

# Comments

## DEVOLVING CONTROL OVER MILDLY CONTAMINATED PROPERTY: THE LOCAL CLEANUP PROGRAM

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### I. INTRODUCTION

The old urban cities of the United States have a dirty little secret: much of the soil they sit upon is contaminated. Years of intensive use have left behind a mix of lead, carcinogens, and arsenic. This legacy was not caused by former factors; it did not emanate from chemical disposal pits or leaking fifty-five-gallon drums. Instead, the pollution was a by-product of daily life of the early- and mid-twentieth century. Coal, used for heat in virtually every house before natural gas and electricity took over, has left behind carcinogenic ash.<sup>1</sup> Lead, a major constituent of paint until its ban in

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<sup>1</sup> In 1900, New York City collected 1008 pounds of coal ash per resident. Kirk Johnson, *Throw-away Societies of Yesteryear; Past Decades Were the Golden Ages for Waste, Scientist Says*, N.Y. TIMES, Nov. 22, 2002, at B1. Coal ash was the single biggest constituent of the waste stream until the

1978<sup>2</sup> and an additive to gasoline until 1995,<sup>3</sup> has been deposited over vast urban areas. Arsenic was a common wood preservative and constituent of certain fertilizers.<sup>4</sup>

While these pollutants can be found across large swaths of the urban environment, the concentrations found in the soil vary. Likewise, the health risks vary—the higher the concentration, the higher the health risk.<sup>5</sup> These risks cover a huge spectrum—some contaminated soil poses an immediate and imminent health hazard while other soil barely presents any risk at all. Despite these differences, contaminated urban land is lumped together and typically described as brownfield property.<sup>6</sup> The scope of the problem posed by former industrial sites is well understood and significant.<sup>7</sup> But the scope of the problem posed by non-industrial properties that have been contaminated by simple historic urban use is less clear.<sup>8</sup>

Scientists are becoming increasingly aware of and concerned over the threat posed by non-industrial contaminated urban soil. For example, in

1950s when oil began to dominate home heating. *Id.* In 1949, 52.4 million tons were used in residences. DEPARTMENT OF ENERGY, ENERGY INFORMATION ADMINISTRATION, ANNUAL ENERGY REVIEW 205 (2003). By 1973, fewer than 5 million tons were used. *Id.* In 2003, only 0.5 million tons were used in residences. *Id.*

<sup>2</sup> See, e.g., EPA, EPA/600/R-01/055, FIELD DEMONSTRATION OF LEAD-BASED PAINT REMOVAL AND INORGANIC STABILIZATION TECHNOLOGIES 1 (2001) (stating that “[t]oday the most widespread source of lead exposure in the environment of U.S. children is lead-based paint that was applied to residential buildings before the 1978 ban on residential leaded paint by the Consumer Product Safety Commission”).

<sup>3</sup> See 42 U.S.C. § 7545(n) (2000) (stating that “[a]fter December 31, 1995, it shall be unlawful for any person to sell, offer for sale, supply, offer for supply, dispense, transport, or introduce into commerce, for use as fuel in any motor vehicle (as defined in section 219(2)) any gasoline which contains lead or lead additives”).

<sup>4</sup> EPA, Arsenic in Drinking Water (Feb. 28, 2006), <http://www.epa.gov/safewater/arsenic/basicinformation.html>.

<sup>5</sup> For example, the health risk posed by carcinogens in soil correlate linearly with the concentration of the carcinogen. Twice the concentration of a carcinogen poses twice the risk that a person exposed to it will develop cancer. See, e.g., EPA, E.P.A. PUBLICATION 9355.4-23, SOIL SCREENING GUIDANCE: USER’S GUIDE (1996) [hereinafter SOIL SCREENING GUIDANCE].

<sup>6</sup> There are many definitions of brownfields. In 2002, Congress defined them as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Small Business Liability Relief and Brownfield Revitalization Act, Pub. L. No. 107-118, 115 Stat. 2356 (codified as amended at 42 U.S.C. § 9601(39)(A) (2000)).

<sup>7</sup> President Bush stated that “anywhere from 500,000 to a million brownfields are across our Nation.” Statement by President George W. Bush upon Signing H.R. 2869, 38 WEEKLY COMP. PRES. DOC. 52 (Jan. 11, 2002), *reprinted in* 2002 U.S.C.C.A.N. 1780, 1782.

<sup>8</sup> For example, a study in Chicago of background soil contamination not attributable to a discernable source determined that the average contamination exceeded Illinois Environmental Protection Agency standards. Statistically, over half of Chicago—approximately thirty square miles—is contaminated. See ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, URBAN AREA POLYCYCLIC AROMATIC HYDROCARBONS STUDY TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES [hereinafter HYDROCARBONS STUDY], <http://www.epa.state.il.us/land/site-remediation/urban-area-pah-study.pdf> (last visited Sept. 5, 2006).

1980, one geochemist predicted in a report to the National Academy of Sciences that “[s]ometime in the near future it probably will be shown that the older urban areas of the United States have been rendered more or less uninhabitable by the million of tons of poisonous industrial lead residues that have accumulated in cities during the past century.”<sup>9</sup> While this prediction has not come to pass, the risk legacy urban pollution presents is gaining more and more attention.<sup>10</sup> This has become particularly true in New Orleans following Hurricane Katrina. Many soil samples tested for contaminants post-Katrina revealed elevated levels of lead, arsenic, and carcinogens.<sup>11</sup> However, federal and state officials do not believe this contamination was caused by the hurricane, and instead attribute it to “New Orleans’ history as an urban area.”<sup>12</sup> Government officials, over strenuous objections from members of the environmental community, plan to leave the contamination in place.<sup>13</sup>

Two bodies of law target contaminated sites, but both fail to effectively address contaminated urban areas. The first is the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”),<sup>14</sup> a federal program administered by the Environmental Protection Agency (“EPA”). In practice, it addresses only the most contaminated sites; CERCLA cleanups are extremely expensive and cumbersome, and require government intervention. As written, however, CERCLA could theoretically reach every contaminated site in the country. Any property that has contamination in excess of any federal or state standards can be targeted.<sup>15</sup> The threat imposed by CERCLA caused owners and investors to steer clear of any site that was potentially contaminated, and many sites sat unused because of CERCLA liability concerns. In response to these fears, and the stagnant property that resulted, the majority of states created Voluntary

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<sup>9</sup> Howard W. Mielke, *Lead’s Toxic Urban Legacy and Children’s Health*, GEOTIMES, May 2005, at 22, available at [http://www.geotimes.org/may05/feature\\_leadlegacy.html](http://www.geotimes.org/may05/feature_leadlegacy.html) (quoting statement of Clair C. Patterson).

<sup>10</sup> For example, a recent article suggested that a new scientific field is beginning to evolve to address this issue. See Gabriel M. Filipelli et al., *Urban Lead Poisoning and Medical Geology: An Unfinished Story*, 15 GSA TODAY 4 (2005).

<sup>11</sup> See, e.g., GINA M. SOLOMON AND MIRIAM ROTKIN-ELLMAN, CONTAMINANTS IN NEW ORLEANS SEDIMENT, AN ANALYSIS OF EPA DATA 3 (National Resources Defense Council 2006) (concluding that EPA “data shows that most districts in New Orleans contain concentrations of arsenic, lead, diesel fuel or cancer-causing benzo(a)pyrene above levels that would normally trigger investigation and possible soil cleanup in the state of Louisiana” with “[s]ome hot spots in residential neighborhoods hav[ing] levels of contamination that are ten times, or even more than a hundred times normal soil cleanup levels”).

<sup>12</sup> Matthew Brown, *N.O. Spots Are Testing Positive for Toxins; But Most Chemicals Here Before Katrina*, TIMES-PICAYUNE, Mar. 6, 2006, at Metro-1.

<sup>13</sup> *Id.*

<sup>14</sup> 42 U.S.C. §§ 9601–9675 (2000).

<sup>15</sup> CERCLA not only requires universal adherence to national standards, but requires adherence to appropriate state standards as well. 42 U.S.C. § 9621 (2003).

Cleanup Programs (“VCPs”),<sup>16</sup> which, in practice, dealt with less contaminated properties.<sup>17</sup> In exchange for voluntary remediation, the state virtually eliminates any potential threat of liability under CERCLA.<sup>18</sup>

While the creation of state VCPs addresses some properties that CERCLA would never reach, there are still contaminated properties slipping through the cracks. This Comment argues that the addition of a further program, the Local Cleanup Program (“LCP”), could address these properties. In order to successfully foster a broader cleanup of less contaminated sites, a new program specifically targeting low-risk sites must be developed. To be successful, it must have reasonable, clearly defined standards and procedures tailored to low-risk properties, and it must generate predictable, efficient results.

While many scholars have analyzed state VCPs, none has directly considered the devolution of regulatory control over low-risk sites to local government. This Comment explores the wisdom of this idea. Part II discusses the evolution of environmental laws, focusing on the law meant to ameliorate contaminated property. This historical review specifically focuses on the interaction between levels of government, and highlights how state programs evolved to fill gaps left by CERCLA, just as it is hoped LCPs will fill the gaps left by the VCPs. Part III begins by delineating the gaps left by the VCPs, and seeks to identify the causes of these gaps. Part IV begins with an introduction and a discussion of how an LCP might work. It then considers various arguments both for and against local control over environmental regulation and demonstrates how these arguments support the LCP concept. Part V concludes.

## II. THE DEVELOPMENT OF BROWNFIELD REGULATION

### A. *The Growth of Federal Regulation*

Prior to 1970, environmental regulation was left primarily to local governments and the states.<sup>19</sup> The first regulations focused on air pollution, and were passed by industrial cities in the Midwest.<sup>20</sup> Chicago and Cincinnati

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<sup>16</sup> As of 2001, 44 states have some form of voluntary cleanup program. See ASTSWMO Survey of State Privatized Cleanup Programs, <http://www.astswmo.org/Publications/pdf/cerclaprivsurvey.PDF> (last visited Mar. 1, 2005).

<sup>17</sup> ELIZABETH GLASS GELTMAN, RECYCLING LAND, UNDERSTANDING THE LEGAL LANDSCAPE OF BROWNFIELD REDEVELOPMENT 68 (2000) (stating that VCPs generally target sites “not within the regulatory radar of state or federal environmental agencies and tend to have only mild to slightly severe (but not chronic) contamination”).

<sup>18</sup> See *infra* note 102 and accompanying text.

<sup>19</sup> Robert V. Percival, *Environmental Federalism: Historical Roots and Contemporary Models*, 54 MD. L. REV. 1141, 1149 (1995).

<sup>20</sup> Richard L. Revesz, *Federalism and Environmental Regulation: A Public Choice Analysis*, 115 HARV. L. REV. 553, 579 (2001) (citing Arthur C. Stern, *History of Air Pollution Legislation in the United States*, 32 J. AIR POLLUTION CONTROL ASS’N 44, 44 (1982)).

were the first to pass smoke abatement laws in 1881, and other cities eventually followed suit.<sup>21</sup> In 1951, some seventy years later, Oregon became the first state to broadly regulate air pollution<sup>22</sup> while the federal government remained largely inactive.<sup>23</sup> Congress did take some action in the environmental realm after World War II, but it did not legislate. Instead, during the 1950s and 1960s Congress primarily sought to support state and local government regulations by providing funding and research.<sup>24</sup> Federal involvement “remained premised on the notion that environmental problems were the responsibility of state and local government.”<sup>25</sup>

Federal involvement changed drastically in 1970, when Congress and the Executive Branch began constructing the modern federal regulatory structure.<sup>26</sup> President Nixon created the EPA in 1970<sup>27</sup> and Congress was quick to give the new agency plenty to do: it passed the National Environmental Policy Act<sup>28</sup> and the modern Clean Air Act<sup>29</sup> in 1970, the Clean Water Act<sup>30</sup> in 1972, and the Resource Conservation and Recovery Act (“RCRA”)<sup>31</sup> in 1976. In total, Congress enacted or substantially modified “more than twenty major federal environmental laws” in a single decade.<sup>32</sup>

Although these statutes federalized many areas of environmental law, the states were not cut out of the picture entirely. Instead, Congress structured three major statutes<sup>33</sup> in a way that fostered cooperative federalism.<sup>34</sup> The federal government established minimum standards, and delegated much of the implementation of these standards to state governments.<sup>35</sup>

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<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> Percival, *supra* note 19, at 1149 (“During the nineteenth and early twentieth century [sic], instances of federal regulation that promoted protection of public health and the environment were notable primarily for their rarity.”).

<sup>24</sup> *Id.* at 1155.

<sup>25</sup> *Id.* at 1156.

<sup>26</sup> For a general description of the historical development of federal environmental law, see ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 85–95 (4th ed. 2003).

<sup>27</sup> *Id.* at 90.

<sup>28</sup> 42 U.S.C. §§ 4321–4370e (2000).

<sup>29</sup> 42 U.S.C. §§ 7401–7642 (2000).

<sup>30</sup> 33 U.S.C. §§ 1251–1376 (2000).

<sup>31</sup> 42 U.S.C. §§ 6901–6987 (2000).

<sup>32</sup> Percival, *supra* note 19, at 1160.

<sup>33</sup> The Clean Water Act, RCRA, and CERCLA all contain similar citizen suit provisions. Compare 33 U.S.C. § 1251 (2000) (Clean Water Act citizen suit provision) with 42 U.S.C. § 6972 (2000) (RCRA citizen suit provision) and 42 U.S.C. § 9659 (2000) (CERCLA citizen suit provision).

<sup>34</sup> See, e.g., *Cleveland Elec. Illuminating Co. v. EPA*, 572 F.2d 1150, 1156–57 (6th Cir. 1978) (discussing the interaction between state governments and the federal government in establishing ambient air quality standards under the Clean Air Act).

<sup>35</sup> *Id.*

Also, state governments were free to enact stricter environmental standards in virtually all areas.<sup>36</sup>

In 1980, CERCLA was enacted by a lame-duck Congress before President Reagan took office.<sup>37</sup> CERCLA charted a new regulatory course—one markedly different than the cooperative federalism model.<sup>38</sup> Enacted in part as a response to the environmental catastrophe of Love Canal,<sup>39</sup> CERCLA, also known as Superfund, was meant as a “gap-filler” to address existing contaminated properties that RCRA failed to address.<sup>40</sup> Instead of creating a standard regulatory program, CERCLA imposed a system of strict liability for contaminated property and focused on forcing the polluter to pay.<sup>41</sup> Although it did not follow the prior cooperative federalism models, CERCLA did provide a role for the states. CERCLA not only required universal adherence to national standards; it required adherence to appropriate state standards as well.<sup>42</sup> The statute also provided a mechanism for states to participate in CERCLA enforcement.<sup>43</sup>

Individual states also responded to concerns about contaminated sites by passing their own versions of CERCLA.<sup>44</sup> These “mini-CERCLA” statutes typically paralleled the federal statute, and often allowed the states to take the lead in addressing some contaminated sites.<sup>45</sup> Although there is some question as to how much of a role the states played in the first decade of CERCLA,<sup>46</sup> the states’ role was strengthened by the Executive Branch under President Reagan, who took office on a platform of returning power

<sup>36</sup> Total federal preemption is rare under federal environmental regulation. Examples of supposed federal preemption include regulating automobile emission standards and labeling pesticides. For a good discussion of federal preemption, see John P. Dwyer, *The Role of State Law in an Era of Federal Preemption: Lessons from Environmental Regulation*, 60 LAW & CONTEMP. PROBS. 203 (1997).

<sup>37</sup> Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (1980).

<sup>38</sup> See, e.g., William W. Buzbee, *Brownfields, Environmental Federalism, and Institutional Determinism*, 21 WM. & MARY ENVTL. L. & POL’Y REV. 1, 26 (1997) (noting that CERCLA is not “rooted in a cooperative federalism scheme dictated by statute”).

<sup>39</sup> Love Canal was a residential neighborhood built adjacent to a canal Hooker Chemical Co. used as a chemical disposal site. The entire neighborhood became contaminated as the waste chemicals leached from the disposal area and spread into adjacent property. Residents were prevented from suing Hooker because of lack of privity. GELTMAN, *supra* note 17, at 34 (2000).

<sup>40</sup> WILLIAM H. RODGERS, ENVIRONMENTAL LAW § 8.1, at 3 (West 2004).

<sup>41</sup> *Id.*

<sup>42</sup> 42 U.S.C. § 9621 (2000).

<sup>43</sup> *Id.* at § 9604(c)(3).

<sup>44</sup> Buzbee, *supra* note 38, at 10.

<sup>45</sup> *Id.*

<sup>46</sup> See Adam Babich, *Our Federalism, Our Hazardous Waste, and Our Good Fortune*, 54 MD. L. REV. 1516, 1534–35 (1995) (claiming that the EPA failed to transfer any control to the states). *But see* EPA, STATUS OF STATE INVOLVEMENT IN THE SUPERFUND PROGRAM, FY 80 TO FY 89, at 24 (1990) (stating that during fiscal years 1980 to 1989, 11,401 completed Superfund Preliminary Assessments were state-led while only 6,203 were EPA-led, and that the states led 26 completed Remedial Actions in this period while the EPA led 41 completed Remedial Actions).

to the states and shrinking federal regulation. Reagan's "new federalism" was clear in Executive Order 12,612, issued in 1987.<sup>47</sup> The order required federal agencies "to accord states maximum flexibility in administering federal programs, and to avoid or minimize preemption of state policies."<sup>48</sup> Congress desired a strong state role and actively protected the role of the state. For example, in 1986, the Supreme Court held that the federal Superfund program preempted any state superfund legislation.<sup>49</sup> Congress responded almost immediately by clarifying that the federal legislation did not preempt similar state statutes.<sup>50</sup>

The weaknesses in the Superfund legislation quickly became apparent.<sup>51</sup> Cleanup costs ballooned astronomically<sup>52</sup> and polluters spent almost as much money litigating as they did actually funding cleanups.<sup>53</sup> Although initially intended to be a five-year program to clean up 200 sites, CERCLA expanded dramatically. In 1986, Congress passed the Superfund Amendment Reauthorization Act ("SARA"),<sup>54</sup> which expanded the budget of the program and attempted to cure some of the exposed weaknesses of the original legislation.<sup>55</sup>

Parts of these failings are attributable to CERCLA's dramatic restructuring of environmental liability. Before CERCLA, owning property rarely invoked environmental concerns and common-law actions were the only avenues of relief.<sup>56</sup> However, post-CERCLA, anyone deemed a potentially responsible party (PRP) faced huge exposure to environmental liability. In addition, the definition of a PRP was expansive, and included current own-

<sup>47</sup> Exec. Order No. 12,612, 52 Fed. Reg. 41,685 (Oct. 30, 1987).

<sup>48</sup> *Id.*

<sup>49</sup> *Exxon Corp. v. Hunt*, 475 U.S. 355 (1986).

<sup>50</sup> Percival, *supra* note 19, at 1177 (citing clarification made in Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, 100 Stat. 1613 (codified as amended at 42 U.S.C. §§ 9601-9675 (2000))).

<sup>51</sup> See JAMES M. MCELISH, JR. & JOHN PENDERGRASS, REAUTHORIZING SUPERFUND: LESSONS FROM THE STATES 3-4 (1993) (summarizing complaints about the Superfund program).

<sup>52</sup> In 1994, for example, the projected average cost of the cleanup of a site on the National Priorities List was \$40 million, with costs soaring as high as \$500 million. Steven P. Ferrey, *Allocation and Uncertainty in the Age of Superfund: A Critique of the Redistribution of CERCLA Liability*, 3 N.Y.U. ENVTL. L.J. 36, 37 (1994).

<sup>53</sup> STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION 18 (1993) (citing a report that 90% of insurance expenditures and 20% of expenditures from firms made in response to Superfund went to pay legal fees or other transaction costs).

<sup>54</sup> Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613.

<sup>55</sup> The 1986 amendment was focused on increasing the speed at which sites were remediated. Mary Frances Palisano, Note, *United States v. Olin Corporation: How a Polluter Got Off Clean*, 15 PACE ENVTL. L. REV. 401, 412 (1997). It sought to accomplish this by setting aggressive schedules for the EPA and increasing the size of the Superfund. *Id.*

<sup>56</sup> GELTMAN, *supra* note 17, at 1.

ers, current operators, past owners, past operators, waste generators, and waste transporters.<sup>57</sup>

CERCLA liability was held to be retroactive, strict, and joint and several.<sup>58</sup> The perceived unfairness of this can be seen in the following explanation of CERCLA liability:

*retroactive*, which means that even those companies that obeyed the existing laws on hazardous-waste disposal before Superfund was passed may be held liable for cleaning up a site;

*strict*, which means that a company may be liable for polluting a site, even if it was doing its best to avoid damage by using state-of-the-art waste management; and

*joint and several*, which means that any firm linked to a site may have to pay the full cost of cleaning it up, regardless of the amount of waste that it dumped, unless it can prove that other companies were polluting too.<sup>59</sup>

This liability scheme sent a chill through the business community. Faced with potentially enormous liability, companies developed two strategies to minimize financial loss. First, property owners discovered it was cost-effective to fight cleanup actions in court. Through litigation, they could delay the commencement of actual cleanup and potentially minimize the cost of cleanup. This strategy diverted money that could have been used in actual site cleanups to pay instead for litigation.<sup>60</sup> Second, owners left potentially contaminated properties fallow. Because liability was retroactive, and industry had only recently become consistently regulated, industrial companies simply had no idea how contaminated the sites they owned might be.<sup>61</sup> Owners quickly learned that it was better not to find out: once they knew, they were legally obligated to do something about it—often at great expense.<sup>62</sup>

CERCLA liability also could reach any party involved in redeveloping a property—not just past owners. For example, in *Tanglewood East Homeowners v. Charles-Thomas, Inc.*, the Fifth Circuit refused to dismiss CERCLA claims against every party that participated in the development of a residential subdivision on contaminated land.<sup>63</sup> This included the devel-

<sup>57</sup> 42 U.S.C. § 9607(a) (2000).

<sup>58</sup> See, e.g., *Nurad, Inc. v. Hooper & Sons*, 966 F.2d 837, 841 (4th Cir. 1992) (finding all PRPs to be strictly liable); *United States v. Ne. Pharm. & Chem. Co.*, 810 F.2d 726, 733–34 (8th Cir. 1986) (finding that Congress intended retroactivity); *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 810–11 (S.D. Ohio 1983) (holding that CERCLA incorporates joint and several liability).

<sup>59</sup> GELTMAN, *supra* note 17, at 2–3.

<sup>60</sup> BREYER, *supra* note 53, at 18.

<sup>61</sup> GELTMAN, *supra* note 17, at 3–7 (discussing the problem of mothballed property and the reluctant seller).

<sup>62</sup> *Id.*

<sup>63</sup> 849 F.2d 1568 (5th Cir. 1988).

oper, the lender, the construction company, and the real estate agencies.<sup>64</sup> As a result of CERCLA, companies that owned potentially contaminated land were incentivized to keep property off the market. Developers and investors were incentivized to stay far away from property that intimated the slightest potential of contamination. Not surprisingly, property with a history of industrial use prior to the passage of RCRA sat fallow.<sup>65</sup>

Throughout the 1980s, Congress tried but failed to develop effective measures to address the chilling effect of CERCLA liability.<sup>66</sup> For example, in the 1986 amendments, Congress provided a mechanism to “[e]ncourag[e] private party cleanups by providing EPA with the authority to grant covenants not to sue.”<sup>67</sup> Though Congress meant for these amendments to ease future liability concerns, the EPA’s subsequent interpretation of this legislation actually increased the threat of the EPA revisiting a site.<sup>68</sup> Also, in 1989 the EPA developed prospective purchaser agreements in an effort to ease liability fears.<sup>69</sup> In such an agreement, the EPA agreed not to pursue any enforcement action against the prospective purchaser over existing property contamination. But the EPA required substantial benefits to accrue before entering into any such agreement.<sup>70</sup> For example, the EPA would enter into an agreement if it resulted in substantial savings of Superfund resources because the prospective purchaser agreed to remediate the site with its own funds.<sup>71</sup> By 1995, the EPA realized this original formulation was too stringent to be effective, and substantially revised the stan-

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<sup>64</sup> *Id.* at 1572–74.

<sup>65</sup> For a wealth of general brownfield information, see EPA’s Brownfield Cleanup and Redevelopment website, at <http://www.epa.gov/brownfields/> (last visited Jan. 21, 2005). See also GELTMAN, *supra* note 17, at 11 (discussing the unintended consequences of environmental law).

<sup>66</sup> The EPA did little to alleviate fears of prosecution when it published a policy “against no action assurances” on November 16, 1984. That policy “reaffirms EPA’s policy against giving definitive assurances outside the context of a formal enforcement proceeding [that] EPA will not proceed with a particular enforcement response.” See Memorandum from Courtney M. Price, Assistant Administrator for Enforcement and Compliance Monitoring, to the Assistant Administrators, et al., Policy Against “No Action” Assurances (Nov. 16, 1984), available at [http://www.epa.gov/safewater/wsg/wsg\\_24.pdf#search=%22policy%20against%20no%20action%20assurances%22](http://www.epa.gov/safewater/wsg/wsg_24.pdf#search=%22policy%20against%20no%20action%20assurances%22).

<sup>67</sup> Covenants Not to Sue Under SARA, 52 Fed. Reg. 28,038, 28,040 (July 27, 1987).

<sup>68</sup> Under CERCLA settlement policy prior to SARA, the EPA must retain the right to revisit a site “covering situations where EPA received additional information after the time of the agreement regarding site conditions or scientific determinations which indicates that the site may pose an imminent and substantial endangerment to the public health or welfare or to the environment.” *Id.* at 28,041. Congress specifically removed the “imminent and substantial endangerment” hurdle that had to be met for the EPA to revisit a site, and expanded the EPA’s authority to reinvestigate to include any actions “necessary and appropriate to assure protection of public health, welfare, and the environment.” *Id.*

<sup>69</sup> Guidance on Landowner Liability Under Section 107(a)(1) of CERCLA, De Minimis Settlements Under Section 122(g)(1)(B) of CERCLA, and Settlements with Prospective Purchasers of Contaminated Property, 54 Fed. Reg. 34,235 (Aug. 18, 1989).

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

dards.<sup>72</sup> However, even with the relaxed standards, subsequent agreements generally covered only existing CERCLA cleanup sites, and did little to clarify the status of property that may be the subject of future CERCLA enforcement.<sup>73</sup>

All the while, communities surrounding the abandoned properties bore the brunt of the EPA's failure to mitigate the unintended consequences of CERCLA.<sup>74</sup> Mothballed properties became dilapidated, driving down neighboring property values.<sup>75</sup> Local tax rolls diminished because the land generated nothing, and often became tax delinquent.<sup>76</sup> Opportunities for local economic development were lost, and the risks such sites posed remained in the community.<sup>77</sup>

In response to the EPA's seeming inability to fix CERCLA, states began to develop their own contaminated-property programs.<sup>78</sup> Minnesota was the first to develop an alternative to federal cleanup programs.<sup>79</sup> Other states quickly followed suit, and state VCPs were created.<sup>80</sup> It was no coincidence that VCPs first emerged in the Midwest and East. The older cities in these states suffered the most from the brownfield problem because they contained the most historically industrial sites that now languished under the cloud of potential CERCLA liability.<sup>81</sup> Although slightly different from state to state, brownfield legislation generally had the same goals: to "[e]stablish clear cleanup goals; [p]rovide limited liability relief; [c]reate financial incentives (tax credits, grants, or revolving loan funds); [s]treamline the government review process;" and "[p]rovide clear documentation of when sufficient cleanup has been conducted."<sup>82</sup>

VCPs set the ground rules for a contract between the state government and the owner of a piece of property. In exchange for remediating sites to a

<sup>72</sup> Guidance on Settlements with Prospective Purchasers of Contaminated Property, 60 Fed. Reg. 34,792, 34,793 (July 3, 1995) ("EPA's experience has demonstrated that prospective purchaser agreements might be both appropriate and beneficial in more circumstances than contemplated by the 1989 guidance," and it may be "appropriate to enter into agreements resulting in somewhat reduced benefits to the Agency through cleanup or response costs or in benefits that also may be available from other parties. These agreements in turn should provide substantial benefits to the community through the creation or retention of jobs, productive use of abandoned property, or revitalization of blighted areas.").

<sup>73</sup> *Id.*

<sup>74</sup> For a discussion of environmental justice concerns associated with the brownfield problem, see Bradford C. Mank, *Reforming State Brownfield Programs to Comply with Title VI*, 24 HARV. ENVTL. L. REV. 115 (2000).

<sup>75</sup> GELTMAN, *supra* note 17, at 7.

<sup>76</sup> *Id.*

<sup>77</sup> *Id.*

<sup>78</sup> IMPLEMENTING INSTITUTIONAL CONTROLS AT BROWNFIELDS AND OTHER CONTAMINATED SITES 3 (Amy L. Edwards ed., 2003) [hereinafter IMPLEMENTING INSTITUTIONAL CONTROLS].

<sup>79</sup> *Id.*

<sup>80</sup> For a description of the growth of state VCPs, see GELTMAN, *supra* note 17.

<sup>81</sup> *Id.* at 1–2.

<sup>82</sup> IMPLEMENTING INSTITUTIONAL CONTROLS, *supra* note 78, at 4.

state-approved standard and complying with reporting requirements, the owner receives a promise from the state that it will not take future enforcement action against the property.<sup>83</sup> The state receives the increased tax revenue from the redevelopment, improved environmental quality for its citizens, and conserves state enforcement resources. The property owner receives a “safe” piece of property without the cloud of potentially enormous liability.

These programs all work in a similar systematic manner.<sup>84</sup> First, a Phase I Environmental Site Assessment is completed.<sup>85</sup> The assessment seeks to establish the current and historic use of the site,<sup>86</sup> primarily through the review of public records, including a review of federal, state, and local environmental databases, the chain-of-title, and any other accessible sources of information, including historic fire insurance maps.<sup>87</sup> If the initial assessment reveals past industrial use, a soil sampling investigation is undertaken.<sup>88</sup> Soil and groundwater samples are collected across the site and analyzed by a certified lab.<sup>89</sup> If contaminants are detected, the level of contamination is compared against state developed standards.<sup>90</sup> If chemical concentrations exceed the permitted standards, the property owner must mitigate the risk posed by the contaminated soil.<sup>91</sup>

Contaminated soil in excess of state limits can be removed or, in many instances, can remain on site underneath an engineered barrier.<sup>92</sup> An engineered barrier physically prevents the contaminant from coming into contact with a person, thus eliminating the risk. Engineered barriers can take many forms, the most common being building foundations, pavement, or a layer of clean soil.<sup>93</sup> The required physical characteristics of the barrier will vary depending on the risk the contaminant presents.<sup>94</sup> For example, if the

<sup>83</sup> See, e.g., ILL. ADMIN. CODE tit. 35, § 740.610(a)(4) (2000).

<sup>84</sup> When specific details are needed, this Comment will utilize the Illinois Site Remediation Program (“SRP”) to supply them.

<sup>85</sup> Illinois law requires that “the phase I environmental site assessment shall be designed and implemented in accordance with the procedures for such assessments set forth in ‘Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process’ (ASTM E 1527-00).” ILL. ADMIN. CODE tit. 35, § 740.420(a) (2000). ASTM standards require a detailed record search for the property.

<sup>86</sup> *Id.* at § 740.425(b)(2)(B).

<sup>87</sup> See STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL SITE ASSESSMENT PROCESS (ASTM E 1527-00) (2000).

<sup>88</sup> ILL. ADMIN. CODE tit. 35, § 740.420(b).

<sup>89</sup> *Id.*

<sup>90</sup> The Illinois VCP does allow for the development of site-specific, risk-based cleanup criteria, called a Tier 3 analysis. *Id.* at § 742.900(b). However, most cleanups utilize cleanup standards provided by the code. *Id.* at §§ 742.500–742.810.

<sup>91</sup> *Id.* at § 742.

<sup>92</sup> *Id.* at § 742.1100.

<sup>93</sup> *Id.* at § 742.1105(c).

<sup>94</sup> *Id.*

contamination is dangerous when inhaled, the Illinois VCP requires that clean soil must be placed over the contaminated soil to a depth of ten feet.<sup>95</sup> If the contamination is dangerous only when eaten, three feet of soil is sufficient.<sup>96</sup>

All phases of remediation—from the investigation to the actual remediation—must be approved by the appropriate state agency responsible for oversight of the VCP.<sup>97</sup> Once remediation is completed and the agency has approved it, the state issues a “No Further Action” letter or equivalent.<sup>98</sup> The letter is essentially an agreement between the state and the property owner. The state agrees not to pursue future enforcement actions against the property as long as the property owner does not contaminate it further and maintains the engineered barriers. The agreement typically specifies what contamination was found on site, whether engineered barriers were used, and any future land use restrictions.<sup>99</sup> Per statute, this letter must be recorded with the Recorder of Deeds to give future owners notice, and the letter runs with the land.<sup>100</sup>

### B. CERCLA-VCP Interaction

Completion of a state approved remediation at a property does not bar the federal government from pursuing CERCLA enforcement. However, most states have entered agreements with the EPA to minimize this potential. Illinois was one of the first states to negotiate such an agreement, called a Superfund Memorandum of Agreement (“SMOA”).<sup>101</sup> In the SMOA, the EPA agreed—with some exceptions—not to pursue future enforcement actions against properties that have successfully completed the VCP process.<sup>102</sup>

<sup>95</sup> *Id.* at § 742.1105(c)(3)(C)(iii).

<sup>96</sup> *Id.* at § 742.1105(c)(2)(C)(iii).

<sup>97</sup> In Illinois, the Illinois Environmental Protection Agency reviews remediation under the Illinois Site Remediation Program, the Illinois VCP. *See, e.g.*, 35 ILL. ADMIN. CODE tit. 35, § 740.410 (setting forth procedure for delivery of remediation reports to the IEPA).

<sup>98</sup> *See* GELTMAN, *supra* note 17, at 87–304 (providing specific information on various state programs); ILL. ADMIN. CODE tit. 35, § 740.600 (setting forth provision for issuing the Illinois No Further Remediation letter).

<sup>99</sup> *See* GELTMAN, *supra* note 17, at 87–304; ILL. ADMIN. CODE tit. 35, § 740.610 (detailing what shall be included in an Illinois No Further Remediation letter).

<sup>100</sup> *See* GELTMAN, *supra* note 17, at 87–304; ILL. ADMIN. CODE tit. 35, § 740.620 (requiring the recipient of an Illinois No Further Remediation letter to submit it to the recorder of deeds within forty-five days of receipt).

<sup>101</sup> GELTMAN, *supra* note 17, at 358; *see also* 40 C.F.R. § 300.505 (2003).

<sup>102</sup> The Superfund Memorandum of Agreement between Illinois and EPA Region V states in part: If a site in Illinois has been remediated or investigated under the practices and procedures of the Illinois PNSCP and IEPA has approved the remediation as complete or made a no-action determination upon review of an investigation, consistent with existing information the site will not be expected to require further response actions. Accordingly, Region 5 will not plan or anticipate any federal action under Superfund law unless, in exceptional circumstances, the site poses an immi-

Pursuant to CERCLA amendments passed in 1996, the EPA proposed Interim Guidelines to standardize the issuance of SMOAs.<sup>103</sup> The Guidelines required state programs to satisfy a minimum set of requirements, effectively unifying the content of the state VCPs through these requirements.<sup>104</sup> The states strongly opposed the EPA's Interim Guidelines, primarily because the EPA attempted to exclude any site that still had contaminated soil on site that exceeded the applicable state cleanup objectives, even if the soil remained under an approved engineered barrier.<sup>105</sup> According to state administrators, this proposed exception threatened to swallow the whole, making the SMOA meaningless.<sup>106</sup> Without protection from CERCLA liability, the VCPs would be meaningless. The state authorities prevailed, and the Interim Guidelines were never adopted.

Even if the EPA agrees to forgo enforcement action against a property that has completed a VCP, the new owner is not completely shielded. CERCLA citizen suits are not preempted by the state programs.<sup>107</sup> Citizen suits are explicit private rights of action included in most major federal environmental actions in which individual citizens can bring suit against the owners of contaminated property as long as the citizen-plaintiffs can prove standing.<sup>108</sup> Participation in a state VCP does not require the federal courts to abstain from hearing a concurrent citizen-suit.<sup>109</sup>

### C. VCP-Local Interaction

State programs often include roles for local governments. The Illinois VCP for example, provides local municipalities with two mechanisms to shape how cleanups will occur within their jurisdictions. First, the Illinois VCP permits local governments to exclude the necessity of groundwater

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ment threat or emergency situation. Region 5 will also continue to work with Illinois to remove any concerns about federal activity under Superfund so as to encourage appropriate redevelopment.

This Principle does not apply to sites which have been listed on the National Priorities List or sites subject to an order or other enforcement action under Superfund law or sites imminently threatening public health or the environment. Future IEPA activities at the site will be based on the conditions of the remediation approval and whether any imminent threat subsequently arises.

Superfund Memorandum of Agreement Between the Illinois Environmental Protection Agency and the United States Environmental Protection Agency, Region V (Dec. 18, 1991), available at <http://www.epa.state.il.us/land/cleanup-programs/superfund-memorandum-of-agreement.html>.

<sup>103</sup> Final Draft Guidance for Developing Superfund Memoranda of Agreement (MOA) Language Concerning State Voluntary Cleanup Programs, 62 Fed. Reg. 47,495 (Sept. 9, 1997).

<sup>104</sup> *Id.*

<sup>105</sup> Joel B. Eisen, *Brownfield Policies for Sustainable Cities*, 9 DUKE ENVTL. L. & POL'Y F. 187, 208-09 (1999).

<sup>106</sup> *Id.* at 208-12.

<sup>107</sup> See generally Jonathan H. Adler, *Stand or Deliver: Citizen Suits, Standing, and Environmental Protection*, 12 DUKE ENVTL. L. & POL'Y F. 39 (2001).

<sup>108</sup> *Id.* at 46.

<sup>109</sup> See *Spillane v. Commonwealth Edison Co.*, 291 F. Supp. 2d 728 (N.D. Ill. 2003) (holding that no abstention doctrine precluded a citizen suit from being brought regarding a site currently enrolled in a state VCP).

remediation, by excluding the use of wells.<sup>110</sup> If local governments pass regulations that preclude the drilling of wells and the use of groundwater as a drinking water source, it is assumed consumption of groundwater is no longer a concern, and this pathway of exposure can be excluded.<sup>111</sup> Property owners are still required to predict where the contaminated groundwater will flow,<sup>112</sup> but they are not required to remediate groundwater that will never be consumed—reducing the cost of remediation dramatically. However, property owners must alert the owners of any property under which the contaminated groundwater is predicted to flow.<sup>113</sup> However, it is unclear whether notified property owners have a common-law or statutory recourse against the source of the groundwater contamination. Second, the Illinois VCP permits local governments to complete Area Background Studies.<sup>114</sup> This allows a municipality to conduct a study of average levels of contamination within the municipality that are not due to a specific, identified event.<sup>115</sup> If background concentrations exceed the health-based permissible concentrations, cleanup standards are set at the background concentrations. As a result, property owners are no longer required to remediate contamination that exceeds state health-based standards so long as it does not exceed background levels.<sup>116</sup> The local flexibility permitted by these two mechanisms results in a more cost-effective and rational site remediation. It is a good first step, one that the LCP seeks to expand.

### III. THE NEED FOR LCPS

Just as the VCPs evolved in response to the failure of CERCLA, the LCP evolves in part to deal with the failings of the VCP. LCPS would share the same goals as VCPs and CERCLA, but focus on a different subset of the brownfield spectrum. Ideally, LCPS tailored to fit the realities of specific municipalities will generate more cost-effective, predictable results, and have the potential to significantly streamline the process by bringing it closer to home. With these improvements, more developers will be willing

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<sup>110</sup> ILL. ADMIN. CODE tit. 35, § 742.1015 (2000).

<sup>111</sup> *Id.*

<sup>112</sup> This is typically completed through the use of a finite-difference or a finite-element numerical model that predicts the fate and transport of specific contaminants based on measurements of the source concentration, characteristics of the subsurface soil, and the existing groundwater table.

<sup>113</sup> ILL. ADMIN. CODE tit. 35, § 742.1015.

<sup>114</sup> ILL. ADMIN. CODE tit. 35, §§ 742.400–742.415 (2000).

<sup>115</sup> “Area background means concentrations of regulated substances that are consistently present in the environment in the vicinity of a site [and] that are the result of natural conditions or human activities, and not the result solely of releases at the site.” 415 ILL. COMP. STAT. ANN. 5/58.2 (LexisNexis 2006) (quotations omitted).

<sup>116</sup> ILL. ADMIN. CODE tit. 35, §§ 742.400–742.415. A polynuclear aromatic hydrocarbons (“PAH”) background study has been completed for the city of Chicago. See HYDROCARBONS STUDY, *supra* note 8.

to remediate their property, and reduce the overall environmental risk faced by current urban dwellers.

#### A. *The Scope of the Problem*

All contaminated sites are not created equal. There are many differences among them: they are different sizes; they contain different contaminants released from different sources; and they pose different health risks through different exposure pathways. To understand how regulations affect these differing properties, it helps to imagine a spectrum of sites ranked in order from most dangerous to least dangerous. At the most dangerous end of the spectrum are the severely contaminated industrial sites—the Love Canals. At the opposite end of the spectrum are residential sites that might have some lead paint chips or coal ash mixed into the soil.

Before federal regulation, only the common law was available to address this spectrum of contaminated property. But common law was effective in dealing with only the worst of the worst polluted sites—sites that posed obvious, acute threats to human health as opposed to sites that posed more remote or chronic risks.<sup>117</sup> The federal government, perhaps in response to inadequacies of the common law, passed CERCLA to reach more properties.<sup>118</sup> While CERCLA technically could reach each and every site that posed any risk under any state or federal standard, in practice it only was applied to the most polluted industrial sites.<sup>119</sup> Nonetheless, the threat of CERCLA liability remained, and the states stepped in with VCPs.<sup>120</sup> These programs chased away the cloud of CERCLA liability, and created a mechanism for redeveloping former industrial sites.

As part of adopting VCPs, states promulgated their own set of risk-based cleanup standards. These standards served as bright-line rules, effectively drawing a line between acceptable and unacceptable levels of contamination or, in other words, clean and dirty property. Ironically, some industrial properties that languished under the threat of CERCLA fell below these bright-line standards. However, there was a flip-side to this line drawing. Many sites, particularly in historically urban areas—sites that were not industrial and were not perceived to present any risk of CERCLA liability—have contamination in excess of state-set cleanup standards. Thus, the state standards created a class of properties that the regulations

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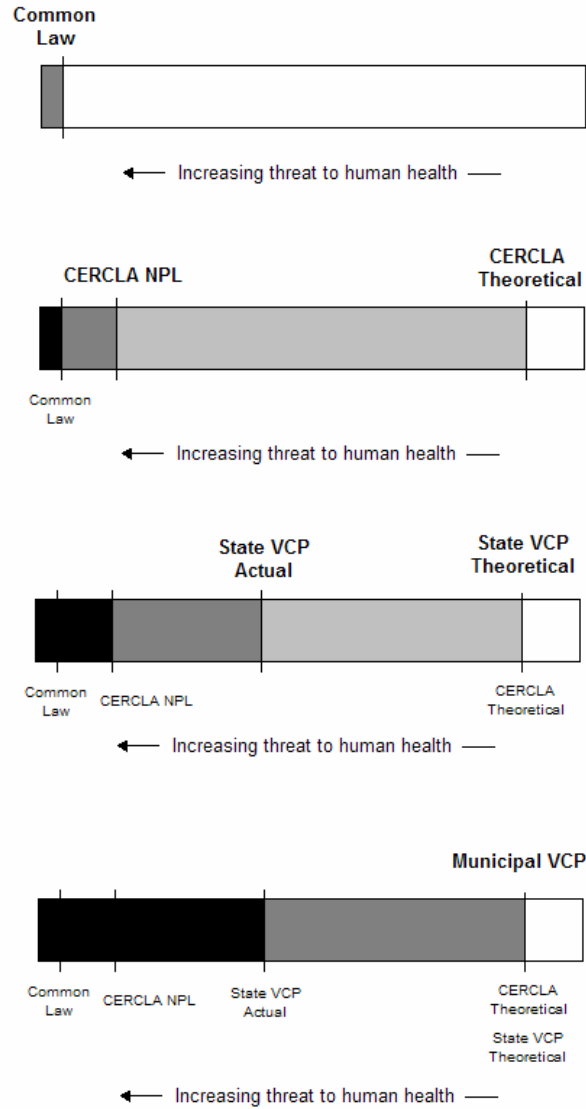
<sup>117</sup> For a discussion of the failings of common law, see *infra* notes 235–37 and accompanying text.

<sup>118</sup> For a discussion of the reasons behind the adoption of CERCLA, see *supra* Part II.A.

<sup>119</sup> For example, the EPA has identified 12,100 sites to which CERCLA could apply. See Comprehensive Environmental Response, Compensation, and Liability Information System (“CERCLIS”) Database, <http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm> (last visited Mar. 4, 2005). Of these sites, only 1237 are on the National Priority List, which qualifies a site to receive money from the Superfund. See National Priority List Query, <http://www.epa.gov/superfund/sites/query/basic.htm> (last visited Mar. 4, 2005).

<sup>120</sup> For a discussion of the reasons behind the adoption of CERCLA, see *supra* Part II.A.

were never intended or designed to address. The primary driving force behind the VCPs is the promise of CERCLA protection. Without the threat of CERCLA liability, there is no benefit to induce property owners to voluntarily remediate their properties at their own expense; there is no market incentive to enter the VCP, and the VCP becomes useless.



*Figure 1 (opposite page). This diagram demonstrates how the law has carved up the universe of contaminated properties over time. The common law only addresses a very narrow subset. CERCLA theoretically addresses the entire universe of contaminated properties, but in reality only impacts sites listed on the National Priority List. State programs were created to fill the void, but in reality address only those sites that have suspected contamination issues. The LCP is targeted to address the remaining properties.*

Although neither CERCLA nor the VCPs envisioned this new class of contaminated property, the risks these properties pose are no less real than any other site. However, these properties continue to remain beyond the reach of current federal and state regulations. And while the current legal and market structures fail to address the problem, people continue to be exposed unknowingly.

### *B. Investigating the Failures of VCPs*

To better understand potential solutions, it is beneficial to understand why VCPs have not been used to remediate non-industrial sites. Two basic reasons can be identified: first, the cleanups triggered by VCPs are often extremely expensive and do not correlate with the minor threats these sites pose; second, with the threat of CERCLA liability off the table, there is no market incentive to engage in voluntary cleanup.

*1. Inefficiency: A Case Study.*<sup>121</sup>—In 2000, a portion of the Henry Horner Homes, a notorious housing project in Chicago,<sup>122</sup> was demolished to make way for a bold new redevelopment. The redevelopment, part of the Chicago Housing Authority's \$1.5 billion Plan for Transformation, envisioned a complex of three- and four-flat residences to replace the existing fourteen-story dilapidated high-rise.<sup>123</sup> The new community will be home to a new mixed income community, diluting the concentrated poverty of older public housing units.<sup>124</sup>

A large portion of the redevelopment budget was supplied by the federal government through the Department of Housing and Urban Develop-

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<sup>121</sup> The data for this case study came from this Author's prior professional experience while working on this redevelopment, conversations with Chicago Department of Environment staff, and review of the associated documents and reports.

<sup>122</sup> See generally ALEX KOTLOWITZ, *THERE ARE NO CHILDREN HERE: THE STORY OF TWO BOYS GROWING UP IN THE OTHER AMERICA* (1991).

<sup>123</sup> CHICAGO HOUSING AUTHORITY, *THE CHICAGO HOUSING AUTHORITY PLAN FOR TRANSFORMATION* (2002), available at [http://www.thecha.org/transformplan/files/plan\\_for\\_transformation\\_brochure.pdf](http://www.thecha.org/transformplan/files/plan_for_transformation_brochure.pdf) [hereinafter *PLAN FOR TRANSFORMATION*].

<sup>124</sup> CHICAGO HOUSING AUTHORITY, *FY2005 ANNUAL PLAN—PLAN FOR TRANSFORMATION 2006* (2005), available at <http://www.thecha.org/transformplan/plans.html> (describing the redevelopment goals for public housing generally, and Henry Horner Homes specifically).

ment.<sup>125</sup> Because federal money was involved, the project had to comply with the environmental requirements of National Environmental Policy Act of 1969 (“NEPA”).<sup>126</sup> NEPA required an environmental site assessment to be completed. The initial assessment revealed an interesting history for this particular block of Chicago, dating back to at least 1916.<sup>127</sup> Before public housing was built on the site in the 1950s, the property had been put to a variety of uses. Portions of the site had been home to:

a sheet metal factory, a used barrel storage area, a broom factory, a repair shop, a welding shop, an auto radiator service building, a picture frame factory, automotive repair shops, a pickle factory, a store fixture factory, an electrical fittings manufacturer, an undertaker, printers, a machine shop, a plating works factory, a motor freight station, a blacksmith, a tin shop, sheet metal works, a display manufacturer, a metal tube factory, a wire works, and a wire and cable warehouse.<sup>128</sup>

A number of underground storage tanks had been on site—some to hold fuel oil, others to hold gasoline.<sup>129</sup> Each of these past uses could potentially have contaminated the site.<sup>130</sup>

As a result, soil samples were taken and analyzed to determine if there was any environmental impact.<sup>131</sup> Soil tests did not reveal any contaminants specifically associated with the past uses that triggered the sampling. Instead, samples from across the site revealed concentrations of polynuclear aromatic hydrocarbons (“PAHs”) that exceeded ingestion standards.<sup>132</sup> This discovery was not unexpected. PAHs are ubiquitous across much of Chicago.<sup>133</sup> The PAH contamination likely resulted as a by-product of widespread coal usage for heating and cooking at the turn of the century or the Chicago Fire,<sup>134</sup> although no definitive sources were identified.<sup>135</sup>

<sup>125</sup> See PLAN FOR TRANSFORMATION, *supra* note 123, at 2.

<sup>126</sup> 42 U.S.C. §§ 4321–4370e (2003).

<sup>127</sup> Maps of the area dating back to 1916 were created by the fire insurance companies of the time to assess the risk of fire. These maps are included as Exhibit IV in PHASE I ENVIRONMENTAL SITE ASSESSMENT CONDUCTED ON HENRY HORNER HOMES REDEVELOPMENT AREA (2002) (on file with author).

<sup>128</sup> *Id.* at 15–16 (internal cross references omitted).

<sup>129</sup> *Id.* at 24–26.

<sup>130</sup> *Id.* at 15–16. For a discussion on what may be a source of site contamination, see MICHAEL D. LAGREGA ET AL., HAZARDOUS WASTE MANAGEMENT 317–54, 887–956 (McGraw-Hill 1994) (describing environmental audits of facilities and site contamination characterizations).

<sup>131</sup> PHASE II ENVIRONMENTAL SITE ASSESSMENT CONDUCTED ON HENRY HORNER REDEVELOPMENT AREA A EAST AND WEST (2002) (on file with author) [hereinafter PHASE II ENVIRONMENTAL SITE ASSESSMENT].

<sup>132</sup> For default residential soil standard, see ILL. ADMIN. CODE tit. 35, § 742, tbl. A (2000) (detailing “Tier I Soil Remediation Objectives for Residential Properties”).

<sup>133</sup> For example, a study was just completed across Chicago that indicated the average concentrations of PAHs were in excess of residential standards. See HYDROCARBONS STUDY, *supra* note 8.

<sup>134</sup> The source of Chicago’s PAH contamination has been debated by the environmental engineering community for several years, and no definitive answer has emerged. For a comprehensive report

The Chicago Housing Authority enrolled the site in the Illinois Site Remediation Program (“SRP”),<sup>136</sup> the Illinois VCP, and it was cleaned up per state guidelines.<sup>137</sup> The remediation scheme required the top three feet of soil to be removed and disposed of in a landfill. The contaminated soil was replaced with three feet of clean soil or covered by building, pavement, or sidewalks.<sup>138</sup> The clean soil was installed to prevent “dirt-eating children,” as then-Judge Breyer called them,<sup>139</sup> from ingesting contaminated soil.<sup>140</sup> The remediation plan received approval from the state, the remediation has been completed, and two “No Further Remediation” letters were issued in 2005.<sup>141</sup>

In some respects, this redevelopment embodies the archetypal brown-field success story. A contaminated site was cleaned up through a state VCP and was successfully recycled. But while the regulatory framework was successful, the economics of the cleanup tell a different story. The cumulative risk posed by the site before remediation, based on IEPA calculations, was at most 10 excess cases of cancer per million people living on the site for their entire lifespan (seventy years).<sup>142</sup> The cost to remediate the site will total approximately \$1 million.<sup>143</sup> Was this an efficient use of public housing funds?

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detailing the potential sources of PAHs and their health effects, see INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY, ENVIRONMENTAL HEALTH CRITERIA 202: SELECTED NON-HETEROCYCLIC POLYCYCLIC AROMATIC HYDROCARBONS § 3.2.1 (1998), available at <http://www.inchem.org/documents/ehc/ehc/ehc202.htm#SubSectionNumber:3.2.1>.

<sup>135</sup> PHASE II ENVIRONMENTAL SITE ASSESSMENT, *supra* note 131, at 2 (attributing the PAH contamination to “the historic uses of the area and/or typical Chicago fill material”).

<sup>136</sup> ILL. ADMIN. CODE tit. 35, § 740 (2004).

<sup>137</sup> REMEDIAL ACTION COMPLETION REPORT FOR HENRY HORNER REDEVELOPMENT AREA A EAST 1–3 (2005) (on file with author); REMEDIAL ACTION COMPLETION REPORT—REVISION 1 FOR CHICAGO HOUSING AUTHORITY HENRY HORNER HOMES 1–3 (2005) (on file with author). Remediation was completed as required by Illinois law, ILL. ADMIN. CODE tit. 35, § 740.455.

<sup>138</sup> ILL. ADMIN. CODE tit. 35, § 740.455.

<sup>139</sup> BREYER, *supra* note 53, at 12.

<sup>140</sup> ILL. ADMIN. CODE tit. 35, § 742.1105(c)(2) (stating that clean fill in excess of three feet “prevent(s) completion of the exposure pathway”).

<sup>141</sup> Illinois Environmental Protection Agency, Site Remediation Program Database, <http://epadata.epa.state.il.us/land/srp/results.asp?IEPAID=0316275169> and <http://epadata.epa.state.il.us/land/srp/results.asp?IEPAID=0316275210>. Issuance of a No Further Remediation Letter “signifies a release from further responsibilities under the Act in performing the approved remedial action and shall be considered prima facie evidence that the site does not constitute a threat to human health and the environment and does not require further remediation under the Act if utilized in accordance with the terms of the No Further Remediation Letter.” ILL ADMIN. CODE tit. 35, § 740.610(a)(4).

<sup>142</sup> A seventy-year lifespan is the default assumption throughout EPA carcinogenic risk-based calculations. See SOIL SCREENING GUIDANCE, *supra* note 5.

<sup>143</sup> The cost of remediation is an estimate based on volumes reported in the Remedial Action Plan that was submitted to the IEPA, utilizing a standard unit cost developed by the City of Chicago Department of Environment. This information comes from this Author’s experience as the Environmental Project Manager for the Henry Horner homes, while working for the Chicago Department of Environment.

To answer this question, consider a hypothetical remediation of a typical Chicago lot that measures 125 feet by 25 feet. Assume it is vacant, and is covered with PAH contaminated soil that will cause ten excess cases of cancer per million. After remediation, the developer plans to build a three-flat building on the site. If the developer cleans the site as dictated by the Illinois VCP, \$150 million<sup>144</sup> will be spent to prevent a single occurrence<sup>145</sup> of cancer over the next seventy years.<sup>146</sup> Clearly, the costs of remediation are out of proportion to the benefits gained.<sup>147</sup>

2. *Lack of Incentives: A Game Theory Analysis.*—The decision to address environmental concerns on non-industrial sites involves many components. At its most basic, the decision can be conceptualized as a balance between the probable financial costs associated with two states of the world: one in which the developer investigates the problem, and one in which the developer ignores the problem. The developer will choose the state of the world that costs the least.

In simplified terms, the costs to the developer to investigate are the following:

$$C_i + P_c(C_c + C_{\text{market}})$$

Where:

$C_i$  : cost of the investigation

<sup>144</sup> The details of this calculation are as follows:

Volume of soil removed = surface area of site  $\times$  depth of removal =  $125' \times 25' \times 3' = 347 \text{ yd}^3$

Cost of removal and replacement =  $347 \text{ yd}^3 \times \$35/\text{yd}^3 \text{ removed} = \$12,145$

People living at the site =  $3 \text{ units} \times 2.87 \text{ people per unit (average Chicago family size in 2000)} = 8.61 \text{ people}$

Occurrences of cancer prevented =  $8.61 \text{ people} \times 10 \text{ cases of cancer per } 1,000,000 \text{ people} = 0.0000861 \text{ cases of cancer}$

Cost to avoid one case of cancer =  $\$12,145 / 0.0000861 \text{ cases of cancer} = \text{about } \$141 \text{ million per case of cancer prevented}$

<sup>145</sup> It is important to remember that occurrence does not mean death. Approximately 60% of U.S. cancer patients live beyond five years. SURVEILLANCE EPIDEMIOLOGY AND END RESULTS, NAT'L CANCER INST., SEER CANCER STATISTICS REVIEW, 1975–2001, at tbl. I-4 (2002), available at [http://seer.cancer.gov/csr/1975\\_2001/results\\_single/sect\\_01\\_table.04\\_2pgs.pdf](http://seer.cancer.gov/csr/1975_2001/results_single/sect_01_table.04_2pgs.pdf) (last visited Jan. 21, 2005).

<sup>146</sup> This type of economic outcome is not unique. For example, then-Judge Breyer relates the story of *United States v. Ottatti & Goss*, 900 F.2d 429 (1st Cir. 1990), as an example of CERCLA waste. BREYER, *supra* note 53, at 11–12. The case revolved around the need to spend \$9.3 million to make a dump site safe enough for nonexistent dirt-eating children to live at the site 245 days per year, as opposed to 90 days per year. *Id.*

<sup>147</sup> For example, in quantifying the benefits of new arsenic standards for drinking water, the EPA estimated the value of a statistical life in 2000 to be \$6.77 million. National Primary Drinking Water Regulations; Arsenic and Clarifications to Compliance and New Source Contaminants Monitoring, 69 Fed. Reg. 6976, 7012 (Jan. 21, 2001).

$P_c$ : probability of contamination

$C_c$ : cost of remediation if contaminated

$C_{\text{market}}$ : reduction of selling price due to stigma, etc.

Note that the initial costs of investigation are incurred regardless of the outcome. Although the probability of contamination is uncertain, even a remote probability can have significant financial impact when coupled with the large cost of remediation. Finally, even after property is cleaned up, its market value may suffer because of the stigma of past contamination, the presence of contamination left onsite under engineered barriers, and the fear of discovering additional contamination.

The costs associated with not investigating are the following:

$$P_c(P_c C_c D_c + P_l C_l D_l)$$

Where:

$P_c$ : probability of contamination

$P_e$ : probability of future enforcement

$C_e$ : costs if future enforcement occurs

$D_e$ : discount factor adjusting for the time value of money

$P_l$ : probability of future liability

$C_l$ : cost of future liability

$D_l$ : discount factor adjusting for the time value of money

Note that, in a typical brownfield scenario where contamination issues are recognized, potential purchasers will assume that the probability of contamination is large, that the probability of enforcement and liability are also substantial, and that the costs associated with these eventualities are extreme. In such a case, no potential purchaser will consider the property without more information, and the owner will be forced to investigate. But for non-industrial properties, the market as of yet does not demand investigations. The probability of any future enforcement action is remote—perhaps zero—and with it the likelihood of liability is also small. For a non-industrial site, the costs of dealing with the problem far outweigh the financial penalties of ignoring it. To illustrate, assume the following values reflect the costs and risks associated with a single standard urban 125' × 25' lot:

$$C_i = \$1,000^{148}$$

$$P_c = 5\%^{149}$$

$$C_c = \$15,145^{150}$$

$$C_{m1} = C_{m2} = \$0^{151}$$

$$P_e = P_1 = 5\%^{152}$$

$$C_e = C_1 = \$50,000^{153}$$

$$D_e = D_1 = 0.7^{154}$$

The average cost of investigating is \$1760, while the average cost of avoiding is \$128. This demonstrates that if the status quo is maintained, the deck is stacked against addressing the problem.<sup>155</sup>

Without some outside governmental or market force, developers of non-industrial urban sites will continue to avoid participating in VCPs. Developers are extremely sensitive to any added costs, and based on current incentives, they are simply better off not knowing anything about potential contamination. Because there is currently little perceived chance of discovery outside of voluntary testing, and no perceived threat of enforcement at mildly contaminated sites, developers simply ignore the problem of potential contamination.

<sup>148</sup> This reflects the cost of a Phase I Environmental Site Assessment, based on this Author's professional experience with the Chicago Department of Environment.

<sup>149</sup> This is based on the Area Background Study that set levels for PAHs at 95% confidence level. See HYDROCARBONS STUDY, *supra* note 8, at 2.

<sup>150</sup> This cost reflects \$35 per cubic yard to remove and replace the top three feet of soil on the site per standard IEPA requirements, plus \$3000 to account for enrollment in the VCP and professional oversight. A price of \$35 per cubic yard is at the low end of the range of estimated cost of soil. Ball-park cost estimates of this type of remediation range from \$35 to \$64 per cubic yard.

<sup>151</sup> This assumes that the market remains neutral, and neither disfavors cleaned-up sites, nor requires a clean environmental bill of health.

<sup>152</sup> All together, this assumes a one in ten chance that the site will come back to haunt the developer in five years. The true probability is likely much lower.

<sup>153</sup> This estimate is based on the idea that enforcement or liability will occur five years from sale and require remediation (adjusted at 3% inflation over five years) plus a 40% additional increase for penalty and transaction costs.

<sup>154</sup> Five years at 7%.

<sup>155</sup> While the probabilities of enforcement can change as the law changes (think of the passage of CERCLA), the risk of such a future is internalized into the market's perception of the risk. In addition, several factors minimize the impact of a future shift in legislation. First, the time value of money reduces the sting of any future penalty. Second, the entities used by most developers—the single-purpose entity—limit the developer's risk. And finally, the developer can take comfort in the fact that if such an event occurs, it will likely be one of the several parties dragged into court.

This model also points to methods a new regulatory structure could utilize to change outcomes. More investigation will occur when the cost of investigating is decreased and the cost of not investigating is increased. The cost of investigating can be decreased by: (1) reducing the transaction costs of the investigation through a streamlined bureaucracy and standardization; (2) reducing remediation costs by reducing both the transaction costs and the physical costs; (3) reducing the probability of contamination by altering the bright-line standards; and (4) minimizing the stigma of cleaned properties through legal certainty. The cost of not investigating can be increased by: (1) increasing the probability of contamination; (2) increasing the probability of enforcement and liability; and (3) increasing the costs associated with enforcement and liability. While this model invites detailed analysis,<sup>156</sup> such detailed analysis is not necessary to analyze the LCP.

### *C. The LCP Innovation*

*1. The LCP Structure.*—An LCP would seek to improve the current state of affairs along two potential fronts—lowering the cost of investigation and increasing the cost of not investigating. An LCP would reduce the cost of investigating by (1) streamlining the bureaucracy, (2) standardizing and tailoring the required investigation, and (3) reducing the amount of time the government takes to review the results. Remediation costs could similarly be reduced by the same methods. In addition, local tailoring of the required remediation could reduce the actual cost of the physical remediation by requiring the owner to militate against actual risks the site poses to the community—not a generic panoply of possible risks. More reasonable but equally effective remedial strategies could be explored. Finally, the probability of contamination can be reduced by adjusting the bright-line standards to reflect standards that are acceptable to the local population and make sense in the local context. To raise costs, an LCP could increase the probability and costs of enforcement, through inspections and fines. Local governments could also experiment with ways to increase participation in the LCP. This could take a variety of forms: educating consumers, demanding that property be investigated, providing tax credits for participating in the LCP, expediting building permit review for LCP participants, and requiring mandatory LCP participation.

Structurally, the program would function under the umbrella of the state VCPs, just as these VCPs function under CERCLA. A defined category of sites, perhaps sites that pose a health risk below a prescribed level,

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<sup>156</sup> For example, note that the decrease in the probability of contamination, which is controlled by where the brightline standards are set, reduces both the cost of investigating and the cost of not investigating. Similarly, lowering the cost of remediation will also likely reduce the cost of enforcement, assuming enforcement will mandate remediation. In order to counteract these reductions to the cost of not investigating, the cost of enforcement can be increased through the assessment of fines.

would be delegated to the LCP. If site sampling revealed a potential risk above a certain level, the site would be referred to the state VCP. The state could also maintain some control over the LCP cleanup standards, perhaps through an approval process.<sup>157</sup> The specifics of the LCP would be developed and administered by the local government, allowing it to respond to local conditions. Based on initial local results, local government could tweak and experiment with the LCP to meet local needs and conditions. To this end, the LCP could be rolled out in stages, with the goal that participation in the program would become standard practice in the community.

2. *LCP Advantage: Better Local Information.*—The LCP would have several advantages over the traditional VCP. First, municipalities are in a better position to respond to local conditions. Assumptions underlying cleanup goals may not hold true for an entire state. For example, the Illinois VCP bases cleanup standards on the assumption that a person will be ingesting dirt 350 days per year.<sup>158</sup> While this assumption may be valid in more temperate parts of the state, it does not make sense for Chicago, where the ground is frozen for a good part of the winter. Perhaps an assumption of 250 days, as in Pennsylvania, would make more sense in Chicago.<sup>159</sup>

LCPs could also develop remedial schemes that make more sense for the area. For example, the requirement of three feet of clean soil currently required by the Illinois VCP does not make sense in all situations. For example, Henry Horner Homes is being redeveloped into condos; it is doubtful a child could dig a three-foot hole without the condo board noticing. In such a setting, heightened institutional controls, resident education, and six inches of clean soil could protect the residents. The EPA currently uses a similar scheme to minimize the risks posed by lead paint.<sup>160</sup> In areas where contamination is widespread, a community health-based approach that covers the entire area makes more sense than cleaning up a single lot. Spending thousands of dollars to clean a single parcel is futile when all the children play in the abandoned lot down the street.

Finally, local governments are in a better position to make sense of the data. If soil sampling becomes standard practice, local government could develop a database that combines the lab results with sample location using geographic information system mapping. Collecting and utilizing better in-

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<sup>157</sup> States are free to adopt differing cleanup standards. For example, Illinois has adopted standards taken from EPA Soil Screening Levels, originally developed for initial screening of Superfund sites. See ILL. ADMIN. CODE tit. 35, § 742 tbl. A (demonstrating that the source of cleanup levels is the EPA Soil Screening Levels); SOIL SCREENING GUIDANCE, *supra* note 5. Other states have adopted different standards. See generally GELTMAN, *supra* note 17 (discussing standards adopted in each state).

<sup>158</sup> SOIL SCREENING GUIDANCE, *supra* note 5.

<sup>159</sup> 25 PA. CODE § 250.306 (2004).

<sup>160</sup> Residential Lead-Based Paint Hazard Reduction Act of 1992, Pub. L. 102-550, 106 Stat. 3897 (requiring sellers, landlords and real estate agents to warn buyers and tenants of lead-based paint hazards in pre-1978 housing property).

formation would allow local officials to identify contamination “hot spots” that pose increased risks to the community. For example, all of the properties downwind from a smelter may show elevated metals contamination. Local officials could also combine contamination trends with census information to develop a community risk profile, allowing them to direct limited resources proactively to neighborhoods and populations that are the most at risk.

3. *Expanding an Already Vital Role.*—Even without LCPs, local governments are essential participants in state VCPs. For example, the most notable innovations to come out of the VCPs combine the adoption of risk-based cleanup goals with institutional controls to minimize or eliminate exposure to contaminated soil.<sup>161</sup> Risk-based corrective action decisions are based on the answers to a progressive series of questions.<sup>162</sup> The first question is whether there is a pollutant at the site and, if so, at what concentration.<sup>163</sup> Second, it must be determined whether this level of contamination presents a danger to humans or the ecosystem.<sup>164</sup> The third question analyzes the potential pathways this contamination may follow to get from the site to a place where it can do harm. Typical pathways (ingestion, inhalation, and groundwater contamination) are discussed below. The likelihood of the pathway actually occurring is analyzed.<sup>165</sup> Finally, the resulting risk is analyzed to see if it is acceptable.<sup>166</sup> Each question represents a link on a chain. If any link is broken, the pollution is deemed to present no risk.

Institutional controls are generally defined as mechanisms put in place to prevent human exposure to potentially harmful contamination left on brownfield sites.<sup>167</sup> They are designed to sever the last link on the risk chain—exposure to humans. Institutional controls can take a number of forms.<sup>168</sup> The most common are restrictions on future land use, and the construction of engineered barriers. Future land use considerations can reduce the stringency of cleanup goals. For example, it is assumed that a worker spends significantly less time at work than a typical resident does at

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<sup>161</sup> Heidi Gorovitz Robertson, *Legislative Innovation in State Brownfield Redevelopment Programs*, 16 J. ENVTL. L. & LITIG. 1, 15 (2001).

<sup>162</sup> BREYER, *supra* note 53, at 9.

<sup>163</sup> *Id.* (“Identify the potential hazard.”).

<sup>164</sup> *Id.* (“Drawing the dose/response curve.”).

<sup>165</sup> *Id.* (“Estimating the amount of human exposure.”).

<sup>166</sup> *Id.* (“Categorizing the result.”).

<sup>167</sup> Robertson, *supra* note 161, at 15.

<sup>168</sup> Institutional controls include: governmental control (zoning, local permits, other police power ordinances, groundwater use restrictions, condemnation of property); proprietary controls (easements, covenants, equitable servitudes, reversionary interests, state use restrictions, conservation easements); enforcement tools (administrative orders, consent decrees); and informational devices (deed notices and state registries). IMPLEMENTING INSTITUTIONAL CONTROLS, *supra* note 78, at 351–66.

home.<sup>169</sup> It is also assumed that children do not spend a significant amount of time on an industrial site.<sup>170</sup> Based on these assumptions, cleanup goals for an ingestion pathway are several times more stringent for residential property than for commercial property.<sup>171</sup> Changed assumptions can lead to very different cleanup goals. Future land use control (industrial or residential) combined with risk-based cleanups is a major innovation contributed by state VCPs. Typical Superfund cleanups required all property to be cleaned up to residential standards.<sup>172</sup> This stringency has resulted in inflated cleanup costs.<sup>173</sup>

The role of local governments in implementing and ensuring land use controls is well known:

Local governments have long been in charge of land use and zoning activity, though state governments occasionally intervene. Given the polycentric nature of land use decisionmaking, where many affected people and interests are likely to want a say in how land is developed, local and county governments are often the only levels of government that know[] of, or ha[ve] the capacity to discover, the preferences of local constituencies. . . . Despite over thirty years of federal environmental activity and leadership, land use decisions and processes have remained quintessentially within the province of local governments.<sup>174</sup>

To be effective, all land use controls require some form of monitoring.<sup>175</sup> The local government is typically the best suited to complete this task, and the EPA recognizes the important role that local governments play. While CERCLA does “not specify a role for local governments in implementing

<sup>169</sup> The statute assumes a resident will spend 350 days a year at his domicile, while an industrial or commercial worker will spend 250 days per year at work, and a construction worker will spend 30 days per year at the site. Tiered Approach to Corrective Action, ILL. ADMIN. CODE tit. 35, § 742 app. C, tbls. A & B (2004) (setting forth standard assumed parameter values for exposure frequency used in Tier I and Tier II remediation objectives equations (“SSL equations”).)

<sup>170</sup> The equations to determine remediation objectives for residential properties take into account the likelihood that children are present, while similar equations for industrial sites do not. For example, for noncarcinogens, the residential standards assume the body weight of the exposed person is 15 kg, while the assumed body weight of the exposed person at an industrial site is 70 kg. *Id.* (utilizing different body weight assumptions for residential and industrial scenarios in SSL equation S1). Similarly, for carcinogens, the equation for residential remediation objectives adjusts the soil ingestion factor to account for age, while the corollary industrial equation does not. *Id.* (utilizing IF<sub>soil-adj</sub> which adjusts soil ingestion for age to determine residential remedial objectives in SSL equation S2, while using a variable that does not account for age in SSL equation S3).

<sup>171</sup> For example, the standard residential cleanup goal for benzo(a)pyrene is 0.09 parts per million while it is 0.8 parts per million for industrial use. *Id.* at app. B, tbls. 1 & 2.

<sup>172</sup> James T. Hamilton & W. Kip Viscusi, *The Benefits and Costs of Regulatory Reforms for Superfund*, 16 STAN. ENVTL. L.J. 159, 166–67 (1997).

<sup>173</sup> *Id.* at 188–98.

<sup>174</sup> William W. Buzbee, *Urban Sprawl, Federalism, and the Problem of Institutional Complexity*, 68 FORDHAM L. REV. 57, 92–98 (1999).

<sup>175</sup> IMPLEMENTING INSTITUTIONAL CONTROLS, *supra* note 78, at 335.

the selected remedy . . . a local government is often the only entity that has the legal authority to implement, monitor and enforce certain types of” institutional and land use controls.<sup>176</sup> Clearly, the long-term success of the state program is already dependent on local government participation. Devolving some responsibility to an LCP would strengthen the vital role a local government already plays, and allow it to integrate remediation into zoning and other local decisions. CERCLA and VCPs already rely heavily on the knowledge and resources of a local community. In this respect, the LCP is not revolutionary—it is simply another step along an existing path.

#### IV. NORMATIVE ARGUMENTS IN SUPPORT OF LCPS

Devolving environmental regulatory power to municipalities is not as radical as it may initially sound. The general idea of decentralization draws support from a variety of sources. The belief that “the most effective, responsible and responsive government is government closest to the people,” is a central tenet of the Republican Party.<sup>177</sup> On what is arguably the other end of the political spectrum, the European Union has adopted a position known as subsidiarity, summarized as follows:

The first, and most axiomatic, advantage of decentralized government is that local laws can be adapted to local conditions and local tastes, while a national government must take a uniform—and hence less desirable—approach. So long as preferences for government policies are unevenly distributed among the various localities, more people can be satisfied by decentralized decision making than by a single national authority.<sup>178</sup>

Devolution generally is consistent with the U.S. federal system. Constitutional federalism is generally thought, in the words of Justice O’Connor, to “consist[] of discerning the proper division of authority between the Federal Government and the States.”<sup>179</sup> The source of the “proper division” is found within the Constitution in the enumerated federal powers,<sup>180</sup> the Tenth Amendment,<sup>181</sup> and perhaps the Eleventh Amendment.<sup>182</sup> Aside from the

<sup>176</sup> *Id.* at 345.

<sup>177</sup> This statement is part of the “Republican Oath” that appears on hundreds of Republican Party websites. See, e.g., Republican National Committee, Republican Principles, available at <http://www.gop.com/About/AboutRead.aspx?AboutType=3&Section=19> (last visited Sept. 10, 2006).

<sup>178</sup> Michael W. McConnell, *Federalism: Evaluating the Founders’ Design*, 54 U. CHI. L. REV. 1484, 1493 (1987) (reviewing RAOUL BERGER, *FEDERALISM: THE FOUNDERS’ DESIGN* (1987)). This idea gained some notoriety when Justice Breyer referenced it in his dissent in *United States v. Morrison*, 529 U.S. 598, 663 (2000) (Breyer, J., dissenting).

<sup>179</sup> *New York v. United States*, 505 U.S. 144, 149 (1992) (O’Connor, J.).

<sup>180</sup> See, e.g., U.S. CONST. art. I, § 8, cl. 3 (“The Congress shall have Power . . . to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.”); U.S. CONST. art. I, § 8, cl. 1 (authorizing Congress to spend to “provide for the . . . general Welfare of the United States”).

<sup>181</sup> U.S. CONST. amend. X (“The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people.”).

Constitution, others have advanced ideas of optimum federalism that depend on other things—such as economic efficiency.<sup>183</sup> These considerations lead to a hybrid question: “[W]hat relationship between the states and the federal government will best advance the values inherent in the federalist system while ensuring effective and efficient regulation?”<sup>184</sup>

Devolution of control to local governments has gained traction in the environmental arena.<sup>185</sup> LCPs fit in nicely with this growing trend. In addition, legal theorists, often under the rubric of “instrumental federalism,”<sup>186</sup> have considered how centralization and devolution play out in the environmental arena. Many arguments have been made to justify the role of centralized federal environmental regulation; many arguments have been made to justify devolving environmental legislation to the states and beyond.<sup>187</sup> These arguments are typically divorced from any positive legal or constitutional concerns, and instead focus on identifying the level of government that can most efficiently respond to environmental concerns.<sup>188</sup>

The vast majority of this debate has focused on the interaction between federal and state governments. Although a few articles have discussed the role of local governments, none has thoroughly considered the devolution of regulatory control over contaminated sites embodied in the LCP.<sup>189</sup> What follows is a fledgling attempt to analyze the normative arguments for and against the LCP. As demonstrated in the analysis that follows, the LCP captures the benefits of local control, while avoiding many of the pitfalls and shortcomings associated with it.

#### A. Arguments in Support of Local Control

This section summarizes the typical arguments in favor of local control environmental regulations and against centralized federal control. These arguments strongly support the concept of devolving some regulatory power over contaminated property to local governments. The arguments

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<sup>182</sup> U.S. CONST. amend. XI (“The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.”).

<sup>183</sup> See Henry N. Butler & Jonathan R. Macey, *Externalities and the Matching Principle: The Case for Reallocating Environmental Regulatory Authority*, 14 YALE L. & POL’Y REV. 23 (1996); Wallace E. Oates, *A Reconsideration of Environmental Federalism* (Resources for the Future, Discussion Paper 01-54, 2001), available at [http://rff.org/rff/Publications/Discussion\\_Papers.cfm](http://rff.org/rff/Publications/Discussion_Papers.cfm).

<sup>184</sup> Ellen R. Zahren, Comment, *Overfiling Under Federalism: Federal Nipping at State Heels to Protect the Environment*, 49 EMORY L.J. 373, 391 (2000).

<sup>185</sup> For example, one law school has claimed discovery of a growing body of “local environmental law.” This claim was made in an introduction to a symposium Pace University held on the topic of the advent of local environmental law. John R. Nolon, *Introduction: Considering the Trend Toward Local Environmental Law*, 20 PACE ENVTL. L. REV. 3, 3 (2003).

<sup>186</sup> *Id.*

<sup>187</sup> See, e.g., Butler & Macey, *supra* note 183, at 27; see also Oates, *supra* note 183, at 22.

<sup>188</sup> See, e.g., Butler & Macey, *supra* note 183, at 27.

<sup>189</sup> This idea is explored in detail later in the paper. See discussion *infra* Part IV.B.1.

considered in turn are: the concept of “our federalism” and the checks and balances divided political control brings; the benefits of tailoring regulations to local conditions; the idea that the government closest to the people will be the most responsive; the inefficiency of bloated centralized bureaucracy; the innovation that can come from the laboratory of the states; and the increasing capabilities of state and local governments in the environmental arena.

1. *“Our Federalism.”*<sup>190</sup>—In the words of James Madison, “[t]he powers delegated . . . to the federal government, are few and defined. Those which are to remain in the state governments, are numerous and indefinite.”<sup>191</sup> The Rehnquist Court showed a willingness to police the outer limits of the reach of the national government set out in the Commerce Clause—something that has not been done since before the New Deal.<sup>192</sup> There has been much speculation on what impact this newly revived Constitutional limit might have on federal environmental regulations.<sup>193</sup> Some commentators wonder if it is simply a subtext for advancing a political agenda.<sup>194</sup> Regardless of any actual or imagined agenda, it appears major federal environmental legislation will survive judicial scrutiny.<sup>195</sup> The Supreme Court has had a number of opportunities to curtail the scope of federal environmental regulations, and has failed to do so. For example, *Alaskan Department of Environmental Conservation v. EPA* essentially asked the question of who had decision-making power under the Clean Air

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<sup>190</sup> For an explanation of “Our Federalism,” see *Younger v. Harris*, 401 U.S. 37, 44–45 (1971).

<sup>191</sup> THE FEDERALIST NO. 45, at 237–38 (James Madison) (Max Beloff ed., 1987).

<sup>192</sup> See *United States v. Morrison*, 529 U.S. 598 (2000) (holding provisions of the Violence Against Women Act unconstitutional because they exceeded the authority granted to the federal government under the Commerce Clause); *United States v. Lopez*, 514 U.S. 549, 567–68 (1995) (holding that the Gun-Free School Zones Act of 1990 was unconstitutional because it was too unrelated to interstate commerce to fall under the federal government’s Commerce Clause authority). *But cf.* *Gonzales v. Raich*, 125 S. Ct. 2195 (2005) (holding that application of the Controlled Substances Act to intrastate growers and users of medical marijuana did not violate the Commerce Clause).

<sup>193</sup> See, e.g., Joshua D. Sarnoff, *Cooperative Federalism, the Delegation of Federal Power, and the Constitution*, 39 ARIZ. L. REV. 205 (1997) (arguing that cooperative federalism is potentially unconstitutional given recent Supreme Court decisions).

<sup>194</sup> As one professor stated:

I spoke to a friend of mine who argued the *Dale* case—the Boy Scout case—in the Supreme Court, and he said that he thought the most important part of the argument when he got up there were the first five words that he said, which were “The State of New Jersey.” Of course, they love states up there, right? And, of course, he lost. And, then we have *Bush v. Gore*, where suddenly we have the majority of the court extolling the virtues of the Equal Protection Clause over state power. So, let’s not kid ourselves about what’s really going on here.

David L. Markell et al., *A Conversation on Federalism and the States: The Balancing Act of Devolution*, 64 ALB. L. REV. 1091, 1112 (2001) (discussing *Boy Scouts of America v. Dale*, 530 U.S. 640 (2000) and *Bush v. Gore*, 531 U.S. 98 (2000)).

<sup>195</sup> See, e.g., Buzbee, *supra* note 38, at 24–25 (arguing that federal regulation of contaminated land is “easily justifi[ed] under the Constitution”).

Act: the state or the federal government.<sup>196</sup> The Supreme Court, in a 5-4 decision, ruled in favor of the federal government, stating that under certain circumstances the EPA, not the state, had the final authority to accept or reject specific pollution control technology to be used in a zinc mining operation in Alaska.<sup>197</sup> In another case, an Alabama District Court found CERCLA's retroactive liability unconstitutional because it exceeded the scope of the Commerce Clause, citing *United States v. Lopez*<sup>198</sup> as justification.<sup>199</sup> The Eleventh Circuit summarily reversed the district court.<sup>200</sup>

The greatest impact of *Lopez* may be the impact it has on the implementation of federal policy. President Clinton, in the wake of *Lopez*, issued an executive order reinforcing the deference that should be afforded to state and local governments.<sup>201</sup> In the typical cooperative federalism framework, "the national government shall grant the States the maximum administrative discretion possible. Intrusive Federal oversight of State administration is neither necessary nor desirable."<sup>202</sup> Further deference is also ordered when it comes to setting environmental standards—"where possible, defer to the States to establish standards."<sup>203</sup>

The federal structure of the Constitution and the recent revitalization of federalism by the Supreme Court are not directly implicated in considering devolution from the state to the municipal level. After all, the Constitution only provides the power-sharing arrangement amongst the federal government, the state government, and the people. However, by analogy, the revitalized system of shared power between the federal government and the states militates in favor of a parallel structure between the state government and the local governments. Additionally, while it appears federal legislation is safe from any impending constitutional challenge, the federal government appears recommitted to cooperative federalism. The LCP fits logically within this framework.

2. *Tailoring to Local Conditions.*—By their very nature, risks posed by contaminated land are local in scope. They extend only as far as the dirty soil or contaminated groundwater extend, and are directly proportional

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<sup>196</sup> 540 U.S. 461 (2004).

<sup>197</sup> *Id.* at 502.

<sup>198</sup> 514 U.S. 549, 567–68 (1995) (holding the Gun-Free School Zones Act of 1990 was unconstitutional because it was too unrelated to interstate commerce to fall under the federal government's Commerce Clause Authority).

<sup>199</sup> *United States v. Olin Corp.*, 927 F. Supp. 1502, 1523 (S.D. Ala. 1996) ("[T]his court applies the principle of enumerated powers discussed in *Lopez* to the question of CERCLA's constitutionality. In so doing, this court finds that, when measured against the 'ultimate touchstone of constitutionality,' the application of CERCLA to *this case* exceeds the power given Congress under the Commerce Clause." (citation omitted)).

<sup>200</sup> *United States v. Olin Corp.*, 107 F.3d 1506, 1515 (11th Cir. 1997).

<sup>201</sup> Exec. Order No. 13,132, 64 Fed. Reg. 43,255 (Aug. 4, 1999).

<sup>202</sup> *Id.* at 43,256.

<sup>203</sup> *Id.*

to the severity of the contamination—the more polluted a site, the greater its zone of impact. The inverse is also true: the risks posed by mildly contaminated sites, the sites the LCP targets, do not extend very far. Additionally, the threat posed by a contaminated site varies based on local factors, such as climate, weather, and geography.<sup>204</sup> The potential damage a contaminated site can cause also depends on local factors, such as the surrounding ecosystems, population density, and population characteristics.<sup>205</sup>

The current arsenal of institutional controls used in response to the problem is local in nature. Regulators on a municipal level would be more aware of the particular local conditions and better understand the nature of the problem.

3. *More Responsive, Closer to the People.*—Simply put, “[f]ederalism is rooted in the belief that issues that are not national in scope or significance are most appropriately addressed by the level of government closest to the people.”<sup>206</sup> There may be real differences between localities in what environmental amenities are most important, what level of protection is preferred, and what remediation methods should be utilized.<sup>207</sup> Because state regulators are closer to the localities they regulate, they “can be more responsive to the needs and concerns of affected citizens than federal agencies.”<sup>208</sup> States are more responsive than the federal government because of size and proximity. The same logic would suggest local government would be more responsive than the states.

4. *Bloated Bureaucracy.*—Centralized regulation and implementation may lead to bloated bureaucracies.<sup>209</sup> Institutions can become self-interested and concerned more with growing or maintaining their own budget than efficiently completing the task at hand.<sup>210</sup> Centralized agencies also must coordinate and communicate with a number of regions. This web of communication may become duplicative and inefficient.<sup>211</sup> Local agencies counteract these problems, and can accomplish tasks in a more time- and cost-efficient manner. Because of these benefits, the EPA already delegates much responsibility to the states, and many states further dele-

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<sup>204</sup> Dwyer, *supra* note 36, at 219–20.

<sup>205</sup> James E. Krier, *Environmental Federalism: On the Topology of Uniform Standards in a Federal System—and Why It Matters*, 54 MD. L. REV. 1226, 1228 (1995).

<sup>206</sup> Exec. Order No. 13,132, 64 Fed. Reg. 43,255 (Aug. 4, 1999).

<sup>207</sup> Cliona J.M. Kimber, *Environmental Federalism: A Comparison of Environmental Federalism in the United States and European Union*, 54 MD. L. REV. 1658, 1662 (1995).

<sup>208</sup> Babich, *supra* note 46, at 1534.

<sup>209</sup> Kimber, *supra* note 207, at 1662.

<sup>210</sup> Buzbee, *supra* note 38, at 53 (stating that “a considerable body of theoretical literature posits that officials within bureaucracies will act to seek expansion of agency turf and budgets”).

<sup>211</sup> Kimber, *supra* note 207, at 1662.

gate.<sup>212</sup> For example, the IEPA delegates all solid waste inspection duties to the city.<sup>213</sup>

5. *Laboratories of Innovation.*—“It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”<sup>214</sup> Perhaps no other sentence has shaped the understanding of the advantages of federalism than this single sentence from Justice Louis Brandeis. The sentiment can be seen in President Clinton’s Executive Order on Federalism: “In the search for enlightened public policy, individual States and communities are free to experiment with a variety of approaches to public issues. One-size-fits-all approaches to public policy problems can inhibit the creation of effective solutions to those problems.”<sup>215</sup> The states are in a better position to “experiment with innovations that are too risky for the federal government to try initially.”<sup>216</sup>

Some argue that innovation is driven by competition amongst the states to attract residents and businesses, and this competition leads to a race-to-the-top because residents and businesses locate in the state that offers the best services for the least cost. However, the potential for improvements in VCPs from a race-to-the-top scenario may be limited.<sup>217</sup> Choices of where to locate seem unlikely to be based sufficiently on such intangible things as good prospective brownfield laws to reward better VCPs, and without this reward, there is no incentive to compete. Any innovation that does occur is likely being driven by the needs of the citizens of the state, and not through state-to-state competition. That is, without the citizenry voting with their feet, the market mechanism necessary to foster true competition is missing.

Although pure competition may not drive the needed innovation, any race-to-the-top benefits that do exist will only be enhanced when local governments compete against each other. Also devolution to the local level does allow a variety of approaches to be tested—it increases the number of

<sup>212</sup> For example, Illinois is “actively involved in the National Environmental Performance Partnership System” and has a Performance Partnership Agreement with Region V of the E.P.A. A PLAN FOR ACHIEVING THE AGENCY’S GOALS AND OBJECTIVES IN REGION 5 V-2 (2004), available at <http://www.epa.gov/region5/about5/r5plan.htm>.

<sup>213</sup> See ILLINOIS EPA, NONHAZARDOUS SOLID WASTE MANAGEMENT AND LANDFILL CAPACITY IN ILLINOIS 3 (2003) (stating that IEPA has a delegation agreement with the City of Chicago that permits Chicago “to conduct many of the duties that would otherwise be performed by an Illinois EPA field office: investigating suspected violations of land pollution laws and reports of open dumping, and inspecting landfills, transfer stations and compost facilities permitted through the Agency’s Bureau of Land.”).

<sup>214</sup> *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

<sup>215</sup> Exec. Order No. 13,132, 64 Fed. Reg. 43,256 (Aug. 4, 1999).

<sup>216</sup> Zahren, *supra* note 184, at 392.

<sup>217</sup> See Daniel C. Esty, *Toward Optimal Environmental Governance*, 74 N.Y.U. L. REV. 1495, 1560 (1999) (stating that government-versus-government competition is unlikely to generate much improvement in the environmental field because “governments simply do not feel competitive pressure from other governments”).

laboratories running experiments. Successful approaches can be replicated by other communities, and successful innovation can spread through imitation and be further refined.

6. *Increased Capacity of the State and Local Government.*—Because states have been required to do much of the work in enforcing federal environmental policy, their capacity to regulate environmental quality has grown.<sup>218</sup> State governments have lead administrative responsibility in over three quarters of major federal environmental programs.<sup>219</sup> States have initiated as much as eighty percent of all federal enforcement actions.<sup>220</sup> “[T]he ultimate source of the states’ power is the fact that environmental programs cannot work without state cooperation.”<sup>221</sup> Delegation of implementation is often explicitly provided for in the legislation. Only in rare cases will Congress carve out specific areas where the federal government preempts any state interference.<sup>222</sup> Federal delegation has permitted the states to become more capable with time, a trend that is continuing:

State cleanup programs are developing and maturing. These efforts are evidenced by the buildup of staffs and infrastructure, as well as by the enactment of both statutory and regulatory frameworks. The sophistication of these programs can also be demonstrated by the simple day-to-day experience gained in directing cleanups.<sup>223</sup>

The same argument can be made with regard to local governments—particularly the governments of big cities. Chicago, for example, has been on the forefront of the brownfield issue in Illinois and the country. In 1994, the City of Chicago Department of Environment sponsored the first brownfield conference of its kind. The City’s Department of Environment has a staff of over 100 people and has been in existence for more than thirteen years. Chicago and other cities have taken the lead in other environmental areas, including smart growth, recycling, and green buildings.<sup>224</sup>

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<sup>218</sup> See Markell et al., *supra* note 194, at 1121–22 (“The states in recent years have done an enormous amount to increase capacity on their own to engage in environmental protection and other activities.”); A. Dan Tarlock, *Safe Drinking Water: A Federalism Perspective*, 21 WM. & MARY ENVTL. L. & POL’Y REV. 233, 247 (1997).

<sup>219</sup> Markus G. Puder & John A. Veil, *Overfiling in the Cooperative Federalism Balance: A Search Forever Incomplete and Incompletable*, 29 COLUM. J. ENVTL. L. 119, 142 (2004).

<sup>220</sup> *Id.* at 142–43.

<sup>221</sup> Arnold W. Reitze, Jr., *Federalism and the Inspection and Maintenance Program Under the Clean Air Act*, 27 PAC. L.J. 1461, 1463 (1996).

<sup>222</sup> See Markell et al., *supra* note 194, at 1115 (“The federal environmental laws are structured so that most enforcement is left to the states.”).

<sup>223</sup> GELTMAN, *supra* note 17, at 348.

<sup>224</sup> See, e.g., City of Seattle, Office of Sustainability and Environment Homepage, <http://www.seattle.gov/environment/> (last visited July 30, 2006) (presenting information on the city’s commitment to sustainable development and climate protection).

Chicago and other cities are building institutional capacity, in part through federal brownfield grants.<sup>225</sup> Chicago has received over \$800,000 over the past eight years to further brownfield redevelopment. The city has participated in taking over twenty-three properties through the SRP program since its inception in 1997.<sup>226</sup>

### B. Arguments in Support of Central Control

Though there are many arguments that highlight the benefits of decentralization, there are just as many that trumpet the benefits of centralization. In this section, arguments in support of centralized federal environmental regulation are summarized. While centralization has benefits in many circumstances, these benefits do not defeat the LCP concept. The arguments considered in turn are: the inefficiency of externalities; the feared race to the bottom that may occur when states or cities compete; concerns regarding regulatory capture of smaller units of government; the economies of scale present in a centralized system; and the moral arguments in support of uniform environmental quality.

1. *Externalities.*—Many pollution problems migrate across political boundaries. For example, a coal-fired power plant located in Illinois emits air pollution that contributes to acid rain over the Adirondacks; a municipal wastewater treatment plant in Chicago releases pollution that eventually flows into the Mississippi and contributes to the “dead zone” in the Gulf of Mexico.<sup>227</sup> If regulation were left to the states, the costs of these harms might not be internalized. States would not have to “bear the full cost of their decisions regarding the regulation of their pollution.”<sup>228</sup> Decisions regarding activity levels and pollution control that are made without this information will necessarily lead to inefficient results.

The examples given above are classic examples of negative externalities, where costs are shifted to non-decision makers. There are also multiple examples of positive externalities in the environmental arena. For

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<sup>225</sup> Since its inception in 1995, the EPA Brownfield Program has administered approximately \$400 million in funding to state and local communities. The Brownfield Program: Setting Change in Motion, EPA Pub. No. 500-F-02-148 (2002), available at <http://www.epa.gov/brownfields/pdf/bfglossy.pdf> (last visited July 30, 2006).

<sup>226</sup> The Illinois EPA VCP Database, available at <http://epadata.epa.state.il.us/land/srp/> (last visited July 30, 2006).

<sup>227</sup> Reversing of the Chicago River is a classic example of ignoring externalities. To end a series of epidemics caused by polluted water and to protect Lake Michigan as a source of clean drinking water, Chicago undertook a major engineering project to reverse the flow of the Chicago River. Through construction of the Sanitary and Ship Canal in 1900, the Chicago River was redirected to flow into the Illinois River and down to St. Louis. Missouri challenged this action in *Missouri v. Illinois*, charging that Chicago’s sewage was fouling drinking water in St. Louis. 200 U.S. 496 (1906). While the Supreme Court held that it had jurisdiction, it found that Missouri had failed to prove the sewage caused increases in illness or death. *Id.* at 525–26.

<sup>228</sup> Butler & Macey, *supra* note 183, at 42.

example, suppose an upstream municipality invests resources to improve a wastewater treatment facility. This would allow downstream users to relax their pollution control measures while still maintaining the same water quality in the river.

When regulation is generated by a political institution that includes all the parties that receive the benefit and the harm of a course of action, that body is in a better position to make efficient decisions. In the pollution context, such an institution must internalize the full harm of the created pollution. If pollution crosses jurisdictional boundaries—such as state boundaries—a centralized authority which eliminates these cross-jurisdictional externalities is in the best position to regulate that pollution.

Health-risk externalities from contaminated land are typically limited to groundwater contamination that can migrate off site. Mildly contaminated properties, however, do not generate groundwater contamination. Instead, the risks extend only to people physically on the site who might ingest or come into physical contact with the soil. Based strictly on externalities, it appears that contaminated land is best regulated on the local level. Two theories based on environmental externalities support this conclusion: the matching principle theory and the optimum environmental area theory.

*a. The matching principle.*—Professors Butler and Macey propose that environmental regulation should be the responsibility of the smallest level of government whose jurisdictional boundaries encompass all negative effects of the pollution—what they term the matching principle.<sup>229</sup> “[T]here is no need for the regulating jurisdiction to be larger than the regulated activity.”<sup>230</sup> Regulating at this level would allow the “optimal or efficient level of pollution without imposing unnecessary costs on productive economic activity.”<sup>231</sup> While this approach has been characterized by some as “a radical devolution of power to subnational governments,”<sup>232</sup> the authors argue the matching principle is consistent with a “long history [of] American constitutional law and theory.”<sup>233</sup>

In the context of contaminated land, Butler and Macey argue that because impacts are local, total regulatory control should, at a minimum, be shifted to the states.<sup>234</sup> They argue further that this regulation could be handled “under the common law of torts.”<sup>235</sup> This is the ultimate devolution of environmental regulation, and goes too far. The common law is ill-

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<sup>229</sup> *Id.* at 23.

<sup>230</sup> *Id.* at 25.

<sup>231</sup> *Id.*

<sup>232</sup> Rena I. Steinzor, *Devolution and the Public Health*, 24 HARV. ENVTL. L. REV. 351, 364 (2000).

<sup>233</sup> Butler & Macey, *supra* note 183, at 25–26.

<sup>234</sup> *Id.* at 64 (“There are several specific aspects of the government response to hazardous waste that could be improved by shifting authority to state governments.”).

<sup>235</sup> *Id.* at 63.

equipped to handle contaminated land problems. First, there is a standard of proof problem: agencies can consider all available data, and err on the side of protecting human health;<sup>236</sup> courts require strict causation and can only consider scientific evidence once it has satisfied the rigorous evidentiary standard imposed on expert testimony.<sup>237</sup> Second, federal and state environmental regulation developed in part to overcome the failure in the common law caused by “[s]tringent common law causation requirements [that] effectively exculpated most defendants.”<sup>238</sup>

*b. Optimum environmental area.*—Professor Esty has used a similar idea to develop his jurisdictional defining theory of “optimum environmental area” (“OEA”).<sup>239</sup> His approach bears some similarities to the matching principle. OEA is concerned with eliminating all temporal externalities: “[T]o be structurally sound and to deliver efficient (and fair) results, the regulatory calculus must include all of the potential cost bearers and beneficiaries of governmental intervention (or nonintervention).”<sup>240</sup> But, in an effort to optimize governance, OEA adds secondary considerations beyond this, seeking to “determin[e] if administrative efficiency or economic and psychological spillovers justify governmental action at another scale.”<sup>241</sup> Because “environmental protection involves problems at various levels,” the optimal response often involves “a multi-tier regulatory structure with appropriate entities at the local, state, federal, and international levels.”<sup>242</sup>

OEA considers externalities and the fear of regulatory capture,<sup>243</sup> and recognizes the benefit of gathering scientific data at the federal level.<sup>244</sup> Considering CERCLA, Esty noted:

It must not be forgotten that many decisions that are best made at the local or state level will benefit from some information, especially technical data, that is more efficiently gathered at a national level. In the Superfund context, for instance, the need for some understanding of how much harm can be anticipated from particular chemicals at various levels of concentration represents a scientific question susceptible to significant economies of scale. The technical dimension of optimal regulation and the need to ground all policy choices on a

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<sup>236</sup> Wendy E. Wagner, *Importing Daubert to Administrative Agencies through the Information Quality Act*, 12 J.L. & POL’Y 589, 590 (2004).

<sup>237</sup> *Id.* (discussing the standards set in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993)).

<sup>238</sup> *Id.* at 589.

<sup>239</sup> See Esty, *supra* note 217, at 1554.

<sup>240</sup> *Id.*

<sup>241</sup> *Id.*

<sup>242</sup> *Id.*

<sup>243</sup> Regulatory capture occurs when policymakers are disproportionately influenced by parties with concentrated interests in an issue. Buzbee, *supra* note 38, at 27 n.101. Esty calls these public choice failures. Esty, *supra* note 217, at 1515.

<sup>244</sup> Esty, *supra* note 217, at 1544–49.

sound analytic foundation argues for an ongoing federal role. The shape of this support for local and state decisionmaking should, however, be refined.<sup>245</sup>

The framework I have proposed would have the best of both worlds. Scientific research would still be the responsibility of the federal government, as it is now. LCPs would operate under the cleanup standards adopted by the state.<sup>246</sup>

2. *The Race to the Bottom.*—The cost of production is directly proportional to the level of environmental regulations that are in place. More stringent environmental standards consume more resources to implement than do laxer standards. If states compete to attract businesses to locate within the state, states may make strategic decisions to lower environmental standards in an effort to attract economic development. If this strategic behavior leads an individual state to lower environmental standards below what it would if it were acting in cooperation with all the competitors, there is a race to the bottom.<sup>247</sup> Professor Richard Stewart, who is widely credited as first articulating this concern in an environmental context,<sup>248</sup> describes the Prisoner's Dilemma as follows:

Given the mobility of industry and commerce, any individual state or community may rationally decline unilaterally to adopt high environmental standards that entail substantial costs for industry and obstacles to economic development for fear that the resulting environmental gains will be more than offset by movement of capital to other areas with lower standards. If each locality reasons in the same way, all will adopt lower standards of environmental quality than they would prefer if there were some binding mechanism that enabled them simultaneously to enact higher standards, thus eliminating the threatened loss of industry or development.<sup>249</sup>

Federal regulation can prevent this from occurring, because “federal agencies [can] restrain state and local tendencies to risk public health and welfare on short-sighted attempts to provide an attractive climate for business.”<sup>250</sup> This concern has become a major concern in today's global economy, as some fear companies will flee strict environmental regulation.

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<sup>245</sup> *Id.* at 1544–45.

<sup>246</sup> For a discussion on capture, see *infra* Part IV.B.3; for a discussion on economies of scale, see *infra* Part IV.B.4.

<sup>247</sup> Decades earlier, Justice Brandeis called this phenomenon a “race . . . of laxity.” *Louis K. Liggett Co. v. Lee*, 288 U.S. 517, 559 (1933) (Brandeis, J., dissenting).

<sup>248</sup> Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 610 n.150 (1996).

<sup>249</sup> Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1212 (1977).

<sup>250</sup> Babich, *supra* note 46, at 1537.

Though the race-to-the-bottom rationale has been vigorously disputed by some,<sup>251</sup> preventing a race to the bottom remains an important justification for centralized control. Despite the fact that arguments criticizing the soundness of the race-to-the-bottom theory have achieved much notoriety, many still argue that it remains a valid concern. Some argue, for example, that when strategic behavior is combined with imperfect information, inefficient decision-making may create a race to the bottom regardless of its theoretical validity.<sup>252</sup> Others point to the lack of more stringent standards being set by the states when the federal government has established a regulatory floor.<sup>253</sup> But this argument can cut both ways. There are a number of states that have enacted more stringent environmental standards.<sup>254</sup>

Experience has shown that a race to the bottom has never materialized between VCPs. Many states already have divergent bright-line standards for the permissible level of contaminants in brownfields, differing by more than a factor of ten,<sup>255</sup> and no migration from the less permissive to the more permissive states has ensued. Also, the nature of the problem does not lend itself to any form of race. Brownfield policies are not a central concern when companies choose where to locate. Property value may matter, but competitors are likely to offer direct subsidies—such as cleaning up a site with tax dollars—to attract companies, instead of adopting lax cleanup standards. Lax cleanup standards are too remote to be an effective lure.

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<sup>251</sup> For example, Professor Revesz argues that there is inadequate theoretical justification. Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210, 1242–44 (1992). Professor Revesz clearly shows that the race to the bottom concern is separate from any externality concern:

The distinction between the race-to-the-bottom and interstate externality rationales is critical for determining the appropriate scope of federal regulation. The concern over interstate externalities can be addressed by limiting the amount of pollution that can cross interstate borders, thereby "showing" upwind states the costs that they impose on downwind states. As long as the externality is eliminated, it would not matter that the upwind state chooses to have poor environmental quality—a central concern of the race-to-the-bottom advocates. Conversely, one could imagine a situation in which the environmental quality in the upwind state is very high, but in which there is nonetheless a serious externality problem because the sources in the states have tall stacks and are located near the interstate border, so that their effects are felt only in the downwind state.

*Id.* at 1222–23.

<sup>252</sup> Kirsten H. Engel, *State Environmental Standard-Setting: Is There a "Race" and Is It "To the Bottom"?*, 48 HASTINGS L.J. 271, 315–51 (1997).

<sup>253</sup> Wallace E. Oates, *The Allocation of Government Authority: Commentary on Environmental Federalism*, 83 VA. L. REV. 1321, 1326–27 (1997); Jerome M. Organ, *Limitations on State Agency Authority to Adopt Environmental Standards More Stringent Than Federal Standards: Policy Considerations and Interpretive Problems*, 54 MD. L. REV. 1373, 1375 (1995) (criticizing recent passage of state laws requiring state environmental standards to be no more stringent than federal standards).

<sup>254</sup> Revesz, *supra* note 251, at 1228 n.65 (citing areas where state standards are more stringent than federal standards).

<sup>255</sup> For example, the residential cleanup standard for benzo(a)pyrene in Pennsylvania is 2.5 mg/kg. 25 PA. CODE § 250.708 app. A, tbl. 3 (2004). In Ohio, the standard is 0.062 mg/kg. EPA Region 9's Preliminary Remediation Goals, *available at* <http://www.epa.gov/region09/waste/sfund/prg/index> (last visited Mar. 1, 2005). In Illinois, the standard is 0.09 mg/kg. Tiered Approach to Corrective Action, ILL. ADMIN. CODE tit. 35, § 742 app. B, tbl. A.

3. *Regulatory Capture*.—Regulatory capture occurs when policy-makers are disproportionately influenced by parties with concentrated interests in an issue.<sup>256</sup> Capture creates policies that are skewed to benefit the parties that exerted influence over the process.<sup>257</sup> In the environmental context, “[r]egulated entities are expected to achieve this disproportionate influence over officials because they likely will be fewer in number and hence have lower costs of acting collectively, and greater monetary interests at stake, than will the usually more dispersed beneficiaries of a political initiative.”<sup>258</sup>

When the cost of compliance with a regulation is concentrated and the benefits of the regulation are diffuse, those bearing the cost of compliance may have greater incentive to attempt to change the regulation.<sup>259</sup> Compliance with environmental regulations costs money. As one commentator noted, “it does cost something (actually a lot) to clean the environment; if it did not, we would not have pollution problems.”<sup>260</sup> For example, one estimate puts the cost of completing all CERCLA cleanups at \$750 billion.<sup>261</sup> With this kind of money in the balance, industry interest in CERCLA is clear; industry may find it much cheaper to hire lobbyists and influence the political process in an effort to minimize the costs of compliance. The counterbalance to this effort must come from the regulators themselves or from organized environmental groups.

In this context, many argue that a larger, centralized governing body is better situated to resist regulatory capture. This argument is based on three primary assumptions: the larger the jurisdiction, the less influence any one actor can command; environmental groups can better organize and amass resources on a larger stage; and finally, federal decision-making is more transparent and more susceptible to judicial review.<sup>262</sup> States are often viewed as less powerful than industry:

Very often . . . the states simply cannot take on a major industry. The industry can throw enormous resources and essentially wear the state down to the point where a twenty-four year old kid straight out of school who is tasked with fighting the thirty industry lawyers simply cannot muster the attention and will to take them on. The imbalance between power and between technical and scientific expertise and resources is so enormous that it’s a real impediment to really delegating things very often at the state level.<sup>263</sup>

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<sup>256</sup> Buzbee, *supra* note 38, at 27 n.101.

<sup>257</sup> *Id.*

<sup>258</sup> *Id.* (citation omitted).

<sup>259</sup> See Daniel A. Farber, *Politics and Procedures in Environmental Law*, 8 J. L. ECON. & ORG. 59, 60–61 (1992).

<sup>260</sup> Krier, *supra* note 205, at 1229.

<sup>261</sup> *United States v. A & N Cleaners and Launderers, Inc.*, 854 F. Supp. 229, 236 (S.D.N.Y. 1994).

<sup>262</sup> See, e.g., Markell, *supra* note 194, at 1123–24 (comment of Erik Olson).

<sup>263</sup> *Id.* at 1124.

Regulatory capture is particularly problematic in the environmental arena because it is difficult to perceive what level of environmental quality is actually being provided by government and whether that level is sufficient.<sup>264</sup> “Simply put, the average citizen knows if he or she is getting adequate roads or schools, and even has a sense of whether the government regulation of banks seems appropriate. In many environmental circumstances, however, no comparable basis for judging the adequacy of outcomes exists.”<sup>265</sup>

Following the rationale that the bigger a governmental body, the harder it is to capture, it appears that the states and municipalities would be more susceptible to special-interest influence than would the federal government. However, in practice this does not always appear to be true. First, the federal government certainly is not free of the influence of special interests. For example, under CERCLA, the oil and gas industry continues to benefit from the exclusion of petroleum products from CERCLA liability.<sup>266</sup> Similarly, in the most recent CERCLA amendment, Congress gave large concessions to small business owners.<sup>267</sup> Second, under cooperative federalism, VCPs, and thus LCPs, can only go so far in relaxing standards. At a minimum, federal standards must be met,<sup>268</sup> and states often adopt more stringent requirements. The state of Illinois, for example, has adopted the most stringent scientifically-based standards supported by the EPA.<sup>269</sup> Third, despite the fact that enforcement activities are likely subject to concentrated capture pressures, many municipal governments already play a vital role in enforcement. In Illinois, for example, the IEPA already delegates all inspection responsibilities within Chicago to the city government.<sup>270</sup> The potential for local capture, such as corruption or bribery, is apparently not great enough to prohibit this arrangement.

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<sup>264</sup> Esty, *supra* note 217, at 1548–49.

<sup>265</sup> *Id.*

<sup>266</sup> Oil is specifically excluded from CERCLA. 42 U.S.C. § 9601(14) (2000).

<sup>267</sup> Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118, 115 Stat. 2356 (2002).

<sup>268</sup> See PERCIVAL ET AL., *supra* note 26, at 101–02 (discussing the structure of cooperative federalism).

<sup>269</sup> Illinois has adopted EPA Soil Screening Guidance standards. See discussion *supra* note 157. According to the EPA, these standards do “not establish binding rules.” SOIL SCREENING GUIDANCE, *supra* note 5, at ii. “Alternative approaches for screening may be found to be more appropriate at specific sites. . . . [These standards] do not constitute rulemaking. These policies are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States government.” *Id.*

<sup>270</sup> See ILLINOIS EPA, *supra* note 213, at 3 (stating that IEPA has a delegation agreement with the City of Chicago that permits Chicago “to conduct many of the duties that would otherwise be performed by an Illinois EPA field office: investigating suspected violations of land pollution laws and reports of open dumping, and inspecting landfills, transfer stations and compost facilities permitted through the Agency’s Bureau of Land.”).

The overarching threat of CERCLA liability would serve as a check on any gain from local capture in an LCP. Assume, for example, that Chicago cuts some corners to make brownfields more financially attractive to industry. Industry, wise to the perils of CERCLA, would investigate the property, regardless of local assurances, before taking title. If the cleanup standards used to remediate the property were too lax, the business would shy away for fear of federal enforcement action or future liability.

There are, admittedly, potential conflicts of interest present in LCPs. Municipalities often gain title to brownfield property because of tax delinquency. There is also a potential for municipalities to relax cleanup standards in an effort to redevelop this property more quickly. However, there are numerous instances where municipalities must follow their own statutes. For example, municipal buildings must comply with the building code. While there is a conflict, it is nothing new to local governments.

4. *Economies of Scale.*—Environmental policy choices are often predicated on scientific understandings of the risks imposed. Generation of scientific knowledge—knowledge that has general application—is more efficient when research is orchestrated and funded on a national scale. Basic research is quite expensive and quite likely exceeds the funding available from any one state, let alone a local government. Also, “[i]t is more efficient if research and development is undertaken by one large, well equipped agency which is staffed with trained persons rather than many small agencies which may duplicate each other’s efforts.”<sup>271</sup> This type of economy of scale has led to the consolidation of the pharmaceutical industry in the last several years.<sup>272</sup> Although the federal government has more resources, some argue that Congress is unwilling to devote them to environmental issues, and thus any benefits attributable to economy of scale are unrealized.<sup>273</sup> “[I]n light of Congress’s unwillingness to provide funds to solve environmental problems, it is illogical to assert that federal intervention is necessary because the states’ funding of their environmental agencies is deficient.”<sup>274</sup> Additionally, much of the basic scientific research that would most benefit from economies of scale has already been completed by the EPA, the European Union, and the World Health Organizations. An LCP will not have to conduct pure scientific research, but can instead apply the existing body of knowledge to its particular situation.

As for economies of scale in implementing environmental legislation, a bigger bureaucracy does not necessarily mean a more efficient bureaucracy.

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<sup>271</sup> Kimber, *supra* note 207, at 1660.

<sup>272</sup> Gardiner Harris, *Where are all the new drugs?*, N.Y. TIMES, Oct. 5, 2003, at BU1 (stating that the merger forming GlaxoSmithKline was motivated by the idea that it would increase research efficiency).

<sup>273</sup> Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1200–01 (1977).

<sup>274</sup> Butler & Macey, *supra* note 183, at 48.

LCPs will likely be more cost-effective. Travel expenses, for one, would be reduced. While over a quarter of the 2628 sites enrolled in the SRP are located in Chicago, project managers are still located in Springfield and must travel approximately 200 miles to inspect a Chicago site.<sup>275</sup> In addition, LCP regulators would be local. LCPs would also be aware of the local conditions, and only require one set of standards tailored to meet them. Every site would be in the same geographic area, have approximately the same geology, involve similar contamination problems and remediation schemes, and involve the same set of professionals. All of these factors would likely make the cost of implementation of an LCP lower than existing VCPs.

5. *National Moral Standards.*—Some argue that federal standards are necessary to ensure a morally required minimum of environmental protection, and “that all citizens have an equal entitlement to environmental quality.”<sup>276</sup> Perhaps centralization is the best method to ensure this “national moral imperative.”<sup>277</sup>

Centralization and standardization is also supported by the notion that we have an inherent right to move about the country without fear of losing a base level of environmental quality.<sup>278</sup> Moral concerns might also contribute to “psychological externalities.”<sup>279</sup> In some cases, people not directly tied physically to the outcome of a policy decision still might have a psychological stake.<sup>280</sup> “Who, for example, holds legitimate interest vis-à-vis the Grand Canyon?”<sup>281</sup>

It is difficult to analyze the implications of an LCP on the current moral landscape. The question does not seem to be one that has a clear moral answer. One commentator describes it in the following terms:

What is an acceptable level of risk? This is a mixed scientific-value judgment where there are no correct answers. The debate is about orders of magnitude of enhanced or reduced risk and takes place under conditions of extreme uncertainty. The debate is usually about extremely high and abstract risk reduc-

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<sup>275</sup> This information came from an analysis of the Illinois EPA database of VCP sites, which is available at <http://epadata.epa.state.il.us/land/srp/>.

<sup>276</sup> Tarlock, *supra* note 218, at 250.

<sup>277</sup> Paul S. Weiland, *Federal and State Preemption of Environmental Law: A Critical Analysis*, 24 HARV. ENVTL. L. REV. 237, 248 (2000); Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L. J. 1196, 1264–65 (1977) (stating that collective moral growth that comes from facing environmental problems is indispensable to society as a whole).

<sup>278</sup> See Markell et al., *supra* 194, at 1097 (comment of Shelley Metzenbaum).

<sup>279</sup> Esty, *supra* note 248, at 594–95.

<sup>280</sup> *Id.*; see also *Sierra Club v. Morton*, 405 U.S. 727, 734 (1972) (stating that damage to aesthetic well-being is sufficient to establish a cognizable interest for standing); *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 562–63 (1992) (stating that desire to observe an animal species is a cognizable interest for standing).

<sup>281</sup> Esty, *supra* note 248, at 595.

tion levels rather than taking obvious and reasonably priced steps to avoid exposure to known risks.<sup>282</sup>

Pragmatically, LCPs would operate very much like VCPs and CERCLA. For example, they would use the same risk-based cleanup objectives and the same institutional controls as the VCPs they operate under. LCP cleanups would be no less safe than the state- or federally-led cleanups. In the end, it would depend on individual critiques of each implemented innovation.

A strong moral case can be made to support addressing the failures of CERCLA and the state programs affirmatively. In Chicago, for example, background or average contamination is in excess of IEPA health standards.<sup>283</sup> A significant percentage of Chicago land is not “safe” per state environmental standards. While the Illinois VCP has been more effective than CERCLA in addressing the public health threat posed by contaminated land,<sup>284</sup> it cannot possibly address the full extent of the problem. The status quo—an extremely limited response that only reaches a small fraction of the total problem—has serious moral failings.

## V. CONCLUSION

When CERCLA was first passed, it was intended to do one thing: clean up dangerous contaminated sites. Since 1980, we have learned that there is a spectrum of contaminated sites. In the early 1990s, states created VCPs in an effort to address fears of CERCLA liability that hung over industrial land. These programs are good at doing what they were intended to do: foster remediation of less contaminated industrial land. However, they are not well suited to promote safe use of less contaminated land, land without an identified industrial past. An LCP would fill this gap.

This paper has laid out the initial framework to devolve some legislative control over contaminated land cleanups to the local level. A review of the history and evolution of CERCLA and state programs suggest that this is a next logical step. A careful investigation of the innovative features of state programs revealed that they often depend on local information and local land use control. These innovations will not be sustainable without local government cooperation. Promoting LCPs would help make sure that happens. And after considering many arguments for and against centralized environmental regulation, LCPs were found to be equally as defensible as the state programs, and in some cases fared better. The goal of CERCLA and the many VCPs is to encourage as much safe use of contaminated land

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<sup>282</sup> Tarlock, *supra* note 218, at 253.

<sup>283</sup> HYDROCARBONS STUDY, *supra* note 8.

<sup>284</sup> This claim is based on the number of properties that have been cleaned up pursuant to each program. In Chicago, there has never been a CERCLA cleanup, while under the SRP, 767 sites have been enrolled in the Illinois VCP. See Illinois Environmental Protection Agency, Site Remediation Program Database, available at <http://epadata.epa.state.il.us/land/srp/> (last visited Jan. 21, 2004).

as possible. LCPs would add yet another regulatory tool to allow that to happen.