 2. Under the pre-Amendment version of CERCLA, both O and B would pay $86 to acquire the property. After the Amendment, B may pay O the No-CERCLA-Risk market value of $100, less the Owner’s Expected Indirect CERCLA Costs of $4, for a total purchase price of $96. Having itself paid only $86 to acquire the property, O would enjoy a windfall of $10 on the sale by keeping the $10 CERCLA Liability Discount.

There would be no way under the amended CERCLA to use O’s gain to help pay for any clean-up of the property. If after B’s purchase of the property the government ordered a CERCLA clean-up, a number of parties could be held liable. These would include parties who operated the property as a dumpsite and parties who sent waste there. However, once O passed title to B, O could no longer be held liable. O would get to keep the $Yst$ gain.

\textsuperscript{53} See Seidenfeld, supra note 40, at 37–38 (in a competitive market in the long run, firms cannot earn economic profit); cf. William T. Mathias, Curtailing the Economic Distortions of the Mortgage Interest Deduction, 30 U. Mich. J. L. Reform 43, 57 (1996) (stating that in the short run, the home mortgage interest deduction reduces the cost of homeownership compared to rental housing, but this increases demand for owner-occupied housing, which causes the price to rise to a higher level in the long run); Kevin M. Yamamoto, A Proposal for the Elimination of the Exclusion for State Bond Interest, 50 Fla. L. Rev. 145, 153 (1998) (discussing the fact that state bond interest is exempt from federal income taxation is capitalized into the cost, that is, the interest rate, of state bonds).
without having to contribute anything to the clean-up. In essence, by enabling buyers to escape liability, the Amendment gives property owners a windfall.

Some may object that the foregoing hypothetical is unrealistic. One might argue that after the enactment of CERCLA in 1980 every piece of property potentially covered by the Act became "untouchable:" no one would be willing to buy the property no matter how steep a discount were offered. After all, that is one of the principal purposes behind the Amendment. By freeing buyers from CERCLA liability, formerly pariah properties are made sufficiently attractive for purchase and development.

Clearly some purchases were discouraged. After all, imposing potentially large and uncertain costs on the buyer of an asset will always tend to reduce demand for that asset. But many sales of brownfields and other properties potentially subject to CERCLA occurred anyway. An exact figure representing either the number of transactions or the area of land sold would be prohibitively expensive to obtain. That does not mean, however, that there is no evidence of brownfield transactions after CERCLA's 1980 enactment. There are a number of reported decisions involving disputes over liability under CERCLA and other authorities for release of hazardous materials from property. A review of even a small sample of these decisions reveals a number of properties used for industrial purposes (and thereby potentially subject to CERCLA) that were sold after 1980.54 These reported

54. See, e.g., ABB Indus. Sys., Inc. v. Prime Tech., Inc., 120 F.3d 351, 354 (2d Cir. 1997) (stating that property contaminated with CERCLA hazardous substances was used to manufacture circuit boards before being sold in 1985 and again in 1986); Coastline Terminals of Conn., Inc. v. USX Corp., 156 F. Supp. 2d 203, 206 (D. Conn. 2001) (stating that contaminated property was used to manufacture steel wire, rope, and strand before being sold in 1983 and again in 1996, when state was told by buyer that it would clean-up the property); Southdown v. Allen, 119 F. Supp. 2d 1223, 1226 (N.D. Ala. 2000) (reporting 1995 purchase of stock of company that owned property used as a hazardous waste recycling facility and known to be contaminated); Int'l Clinical Labs. v. Stevens, 710 F. Supp. 466, 468 (E.D.N.Y. 1989) (reporting 1986 sale of property at which hazardous materials were allegedly disposed into cesspools by seller's tenant before date of sale); Grand Street Artists v. Gen. Elec. Co., 19 F. Supp. 2d 242, 246 (D.N.J. 1998) (stating that property contaminated with mercury was used for a tool and die business and manufacture of light bulbs before being sold in 1993); Andritz Sprout-Bauer, Inc. v. Beazer East, Inc., 12 F. Supp. 2d 391, 397 (M.D. Pa. 1998) (stating that property was used to manufacture wire rope until sold in 1986, then used for various industrial and manufacturing operations, including production of equipment for grain, pulp and paper mills, fabrication of sheet metal and dies, and foundry operations until property sold again in 1990); Middlebury Office Park Ltd. P'ship v. Timex Corp., 1998 WL 351583, at *1, *1 (D. Conn. June 16, 1998) (stating that property used for manufacturing activities including electroplat-
decisions represent only a fraction of all cases actually filed. Moreover, cases actually filed represent only a fraction of all transactions in brownfield properties. Attorneys handling real estate transactions have also reported that there have been sales of properties with issues of environmental contamination in recent years. It is therefore reasonable to assume that many properties potentially subject to CERCLA were sold after its enactment. As explained above, rational buyers of such properties

would have demanded a discount. After the Amendment, buyers who bought at a discount would be able to sell the properties at nearly full price. Thus, the prospect of property owners enjoying a windfall upon sale is not just hypothetical. It is a real problem.

There is another potential objection to my argument that brownfield owners are likely to receive a windfall because of the Amendment. Arguably, my hypothetical fails to acknowledge that under the pre-Amendment version of CERCLA there were alternatives to the buyer simply assuming the risk of CERCLA liability. Through negotiation of a purchase agreement, a buyer might attempt to have all or part of the liability either retained by the seller or transferred to a third party such as an insurance company.56 There are a number of responses to this "liability shift" objection. First, the only way to eliminate the windfall is for the buyer to shift all the risk of CERCLA liability to the seller or a third party. If the buyer assumes any part of this risk, it is expected that this risk is reflected in the purchase price. Consequently, the purchase takes place at a discount. It is this discount, coupled with the Amendment's freeing purchasers from CERCLA liability, that creates the opportunity for a windfall to be enjoyed by property sellers.

The second response to this objection is that there is no such thing as a free lunch. Even assuming that under the pre-Amendment version of CERCLA a buyer of property shifted all of the CERCLA liability risk to the seller or a third party, it was still no more than a shift. It did not, by itself, eliminate risk. Presumably the seller or third party was compensated in some way by the buyer to assume this risk of the buyer being held liable under the pre-Amendment version of CERCLA. If the buyer, "O," then sought to sell the property to a new buyer, "B," O would either have to refuse to assume any of B's CERCLA liability risk and sell the property for less than O paid for it or agree to assume B's CERCLA liability risk and sell the property at full price. The Amendment changes this calculus. The Amendment would make B free from CERCLA liability, so O could sell the property at full price and be free from CERCLA liability, giving O a windfall. And to the extent O managed to have shifted this risk to the party from whom O bought the property or a third party, such as an insurer, then that party enjoys a windfall. Formerly

56. Id. at 479.
liable parties are now freed from exposure because of the Amendment.

There is a third response to the liability shift objection. To the extent that the objection is valid, it undercuts the need for the Amendment. If under the pre-Amendment version of CERCLA buyers really were able to shift their risk of CERCLA liability to sellers or third parties, then there was no problem to be solved. The CERCLA liability risk could not have been an impediment to the acquisition and development of brownfields. Rather than constituting a defense to the Amendment, this objection reveals the Amendment itself is unnecessary.

Another objection may be raised to my argument that the Amendment will give a windfall to owners of potential or actual CERCLA sites. Simply stated, this objection asks, “So what?” Every change in government policy—that is, every legal transition—imposes gains and losses on individuals who before the change performed acts with long term consequences. Should government attempt to tax the gains and compensate the losses, or not? In other words, who should bear (or enjoy) the risk of a change in government policy: the individual or government? In a 1986 article, Louis Kaplow argued that the risk should be borne by the individual.57 Individuals who invest in, say, a business face a number of market-created risks—that a competitor might enter or leave the market, that the price of a resource on which the business depends will increase or decrease, and so on. Each of these risks poses the possibility of a gain or a loss to the individual. It is generally believed that it is fair and economically efficient for such market-created risks to be borne by the individual.58

The possibility of a government policy change that would pose a loss or gain to an individual is a government-created risk. Because the possibility of gains and losses to individuals resulting from government-created risk is similar to market-created risk, it is fair to assume that they should be treated the same way.59 Government-created risk should be borne by the individual. Losses and gains resulting from changes in government policy—legal transitions—should be ignored by government.60

58. Id. at 533–34.
59. Id. at 534.
60. Id. at 527–536.
The risk of amendment to CERCLA is a species of government-created risk. Some might therefore argue that such a risk should be borne by the individuals affected by it. If the Amendment increases the value of property, resulting in a gain for property owners, this may be characterized as a windfall. Regardless of the label applied, however, this gain should be ignored by the government. It is not a valid basis for criticism of the Amendment.

There are at least two responses to this argument, both of which demonstrate that this objection is not well founded. First, the windfall is unfair because it is arbitrary. Arbitrariness in gains and losses when associated with market-risks seems less unfair because there is no single entity charged with advancing the public good behind them. The market is by nature a rough and tumble place, filled with risks and gains and losses that are arbitrary. However, arbitrariness in gains and losses connected with changes in government policy seems unfair. Here the class of individuals benefited by the Amendment is composed of those who bought potential CERCLA sites between CERCLA's 1980 enactment and the Amendment's effective date 21 years later. Why should this group be singled out for gain? Why shouldn't those who bought property before the enactment of CERCLA also receive a gain? As you can see, the arbitrariness of the windfall is unfair.

Second, the creation of a windfall by the Amendment is inefficient because it impairs the ability of government to influence behavior through legislation. This argument is a corollary to a thesis advanced in Kyle Logue's 1996 article. Logue argued that there is a category of government policy that, when changed in a way that causes losses to certain individuals, should include some government-sponsored relief to those individuals. This category consists of government rules that aim to incentivize behavior by inducing reliance on them. Because such rules are useful to government, it should be careful not to do anything that might impair their future usefulness. Logue calls these rules "incentive subsidies." As an example, consider a tax rule de-

62. Id. at 1131.
64. Logue, supra note 63, at 1513.
signed to induce private investment in a socially desirable activity. If no relief were provided to those individuals injured upon the repeal of this incentive subsidy, investors would demand a larger subsidy, or "default premium," the next time government sought to induce investment through policy. According to Logue, inducing reliance on government policies would become quite costly, perhaps prohibitively so.65

Professor Logue's argument concerned incentive subsidies—government policies designed to induce investment in socially useful enterprises. However, his argument has implications for the opposite situation too, where there is a government policy that aims to deter investment in socially damaging enterprises. These types of policies might be labeled "disincentive penalties." Just as incentive subsidies should be accompanied by government-sponsored relief to those damaged when the subsidy is withdrawn, the same holds true for disincentive penalties. If such penalties are withdrawn, efficiency demands that government seize the windfall that some individuals will otherwise enjoy.

By holding buyers of contaminated properties liable, the pre-Amendment version of CERCLA constituted a disincentive penalty. As argued at length in the preceding section, CERCLA aims to deter future release of hazardous materials by imposing high costs on sloppy waste management and disposal practices. The pre-Amendment version of CERCLA accomplished this not only by holding liable the parties who actually handle the waste or own the property, but also those who subsequently purchased the property—even if they did not actually continue any of those activities. By making buyers liable too, this made the property less marketable. The property owner who actually mishandled the waste was thus saddled with another cost, namely the reduction in the price the property could command on sale. The buyer's liability was a disincentive penalty and was an important means of advancing CERCLA's goal to deter sloppy waste management practices.

Through the removal of this disincentive penalty, the Amendment raises the cost of government using these penalties in the future. These penalties are an important government tool. By making buyers of property liable for the poor waste management activities of their predecessors, the pre-Amendment version of CERCLA imposed a kind of derivative, or successor, liability.

65. Id.; Logue, supra note 61, at 1138–43.
As a result of making successors liable for their predecessors’ misconduct, CERCLA imposed a disincentive penalty to deter that misconduct. Of course, this is not the only place where the law imposes liability on successors. The law imposes successor liability in a variety of contexts. That such liability constitutes a disincentive penalty designed to deter predecessor misconduct may also explain the presence of successor liability in the other contexts.

By removing the disincentive penalty from CERCLA, the Amendment makes it more difficult for government to use these penalties in other contexts. Seeing that buyers have been let off the hook under CERCLA, would-be successors in other contexts will no longer fear liability so much. They will view their liability as temporary and therefore less of a threat. Instead of demanding steep discounts to step into the shoes of the predecessor, would-be successors will be willing to pay more. Thus, an important deterrent to predecessor misconduct will disappear.

CERCLA itself is a prime example. If a corporation with CERCLA liability dissolves, may another corporate entity be held liable as the former corporation? CERCLA has been interpreted by the courts to provide for such successor liability under certain circumstances. Many jurisdictions use the “substantial continuity” test, under which courts look to whether the successor corporate entity engages in basically the same business, with the same employees and customers.66 This is arguably another example of a disincentive penalty, designed to deter misconduct by the former corporation by discouraging other corporate entities from stepping too far into the shoes of the predecessor corporation. The Amendment has weakened this disincentive penalty. By freeing buyers of property from CERCLA liability, the Amendment has suggested that other disincentive penalties in CERCLA are likewise vulnerable to change. Corporate successors may believe that the “substantial continuity” test may be restricted or eliminated by Congress in the future, reducing the scope of their liability. This emboldens would-be successor corporate entities to embrace predecessor corporations who mishandle hazardous waste, thus making mishandling less costly. As a result, the deterrent effect of this other aspect of CERCLA is diminished.

What does this mean for the overall deterrence level? To keep the same level of deterrence, government would have to increase the risk of CERCLA liability in some other way. This might be accomplished by increasing the costs a business would suffer by being found liable under CERCLA, or by increasing the possibility of being caught. Either way, government faces an increased cost. By bestowing a windfall on a class of property owners, the Amendment has weakened the credibility of other deterrence regimes and thereby increased the cost of creating and maintaining them. Because this is, at base, a question of the government's credibility, the costs of restoring it may be prohibitive.

2. The Amendment's Lien Provision Will Not Eliminate the Windfall to Sellers

While the Amendment does have a provision putatively designed to prevent windfalls to property owners, that provision will not prevent the windfalls described in the prior section. This provision imposes a lien on the property to the extent unrecovered cleanup or response costs incurred by the federal government increase the "fair market value" of the property above its value prior to the response action.\(^67\) The Lien Provision is triggered only when response actions result in an increase in market value to the property. There is every reason to believe that in many instances there will be no increase in market value resulting from a response action and thus no lien imposed.

The reason lies in the fact that every response action visits on the property not only certain potential benefits, but also certain potential costs. The potential benefits are fairly obvious. A response action may remove certain hazards from the property that, aside from CERCLA liability, imposed costs on the property owner. Those hazards may have exposed people on the property or neighbors to health problems. This would have raised the property owner's risk of tort liability. The owner may have been compelled to limit its development and use of part or all of the property. By eliminating or at least containing these hazards, response actions may reduce property owner's liability risks and thereby tend to increase the property's fair market value.

Response actions, though, also bring potential costs. Of course property owners who take title after the Amendment's effective

date will no longer be liable for the *direct* costs of CERCLA liability. They will not be writing checks to engineers and consultants to investigate the waste, design the remedy, and implement it. But property owners will still suffer the *indirect* costs of CERCLA liability. These include the disruption to the use of the property during remediation. By "remediation" I mean not only the steps of investigating the waste, designing the remedy, and implementing it, but also continued oversight and monitoring of the remedy. Going from designation of the property as a CERCLA site to implementation of the remedy can often take years.  

Use of the property may also be disrupted after remediation. Treatment has been declining as a clean-up remedy over the past decade and containment has become increasingly popular. For example, rather than treating hazardous materials on site or removing them to an offsite location, a clean-up remedy might instead leave them in place and seek to contain them. A containment remedy might make it necessary to limit the development of a portion or all of the property. These disruptions on the property's use would tend to decrease its fair market value.  

Which effect predominates in clean-ups—factors tending to increase or decrease the property's fair market value? It is possible that in some instances, a clean-up will result in either no change in fair market value, or even a decrease. In either case there would be no increase in market value resulting from the remediation, regardless of whether the costs of performing it were incurred by the government or some other party. In the absence of such an increase in market value, the Lien Provision will not be triggered. Not facing the prospect of a lien, a buyer would have no reason to factor a possible lien into his decision as to how much to pay for the property to begin with. If the clean-up had no impact on the fair market value, the buyer would pay the

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68. Probst et al., *supra* note 20, at 18 (the average time between the designation of a site under CERCLA and the completion of the site's remedy is twelve years).  
69. *Id.*  
70. Reps Ask Why EPA Using Fewer Permanent Remedies at Sites, *Hazardous Waste News*, October 11, 1999 (noting that treatment, as opposed to containment, as a remedy has been declining since 1993).  
seller in accordance with the last section. That is, the owner would keep the CERCLA Liability Discount, and gain a windfall on the sale.

How would the buyer handle a decrease in market value? It is fair to assume it would be a small decrease relative to the direct costs of CERCLA liability. First, it may be assumed that the seller factored in this same risk that the clean-up would decrease the property's value. Thus, the buyer demanding a discount for this risk would not reduce the seller's windfall due to the buyer being freed from the direct costs of CERCLA liability. Second, even if the change in remedial practices in favor of containment remedies tends to decrease the market value of properties, that factor is likely to be weak relative to the freeing of the buyer from the direct costs of CERCLA liability. The change in liability will put great upward pressure on the price of the property, while the risk of a clean-up disrupting the use of the property will put little downward pressure on the price. That is the assumption behind the Amendment. In either event there would still be a windfall to the owner.

What if the clean-up has a positive impact on the market value of the property—will the Lien Provision eliminate the windfall to sellers? The answer is probably not. Part of the explanation lies in the fact that the Lien Provision has not significantly diminished the ability of a property owner to enjoy fully any increase in market value of a piece of property by shifting the clean-up cost to someone else. Before the Amendment, unless the narrow "innocent purchaser defense" applied, CERCLA made the owner of the property jointly and severally liable for the entire cost of clean-up. The owner, however, had the opportunity to shift some of the cost of clean-up to a third party. This might occur in a number of ways. The government might have performed the clean-up in the first instance and not called upon the owner to reimburse its costs. The property owner may have incurred clean-up costs and sued other potentially responsible parties in contribution. Or, the government may have directed another potentially responsible party to perform the clean-up and brought a contribution action against the property owner.72

72. Ever since the original enactment of CERCLA in 1980, if the Environmental Protection Agency expends money for removal or remedial action, it may recover its costs from PRP's. 42 U.S.C. § 9607(a)–(b) (2000). PRPs may also bring actions for contribution. Although the original version of CERCLA was silent on this fact, the
When adjudicating a contribution action, the court may allocate, or apportion, responsibility for clean-up costs in any manner it sees fit. The court has complete discretion. It may take into account any number of equitable factors to divide the cost of clean-up among the liable parties. The property owner's gain from the increase in value to the property resulting from the clean-up is one factor that may be taken into account by the court. It is within the court's power to increase the owner's share of the clean-up cost in an amount equal to the increase in the property's market value due to the CERCLA clean-up. This may be done in any one of a number of different types of CERCLA cases. For example, a property owner may pay for a clean-up and sue another liable party for contribution. Or a liable party who does not own the property may pay for a clean-up and sue the owner for contribution. In either case, the increase in the property's market value resulting from the clean-up—and otherwise inuring to the owner's benefit—may be "charged" to the owner. The owner may bear more of the clean-up cost to account for this benefit, which prevents the owner from enjoying a windfall.

The possibility that on apportionment an owner would be charged for any increase in market value of the property resulting from clean-up has always been just that—a possibility. Although Congress considered including the so-called "Gore factors" to be considered on apportionment, no such list made it into the final version of CERCLA. Courts have complete discretion to apportion clean-up costs among liable parties "using such equitable factors as the court determines are appropriate." Under CERCLA there was always a possibility that the increase in the property's market value resulting from clean-up would not

Superfund Amendments and Reauthorization Act of 1986 explicitly provided for such actions. § 9613(f)(1).

73. Envtl. Trans. Sys., Inc. v. Ensco, Inc., 969 F.2d 503, 509 (7th Cir. 1992) (showing how the language of CERCLA's apportionment provision allows courts to determine what factors should be considered in their own discretion without requiring a court to consider any particular list of factors).

74. Smith Land & Improvement Corp. v. Celotex Corp., 851 F.2d 86, 90 (3d Cir. 1988) ("[I]f the tract's price is reduced to allow for future environmental clean-up claims, the purchaser should not be entitled to double compensation. Nonetheless, the amount of the discount, if any . . . may enter into the allocation of contribution by the district court in its exercise of discretion."); accord Alcan-Toyo America, Inc. v. N. Ill. Gas Co., 881 F. Supp. 342, 347 (N.D. Ill. 1995) (apportioning property owner 10% of the costs of clean-up in part because owner "will also reap the benefits of the environmental cleanup of its property").

75. § 9613(f)(1).
be charged to the liable property owner. In other words, there was a chance that the owner would get to keep this benefit on apportionment.

Anyone who purchased a potential CERCLA site after the statute’s enactment would likely have taken this potential benefit into account when they bought the property. That is, because of this potential benefit, the price of the property would have been bid up. Just as the CERCLA liability costs would be capitalized into the purchase price by the buyer, so too would any benefit to be enjoyed by the owner as a result of the increase in the property’s value due to clean-up. Anyone who bought the property after CERCLA’s 1980 enactment took into account this potential benefit and paid for it up front.

The Amendment’s net impact on this would appear to be minimal. As a result of the Lien Provision a property owner will, on resale, have to disgorge any increase in the property’s value resulting from the clean-up. But this provision applies only to unreimbursed costs incurred by the federal government. At many CERCLA sites, the federal government has no direct involvement. Instead, the clean-up cost is borne by state governmental entities and potentially responsible parties. No lien will be imposed with respect to costs incurred by these parties. Further, the lien will be available only as to unrecovered response costs incurred by the federal government. There may be a solvent PRP from which the United States may recover its clean-up costs. The federal government would still have some incentive to locate them. The lien is limited by the amount of increase in the property’s fair market value, which may be substantially less than the costs incurred by the government. If the government wishes to be made whole, it would need to pursue another responsible party that could fully reimburse the government for its response costs.

The Amendment does not otherwise provide a mechanism by which the property owner may be compelled to disgorge any increase in the fair market value of the property due to a CERCLA clean-up. There is no way for another responsible party to apportion to the property owner any of the clean-up costs it incurs. Since an owner who takes title after the Amendment’s enactment is not liable under CERCLA, he cannot be sued for

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76. PROBST ET AL., supra note 20, at 17 (stating that by fiscal year 1993 private parties lead clean-up efforts in 79 percent of remedial actions under CERCLA).
contribution. Therefore, a property owner is confronted with two starkly different possibilities with respect to any increase in the property’s market value due to the clean-up. To the extent that the increase is due to unreimbursed federal government expenditures, the Lien Provision ensures that the owner will eventually disgorge those gains. But to the extent that the increase is due to clean-up activities paid for by others, the owner gets to enjoy the entire gain. Because either result is possible, the net result is that it is possible that the owner will get to retain the full benefit of any increase in the property’s market value.

In broad outline this is no change from the earlier version of CERCLA. And so, just as before, a prospective purchaser will attempt to factor in this possibility of keeping a benefit. Post-Amendment purchasers will be willing to pay slightly more for the property than they otherwise would, thereby bidding up the price. But this is no different than what was done by those who purchased property after CERCLA’s passage but before the Amendment was enacted. Because of this, it is reasonable to expect that the Lien Provision will have no impact on how much prospective purchasers will be willing to pay for a piece of property. The Lien Provision will likely do nothing to prevent the windfall that sellers will come to enjoy as a result of the Amendment’s passage.

The possibility that a clean-up may increase the fair market value of the property raises another possible objection: the benefits of a CERCLA clean-up exceed the expected costs of that clean-up to a property owner. According to this objection, a party who bought a potential CERCLA site after CERCLA’s 1980 enactment, but before the Amendment’s passage, did not buy at a discount to account for the CERCLA liability risk. Because this is the basis of a windfall when the owner sells to a buyer now exempted from CERLCA liability by the Amendment, this objection questions whether there will ever be a windfall.

This objection rests on the premise that prospective purchasers of potential CERCLA sites always looked at the risk of CERCLA liability as, on balance, a potential benefit rather than a potential cost. One response to this objection is that, if true, there would have been no need to amend CERCLA to encourage the purchase and development of potential CERCLA sites. Prospective purchasers would have already considered them very attractive. In fact, under the objection’s assumptions,
properties with risk of CERCLA liability would have been considered more attractive than properties without such a risk. But the opposite—that such CERCLA-risk properties were considered less attractive—was the whole premise behind the Amendment. Thus, in order to accept the objection it is necessary to assume there was no need for the Amendment to begin with. This is hardly a persuasive argument in the Amendment’s favor. The objection’s premise is not only inconsistent with the impetus for the Amendment, it is also highly implausible. The assumption behind not only the Amendment but a whole host of literature is that the risk that a piece of property may be designated a CERCLA site is perceived by purchasers to be, on balance, a bad thing.77

C. The Amendment Will Make Clean-Ups More Expensive

The Amendment will also increase the costs of clean-up. Many CERCLA sites are the result of activities that took place decades ago. In the intervening years, witnesses move away or die. Documents are lost or destroyed in the ordinary course of business. Those who caused the release or threatened release that is the basis of the site’s CERCLA designation disappear. Under the pre-Amendment version of CERCLA, this left the current property owner as the only liable party that could be found with relative ease.

The Amendment will eliminate even this funding source. Owners of property who took title before the Amendment are still potentially liable under CERCLA and are faced with a choice: either hold on to the property and run the risk of being tapped for CERCLA liability, or sell the property for a windfall and be free of CERCLA liability forever. Clearly, property owners will be tempted to sell out. They will be replaced with liability-proof buyers. No easy-to-find liable party will remain to pay for the clean-up.

This makes it more likely that clean-up will be performed and paid for by the government. Not being a profit maximizing institution, government lacks the incentives of private individuals and entities to perform clean-ups as cost-effectively as possible. One study has concluded that clean-ups performed by private parties

are typically 15 to 20 percent cheaper than those performed by government. Why? One reason lies in technology. Some commentators contend that technical problems that arise at various stages during the clean-up process are one of the primary contributors to the perceived high cost of conducting clean-up at CERCLA sites. These commentators have further argued that if government were to become the primary consumer of clean technology, there would be little pressure to develop cheaper technology to perform clean-ups.

However, technology is only one part of the cost of clean-up. Another important cost component is management. The process of cleaning up a CERCLA site typically involves coordinating and supervising the activities of a host of scientists, engineers, and builders. Mismanagement can cause an increase in clean-up costs. Not being a profit-maximizing institution and lacking the relevant management experience of a private entity, government management costs would likely be higher. By making it more likely that clean-ups will be performed by government, it is expected that the Amendment will thus increase their cost.

It may be objected that these increased clean-up costs will be insignificant because the major sites have already been identified and are in the process of being cleaned up. In other words, CERCLA’s big battles have already been fought and all that remains are smaller sites. Most of these smaller sites, namely the “brownfields,” pose no real threat to human health and will never require a clean-up under CERCLA. One primary purpose of the Amendment is to encourage the development of brownfields by relieving purchasers from liability. According to this argument, the few sites that continue to require clean-up may be mopped up easily and at low cost.

This objection fails for at least two reasons. First, it is expected that sites requiring clean-up under CERCLA will continue to be discovered. One list of potential sites requiring clean-up is the National Priorities List (“NPL”), which is maintained by the federal Environmental Protection Agency. The NPL is generally considered to include the sites that pose the greatest hazard and thus are most in need of clean-up.

78. PROBST ET AL., supra note 20, at 17.
79. Steinzor & Greer, supra note 18, at 10,293–94.
80. Id. at 7.
by Congress reports that the rate at which new sites are added to
the NPL is expected to increase. After 20 years of Superfund, one might expect that the
worst sites—the "mega sites" as they are called—would have
long since been uncovered and addressed. But mega sites
continue to surface, requiring clean-ups that are both time consum-
ing and expensive. Far from winding down, the challenge of
cleaning up contaminated properties will remain with us for
some time to come.

Second, the Amendment makes a government-run clean-up
more likely not only at relatively clean brownfields, but also at
the dirtiest Superfund sites. The Amendment's purpose was to
remove an impediment to the development of brownfields—land
feared to be contaminated by hazardous materials. Properties
that posed no threat to human health in fact were underutilized
because of a fear that they might be contaminated and require a
clean-up under CERCLA. The Amendment does not free pro-
spective purchasers from liability only for relatively clean brown-
field sites. Instead, the Amendment exempts purchasers from
liability for all properties subject to CERCLA—from the clean-
est cannery to the dirtiest dumpsite. In other words, the
Amendment removes an important PRP for the most complex
and costly CERCLA sites—the mega sites—that are expected to
continue to be a challenge for the foreseeable future.

III. THE COSTS OF THE AMENDMENT OUTWEIGH
ITS BENEFITS

Proponents of the Amendment may admit that it will impose a
number of costs on society. They may concede that it will in-
crease incentives to create hazards that later become CERCLA
sites, give windfalls to property owners, and increase the cost of
clean-ups. But the Amendment's proponents may nonetheless
claim that the benefits of the Amendment exceed its costs.

82. Id. at 98.
83. Id. at 101–103.
84. Id. at 88, 103; Katherine Q. Seelye, Bush Proposing Policy Changes on Toxic
Sites: Taxpayers Would Bear Most Cleanup Costs, N.Y. TIMES, Feb. 24, 2002 ("[T]he
[Bush] administration says it is dealing with much bigger and more complex [CER-
CLA] sites . . . .").
Is this argument valid? Are the costs of the Amendment outweighed by its benefits? To answer this question with any type of mathematical precision would require an amount of information that is too costly to gather. It is, however, possible to obtain a satisfactory answer to this question by relying on evidence that may be reasonably acquired. The evidence demonstrates that on balance, by freeing prospective purchasers from CERCLA liability, the costs of the Amendment exceed its benefits. This is so for two reasons. First, while brownfields may not have been developed as much as was socially desirable before CERCLA was amended, the market was making progress in changing this. Some of the largest disincentives to purchasing a brownfield have been the difficulty of: (1) quantifying the risk that the property would be designated as a CERCLA site; (2) shifting this risk to a party better situated to bear it; and (3) determining the exposure of creditors secured by the property to liability under CERCLA.

Today these tasks are much more easily accomplished than they were just five or ten years ago. Quantifying environmental liabilities connected with a property pre-purchase remains, as a pair of commentators put it, “more of an art than a science.” But after more than 20 years of living with the Superfund statute, environmental consultants have developed substantial expertise in predicting the costs of clean-up when a property is designated a CERCLA site. The ability to shift risk has also improved. Over the past several years a number of insurance products have been developed to shift some or all of the risks of environmental liabilities to third parties. As for lender liability, much of the uncertainty that once existed was eliminated with CERCLA’s 1996 amendment. These amendments clarified the scope of the secured creditor exemption contained in the Act.

85. Kolesar & Kovilaritch, supra note 55, at 477 (“[A]n experienced consultant can provide ranges of potential future costs, including most likely and reasonable worst case costs, and identify the consultant’s confidence level in such cost estimates.”).

86. Id.

87. Environmental Aspects of Real Estate Transactions 333 (James B. Witkin, ed. 1995) (stating that while it failed to establish a significant market for many years, environmental impairment insurance was regarded as a potentially viable risk-transfer device by the mid 1990’s); Efflandt, supra note 25, at 57–58 (1999) (“reasonably priced environmental insurance policies” are “increasingly available”); Kolesar & Kovilaritch, supra note 55, at 485; Charles Smail, Time is Right for Disposition of Brownfield Properties, REAL EST. Wkly., Dec. 13, 2000, at 2 (“[T]he insurance industry has created new products for mitigating the risks created by environmental contamination.”).

These advances have not gone without notice in the real estate acquisition and development community. A national magazine entitled *Brownfield News* was started in 1997 with the goal of being a source of reliable information on the brownfield market. In 1999, the National Brownfield Association was founded to stimulate brownfield development. Over the past few years a number of “how to” books and essays offering instruction on how to acquire, finance, and allocate the risk of clean-up of brownfields have been published. These publications are not going unread. Numerous business ventures dedicated to acquiring and developing brownfields have publicized their formation in recent years. As an indication of the amount of sale and development activity in brownfields that is actually taking place, these facts are of course an imprecise measure. Nonetheless, they do indicate that interest in brownfields has increased in recent years, and suggest that a number of the traditional barriers to brownfield development have been identified and surmounted. And all of this took place before CERCLA was amended to relieve prospective purchasers of liability.

Notwithstanding all the apparent activity in redeveloping brownfields, some may assert that a measure of liability relief

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92. *E.g., Smail, supra* note 87 (describing the GreenPark Group, a land development company “focused on environmentally contaminated properties” that has since 1998 “invested more than $100 million in redeveloping brownfield sites”); *Co-venture Will Revitalize “Brownfield” Sites, Real Est. Wkly.,* May 29, 1996, at 13 (reporting the formation by two firms of a “pioneering co-venture that will acquire and revitalize environmentally-distressed real estate”).
was still appropriate. In other words, things will be even better thanks to the CERCLA Amendment. This objection is unpersuasive. It raises a second reason why, on balance, by freeing prospective purchasers from CERCLA liability the costs of the Amendment exceed the benefits. This is because, to the extent some liability relief was still necessary, the Amendment could have been crafted in such a way as to offer most of its benefits without imposing nearly such substantial costs. Congress gave away too much liability relief. A better amendment would have narrowed the group of prospective purchasers freed from CERCLA liability. Rather than exempting all prospective purchasers from liability, the Amendment should have exempted only those prospective purchasers who acquired property that had not been transferred since the 1980 enactment of CERCLA. One of the primary problems with the Amendment as enacted is that it gives a windfall to property owners who took title after CERCLA was enacted and bought the property at a discount to reflect the CERCLA liability risk. If the Amendment had not exempted prospective property purchasers from liability, the opportunity for this windfall would have never been created.

Such a narrower Amendment may have been justified. If the Amendment had exempted only those prospective purchasers who acquired property that had not been transferred since CERCLA's enactment, only the properties most in need would have still been assisted. If a brownfield property had not been sold since 1980, it might be reasonable to infer that the CERCLA liability risk to any prospective purchaser constituted a barrier to development that should be removed. Those who acquired title before 1980 were in some sense “burned” by CERCLA's subsequent enactment. They could not have purchased the property at a discount to reflect the risk of CERCLA liability and thus would not enjoy a windfall on its sale to a purchaser freed from liability under the Amendment.

Another way the Amendment could have been improved is if it made it more likely that increases in property value due to clean-up would redound to the benefit of those who paid for that clean-up. Any time a clean-up is performed on contaminated property there is a chance that the property's market value will be increased. In the absence of some other mechanism, this increase in value would be enjoyed exclusively by the property owner. And since the Amendment makes the property owner exempt from CERCLA liability, there will be no way to make
the property owner pay for it. Because this benefit will be capitalized into the bid price for brownfields, this exacerbates the problem of windfalls that will be enjoyed by sellers.

The Amendment attempts to address this with the Lien Provision, but it is too narrowly drafted to be effective. It applies only with respect to federal government clean-up. Where clean-up is performed by another party, there is no lien or any other way to force the property owner—including the seller from whom the exempt buyer purchased the property—to give up some of this benefit. The lien provision could have easily been broadened to embrace increases in value due to clean-up performed by any party. This would have had some dampening effect on the windfalls property owners will otherwise enjoy because of the Amendment.

IV.
CONCLUSION

Amending CERCLA to relieve prospective purchasers from liability was a policy mistake. It removed an important disincentive to the release of hazardous materials. It gave a windfall to property owners who took title with notice of their potential CERCLA liability. This result is unfair. It will make it more difficult for government to use disincentive penalties to deter socially undesirable conduct under CERCLA and other legal regimes. Finally, by removing an important potentially liable party under CERCLA, the Amendment has increased the likelihood that future clean-ups will be left to the government, which would make them more expensive.

All of these costs appear to outweigh the benefits of relieving prospective purchasers from liability. Some additional brownfields will be purchased and developed. But under the pre-Amendment version of CERCLA many brownfields had been purchased and developed. Moreover, the pace of this development appeared to be increasing in recent years. With this kind of momentum already existing, the Amendment provided very little added benefit.

The foregoing analysis of the Amendment has implications for government regulation and deregulation beyond CERCLA. Government creation and removal of a type of successor or derivative liability imposes numerous costs. First there is the cost of diminished deterrence that was formerly placed upon the primary actor. This is due to the fact that primary actors and their
successors are connected by the market. And relieving the successor of liability reduces the sum costs of direct and indirect liability to that primary actor.

Second, there is the cost of the primary actor, which knowingly assumed the risk under the earlier legal regime, enjoying a windfall when that regime is relaxed. Such windfall is unfair because it is an arbitrary transfer of wealth by government. It is also inefficient because it increases the cost of government regulation through successor or derivative liability in other contexts.

Third, this type of change may increase the total cost of regulating in the context from which successor or derivative liability was removed. This happens if government both no longer requires private individuals to accomplish a task and determines that the task must still be performed—leaving only the government to do it. The issue of government outsourcing its activities has been the subject of much debate over the past decade. If the CERCLA experience is any indication, government is not always the most efficient provider of services, especially services of the nature that private entities have traditionally performed.

Finally, it can take time for markets to respond to changes in government policy. Change imposes a cost. But markets can eventually adjust to such changes. By ignoring these adjustments, policy makers risk underestimating the benefits of the existing regime.

The last time CERCLA underwent a major revision was in 1986. At least one aspect of the 2002 revision is a step backwards. Hopefully we will not have to wait another 16 years for Congress to agree to an unmitigated improvement in the statute.