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Superfund: It's Time for Repeal After a Decade of Failure

*Robert W. McGee**

I.

INTRODUCTION

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA),¹ also known as Superfund, was passed more than a decade ago.² After that much time, there is more than enough evidence to evaluate whether Superfund has been effective in achieving its purpose: cleaning the environment.³ The evidence suggests that Superfund not only did not accomplish its task but it also might have made things worse in a number of ways. This Essay, in part II, enumerates the problems associated with Superfund. Part III argues that Superfund is beyond repair and should be repealed — the sooner the better. It then continues by suggesting what should replace Superfund.

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1. Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified at 42 U.S.C. §§ 9601-9657 (1982)).

2. CERCLA was amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. No. 99-499, 100 Stat. 1613, to remedy some of the law's deficiencies. However, the amendments might have made things worse rather than better. The amendments have been roundly criticized. See Milton R. Copulos, *Why the Superfund Pork Barrel Deserves a Veto*, HERITAGE FOUND. EXECUTIVE MEMORANDUM NO. 136, Oct. 9, 1986; Milton R. Copulos, *Superfund Extension: How Much Is Enough?* HERITAGE FOUND. BACKGROUNDER NO. 420, Apr. 3, 1985 [hereinafter Copulos, *Superfund Extension*]; Milton R. Copulos, *The Super Problems With Superfund Extension*, HERITAGE FOUND. EXECUTIVE MEMORANDUM NO. 64, Sept. 16, 1984.

3. CERCLA was criticized as being structurally unsound even before it was passed. See Louis J. Cordia, *"Superfund" Legislation*, HERITAGE FOUND. ISSUE BULLETIN NO. 64, Sept. 17, 1980.

II.

WHAT'S WRONG WITH SUPERFUND?

There are a number of problems with Superfund: the National Priority List's system to rank hazardous waste sites is flawed, the response time to clean up hazardous waste sites is too long, the hazardous waste at the waste sites is not treated, but rather, is moved from one site to another, and, most importantly, the costs of the program are excessive because of the constant repetition of feasibility studies and litigation. Originally intended to deal with abandoned hazardous waste sites,⁴ Superfund's grasp now extends to active factories, municipal landfills and military facilities.⁵ Superfund requires that the Environmental Protection Agency (EPA) create a National Priority List (NPL),⁶ which lists the hazardous waste sites most in need of attention.⁷ The decision of what sites are included on the NPL is based on politics rather than economics. Superfund, in its original form, required the EPA to include at least 400 sites on the NPL — a number

4. The impetus for the Superfund legislation was Love Canal, an abandoned hazardous waste site that was formerly owned by Hooker Chemical and sold to the city of Niagara Falls, New York, with a deed restriction prohibiting future owners from digging up the land. Hooker knew of the potential danger to health that development of the property could cause and warned government officials. However, the government officials ignored the warnings and allowed construction to take place which triggered leakage of hazardous chemicals. As a result, thousands of residents had to abandon their homes. For more on the Love Canal incident, see generally ADELIN LEVINE, *LOVE CANAL: SCIENCE, POLITICS AND PEOPLE* (1982); Richard L. Stroup, *Chemophobia and Activist Environmental Antidotes: Is the Cure More Deadly Than the Disease?*, in *ECONOMICS AND THE ENVIRONMENT: A RECONCILIATION* 192-213 (Walter Block ed., 1990); Eric Zuesse, *Love Canal: The Truth Seeps Out*, 12 REASON 16 (1981).

5. See James Bovard, *The Real Superfund Scandal*, POL'Y ANALYSIS (Cato Inst., Wash., D.C.), Aug. 14, 1987, at 2. Potentially responsible persons are also liable under another statute dealing with hazardous waste, the Resource Conservation and Recovery Act (RCRA), which was passed in 1976 and later amended. Pub. L. No. 94-580 (codified at 42 U.S.C. §§ 6901-6992 (1988)). For a discussion of RCRA, see Roger W. Anderson, *The Resource Conservation and Recovery Act of 1976: Closing the Gap*, 3 WIS. L. REV. 635 (1978).

6. 48 Fed. Reg. 40,658-60 (1983). As of the end of 1990, there were 33,834 sites identified as potentially hazardous. See Barnaby Feder, *In the Clutches of the Superfund Mess*, N.Y. TIMES, June 16, 1991, at C1, C6. There are now about 1300 sites on the list. See Claudia Maclachlan & Marianne Lavalle, *Cities Scurry*, NAT'L L.J., Sept. 2, 1991, at 22 [hereinafter *Cities Scurry*]. For more on the National Priority List, see Ragna Henrichs, *Superfund NPL: the Listing Process*, 63 ST. JOHN'S L. REV. 717 (Summer 1989).

7. The statute's avowed purpose is not a reality. In theory, the NPL lists the most hazardous waste sites, but in reality, many of the listed sites are less hazardous than other sites that are not on the list. This fact is discussed in more detail *infra* text accompanying notes 12-15.

roughly equivalent to the number of Congressional districts.⁸ The statute required that at least one hazardous waste site be listed for each state, even if there were no dangerous sites in the state.⁹ As a result, some sites on the NPL pose little or no health threat,¹⁰ creating a false impression that the sites are hazardous. In particular instances, then, the NPL falsely allows members of Congress to point to the list to show that they are doing something to clean up the environment in their state.¹¹

The system used to rank sites on the NPL is arbitrary and has little or nothing to do with the extent of the health risk a site

8. Bruce Yandle points out this curious relationship in Bruce Yandle, *Taxation, Political Action, and Superfund*, 8 CATO J. 751, 761 (1989); accord Bovard, *supra* note 5, at 3. The NPL now includes 1275 sites. U.S. GENERAL ACCOUNTING OFFICE, SUPERFUND: CLEANUPS NEARING COMPLETION INDICATE FUTURE CHALLENGES, GAO/RCED-93-188 (Sept. 1, 1993). The list is expected to have 2000 sites by the year 2000. U.S. GENERAL ACCOUNTING OFFICE, SUPERFUND: CURRENT PROGRESS AND ISSUES NEEDING FURTHER ATTENTION, GAO/T-RCED-92-56, at 2 (June 11, 1992).

9. This requirement had the effect of generating excess demand for congressional services. Yandle, *supra* note 8, at 761.

10. Perhaps it is worth pointing out that the health threat from hazardous waste sites is minimal. The EPA estimates that even without improvements in the disposal of hazardous wastes, the aggregate risk from all operating landfills in the United States is one cancer death every 23 years. See Lynn Scarlett, *A Consumer's Guide to Environmental Myths and Realities*, POL'Y REP. No. 99 (Nat'l Center for Pol'y Analysis, Dallas, Tex.), Sept. 1991, at 24 (statistic reported by the Office of Information and Regulatory Affairs, Office of Management and Budget).

11. Thus, Superfund fits the public choice theory of rent-seeking. See Yandle, *supra* note 8. Yandle examines environmental taxes from a public choice perspective. He reviews an old controversy — why most user fee systems are unstable — inspired by Pigou's 1920 admonition regarding social cost and user charges, a controversy that was joined by Turvey, Buchanan and Stubblebine, and Coase. See ARTHUR C. PIGOU, *THE ECONOMICS OF WELFARE* (1920); James Buchanan & William Stubblebine, *Externality*, 29 *ECONOMICA* 371 (1962); R.H. Coase, *The Problem of Social Cost*, 3 *J.L. & ECON.* 1 (1960); Ralph Turvey, *On Divergences Between Social Cost and Private Cost*, 30 *ECONOMICA* 309 (1963).

User fees are politically unattractive and seldom used. They are unattractive because (1) environmentalists regard selling pollution rights as immoral, (2) industrialists are cost minimizers and have nothing to gain by paying more taxes, although they can gain from standards that serve to restrict entry and raise costs to competitors, and (3) political agents gain by making regulations that benefit environmentalists and industrialists. See Yandle, *supra* note 8, at 757-59. For more on this point, see PAUL DOWNING, *ENVIRONMENTAL ECONOMICS AND POLICY* 211-12 (1984); James Buchanan & Gordon Tullock, *Polluters' Profit and Political Response: Direct Controls Versus Taxes*, 65 *AM. ECON. REV.* 139 (1975).

Rent-seeking may be defined as seeking special privileges or protection from government or getting others to pay for one's benefits. For a general discussion of rent-seeking, see *THE POLITICAL ECONOMY OF RENT-SEEKING* (Charles Rowley et al. eds., 1988).

poses.¹² Ranking is determined by scores which, in turn, are based almost entirely on the amount of information available about a particular site and on how many people live near the site, rather than the degree of danger a site poses.¹³ In addition, the score is based on the most dangerous substance at the site rather than a composite of all substances, which would be a more appropriate measure.¹⁴ Therefore, a site that has thousands of barrels of industrial waste could qualify for a place on the list if it has just one or two barrels containing PCBs. One site, a low-income neighborhood in Boston, made the list because the dirt around the houses had a high lead content, which came from lead-based paint that had chipped off the houses over the years.¹⁵

In addition to the NPL's flawed ranking system, Superfund's response time is inadequate. In its first seven years, less than twenty hazardous waste sites were cleaned up,¹⁶ and many of those are still leaking.¹⁷ As of mid-1991, less than seventy sites had been cleaned up.¹⁸ Even after the EPA declares that a site

12. Bovard, *supra* note 5, at 3; Yandle, *supra* note 8, at 761-62.

13. *Reauthorization of Superfund: Hearings Before the House Comm. on Energy and Commerce, Subcomm. on Oversight and Investigation*, 99th Cong., 1st Sess. 338 (1985) (testimony of John Paul, American Mining Congress).

14. OFFICE OF TECHNOLOGY ASSESSMENT, *SUPERFUND STRATEGY* 105 (1985).

15. Matthew L. Wald, *Lead Tainted Soil to Be Removed in Boston*, N.Y. TIMES, June 23, 1987, at A14.

16. Bovard, *supra* note 5, at 1.

17. *Id.*

18. Feder, *supra* note 6, at 1, 6. One commentator puts the number of sites cleaned up at 64. See Michael Weisskopf, *Administrative Costs Drain 'Superfund'; Few Toxic Waste Sites Actually Cleaned Up*, WASH. POST, June 19, 1991, at A1. In testimony before the Subcommittee on Investigations and Oversight, Committee on Public Works and Transportation, Peter F. Guerrero, Associate Director, Environmental Protection Issues, Resources, Community, and Economic Development Division, stated:

One of the most frequently criticized aspects of Superfund is the slow pace of its cleanups. Sites that have entered the Superfund pipeline have become clogged in a lengthy study and evaluation process, and few have emerged from the end of the pipeline. . . .

After 11 years, cleanups have been finished at only 63 sites, or 5 percent, of the current 1,245 Superfund sites. Cleanup work is underway at an additional 353 sites. The remaining 829 sites have progressed no further than the remedial study or design phase of the process, which means they are still years away from being cleaned up. . . .

A major cause of slow cleanup progress is the extended time EPA takes to choose and design a cleanup remedy. This pre-construction phase has gotten longer over time. Site studies once expected to take 2 years are now lasting 4 years or more. Remedial designs that were done in 18 months are now taking nearly 3 years. Add to these time frames at least another 3 years to complete the cleanup action, and the average cleanup now requires more than 10 years.

contains hazardous waste, it often takes two to three years to start the cleanup because of the lengthy process of site studies and development of remediation plans.¹⁹ In some cases, the delay between listing and cleaning a site is as long as seven years.²⁰ Because of the bureaucracy involved in cleaning up an NPL site,²¹ the EPA prefers to clean up sites that are not on the NPL,²² even though they may be less hazardous than sites that are on the list. As a result, more than half of the sites where cleanup has begun are not on the NPL.²³ Thus, the EPA squanders precious resources when it does not clean up the most hazardous waste sites first.²⁴

In addition to cleaning up sites that are less hazardous, the hazardous wastes that are removed are not being made nonhaz-

See U.S. GENERAL ACCOUNTING OFFICE, SUPERFUND: ISSUES THAT NEED TO BE ADDRESSED BEFORE THE PROGRAM'S NEXT REAUTHORIZATION, GAO/T-RCED-92-15, at 3, 4 (Oct. 29, 1991) [hereinafter SUPERFUND: ISSUES]. By 1992, one year later, only an additional 17 sites, or 6 percent of the total 1275 Superfund sites then existing, had been cleaned up. U.S. GENERAL ACCOUNTING OFFICE, SUPERFUND: CURRENT PROGRESS AND ISSUES NEEDING FURTHER ATTENTION, GAO/T-RCED-92-56, at 7-8 (June 11, 1992). Cleanup was underway at 357 sites, the remaining 838 sites had progressed no further than the remedial study or design phase of the process, and the average cleanup time was still expected to take ten years. *Id.*

19. U.S. GENERAL ACCOUNTING OFFICE, CLEARER EPA SUPERFUND PROGRAM POLICIES SHOULD IMPROVE CLEANUP EFFORTS 65 (1985).

20. Feder, *supra* note 6, at 1. One EPA official has estimated that a cleanup could take as long as ten years from start to finish. See U.S. GENERAL ACCOUNTING OFFICE, SUPERFUND: ISSUES, *supra* note 18, at 3, 4.

21. One problem is the shortage of qualified lab analysts and hydrologists, and an excessive number of lawyers who are involved in Superfund litigation. See Robert E. Taylor, *Toxic Waste Cleanup Is Expensive and Slow and Tough to Achieve*, WALL ST. J., May 16, 1985, at 20.

22. Bovard, *supra* note 5, at 13.

23. Sometimes, a state prefers not to report all its hazardous wastes to the EPA because placing a site on the list will delay the cleanup. See Bovard, *supra* note 5, at 13.

24. Estimating the average cost of a cleanup, or even the projected cost of a particular cleanup, is extremely difficult. Over the course of time, the cost figure can expand dramatically, because cleanup costs are open-ended — there does not seem to be a limit. The EPA once estimated that the average cost of a cleanup is almost \$30 million. Some estimates for cleaning up the entire country are in the neighborhood of \$750 billion. See Feder, *supra* note 6, at 6.

One estimate places the cost of cleaning up various categories of polluted sites as follows: 4000 Superfund abandoned sites, \$80-120 billion; 5000 to 10,000 federally owned sites, \$75-250 billion; 2000 to 5000 corrective actions on active private sites, \$12-100 billion; 350,000 to 400,000 leaking underground storage tanks, \$32 billion; 6000 to 12,000 state law mandated cleanups, \$3 billion to more than \$120 billion; 24 inactive uranium tailings, \$1.3 billion; 22,300 abandoned mines, \$55 billion. It should be pointed out that other antipollution regulations presently cost \$115 billion a year, according to the EPA. See Peter Passell, *Experts Question Staggering Costs of Toxic Cleanups*, N.Y. TIMES, Sept. 1, 1991, at A1, A28.

ardous, but are merely being transported from one place to another.²⁵ For example, the EPA hauls waste from New England to Alabama,²⁶ and it has shipped waste from Michigan to Idaho.²⁷ Many of the sites to which these wastes are shipped also leak or pose a threat of leaking.²⁸ Therefore, it is not unreasonable to expect that some of these disposal sites also will have to be cleaned up in the future.²⁹

Much of the Superfund budget is being consumed by repetitive feasibility studies, administrative costs, and litigation rather than actual cleanup expenditures.³⁰ On occasion, feasibility studies have been repeated three or four times before a cleanup starts.³¹ Almost a third of the money EPA spends on "cleanup" goes toward the payment of the contractors' administrative expenses rather than cleanups themselves.³² In recent years, the amount of contractors' overhead costs that are passed on to the EPA has skyrocketed. In some cases, it costs twice as much to administer a cleanup project than to actually clean up the site.³³ Addition-

25. Taylor, *supra* note 21, at 1. One frequently heard myth is that we are running out of space for landfills. This is simply not the case. "All the garbage Americans will produce in the next thousand years would fit in an area 44 miles square and about 120 feet deep. This amounts to less than one-half of 1 percent of the surface area of the continental United States." *Fact or Fiction?*, EXECUTIVE ALERT (National Center for Policy Analysis, Dallas, Tex.), Sept./Oct. 1991, at 6; *accord* Scarlett, *supra* note 10.

26. Taylor, *supra* note 21, at 1.

27. *Id.* at 20. In one case the EPA had transported 16,000 cubic feet of dirt from Massachusetts to dump sites in Ohio and New York at a cost of \$4.5 million, when it determined that the end of the cleanup was nowhere in sight. In effect, the EPA was making a hole in Massachusetts and a hill in New York.

28. Bovard, *supra* note 5, at 1.

29. One government report points out that material involved in Superfund cleanups is transferred to locations most of which also pose serious health threats. *Id.* (citing *Reauthorization of Superfund: Hearings Before the House Committee on Energy and Commerce, Subcommittee on Oversight and Investigation*, 99th Cong., 1st Sess. 8 (1985)).

30. See Bovard, *supra* note 5, at 12 (about 75% of Superfund's budget is spent on repetitive studies and litigation rather than cleanups). Another commentator states that the cost of enforcement actions — excluding the cost of conducting studies — is between 24% and 44% of cleanup costs. See Roger J. Marzulla, *Superfund '91 — Congress' Chance to Clean Up Its Act*, RISK MGMT., Apr. 1990, at 32, 36.

31. Bovard, *supra* note 5, at 13.

32. Weisskopf, *supra* note 18, at A1.

33. *Id.* See U.S. GENERAL ACCOUNTING OFFICE, SUPERFUND: EPA HAS NOT CORRECTED LONG-STANDING CONTRACT MANAGEMENT PROBLEMS, GAO/RCED-92-45 (Oct. 1991). The General Accounting Office has singled out 16 areas of federal government activity as being vulnerable to fraud, waste and abuse. Superfund made the list. Even after several GAO audits, the problems have not been corrected.

ally, the EPA continues to hire contractors that have done shoddy work in the past, even paying them bonuses in some cases.³⁴

The cost of many cleanups is excessive.³⁵ In one case, for example, the EPA decided to dismantle a house in Pennsylvania that contained above-average levels of radon (which probably did not pose a health threat). It budgeted \$3.5 million to buy the home, dismantle it, and ship 300 cubic yards of contaminated waste to the state of Washington. But for a mere \$114,000, the radon health risk could have been removed by resorting to other methods.³⁶

The EPA sometimes resorts to overkill to solve minor hazardous waste problems at great expense. Perhaps its greatest fiasco was Times Beach, Missouri. In 1982, the government told the 2232 residents of Times Beach to evacuate their homes because the soil contained traces of dioxin.³⁷ The Centers for Disease Control (CDC) had previously concluded that ingesting any substance containing at least one part per billion of dioxin posed a serious health threat, and the dioxin levels at Times Beach were higher than that.³⁸ The EPA declared the town a toxic waste site,

34. Bovard, *supra* note 5, at 13.

35. Passell, *supra* note 24, at A1, A28. For example, in the cleanup of an abandoned factory in Missouri, it would cost \$71,000 to isolate the harmful chemicals from humans. Another method involving cleaning up residues and burying the remaining traces under a blanket of clay could also protect the public at a cost of \$3.7 million. However, federal and state laws require work to be done that would cost between \$13.6 and \$41.5 million. The EPA favored spending \$13.6 million to remove soil and other materials, burn the most dangerous debris, and bury the rest. The \$41.5 million solution involved removing 14,000 tons of soil and other materials and burning it at another location. Why should someone be forced to spend \$13.6 million to \$41.5 million when \$71,000 would make the place safe?

36. Bovard, *supra* note 5, at 6-7. It should be pointed out that the dirt would be just as contaminated in Washington as it was in Pennsylvania. The EPA did not clean up the mess, it merely transported the dirt to a new location — at a cost of more than \$3 million.

37. Reed Irvine, *The Dioxin Un-Scare — Where's the Press?*, WALL ST. J., Aug. 6, 1991, at A16. This letter points out that the health threat posed by dioxin was vastly overrated. Apparently, the health threat of PCBs has also been vastly exaggerated. See Irving T. Salmeen, *As Toxic Scares Die, Regulations Live On*, WALL ST. J., Sept. 13, 1991, at A11, (reporting on an article written by Philip Abelson in the July 26, 1991 issue of SCIENCE discussing new research showing PCBs to be far less dangerous than thought). For further discussion of the Times Beach case, see also Richard Stroup, *Chemophobia and Activist Environmental Antidotes: Is the Cure More Deadly Than the Disease?*, in ECONOMICS AND THE ENVIRONMENT: A RECONCILIATION, 193-213 (Walter Block ed., 1990).

38. Irvine, *supra* note 37, at A16.

bought up all the property for \$33 million, and prepared to clean it up.³⁹

In 1990, after years of costly litigation, Syntex, the company allegedly responsible for the dioxin contamination signed a consent decree promising to pay for the cleanup, estimated to cost as much as \$200 million.⁴⁰ Then a bombshell struck. Shortly after demolition of the town's buildings had begun, the CDC official who had previously recommended the evacuation announced that the CDC's study was based on faulty research methodology and that the low incidence of dioxin did *not* pose a significant health threat — certainly not enough to tear down a town or evacuate its inhabitants.⁴¹

Astonishingly, this announcement did not put an immediate halt to the demolition of Times Beach. Rather, the CDC official concluded that the cleanup must proceed anyway, "because we've got the public so riled up."⁴² In other words, the company that was responsible for this "nonhazard" had to continue to foot the bill for an unnecessary cleanup just because some government officials wanted to avoid a public backlash for needlessly evicting more than 2000 people from their homes.

It is questionable, furthermore, whether the federal government should even have become involved in cleaning up many of the toxic waste sites that have been placed on the NPL. The vast majority of NPL sites are confined within a single state.⁴³ A General Accounting Office study involving groundwater problems in fifteen states did not find a single case involving in-

39. *Id.*

40. *Id.*

41. *Id.*

42. *Id.*

43. As of October, 1991, New Jersey had the most NPL sites (109), followed by Pennsylvania (95), California (88) and New York (83). U.S. ENVIRONMENTAL PROTECTION AGENCY, SUPERFUND: FOCUSING ON THE NATION AT LARGE 11-12 (Sept. 1991). Douglas W. McNiel et al., *Superfund Taxes and Expenditures: Regional Redistributions*, 18 REV. REGIONAL STUD. 4-9 (Winter 1988), point out that while pollution at sites tends to be localized the money that Superfund collects from industry for cleanups tends to travel. Most of Superfund's revenue (measured by collections per thousand people) comes from the South Central region of the United States (including Texas, Oklahoma and Louisiana), where petroleum and chemical companies are concentrated, but most expenditures are in the North Central, New England and Mid-Atlantic states, which seems to be inequitable. *Id.* at 7. For a treatise on the ethics of redistribution, see BERTRAND DE JOUVENEL, *THE ETHICS OF REDISTRIBUTION* (1951).

terstate groundwater problems.⁴⁴ Also, the states have ample resources⁴⁵ to address pollution problems within their territories.⁴⁶ Thus, there is no need for the federal government to become involved.⁴⁷ There are also some constitutional issues that could be addressed, such as compensation for takings,⁴⁸ applying liability retroactively,⁴⁹ and inspecting sites without a warrant.⁵⁰

One of the biggest problems with Superfund is the litigation explosion that has resulted from using a joint and several approach to liability.⁵¹ The potential liability waste generators face

44. Bovard, *supra*, note 5 at 9 (citing U.S. GENERAL ACCOUNTING OFFICE, REPORT TO THE CHAIRMAN, SUBCOMM. ON COMMERCE, TRANSPORTATION AND TOURISM, COMM. ON ENERGY AND COMMERCE, HOUSE OF REPRESENTATIVES: FEDERAL AND STATE EFFORTS TO PROTECT GROUND WATER, GAO/RCED-84-80, at iv (Feb. 21, 1984)).

45. States tax the same people the federal government taxes, so there is no justification for asserting that the federal government has more resources to handle the problem. No government has any resources of its own. Whatever resources it has, it has to take from someone.

46. For a discussion of the role states can play, see Beverly Conerton & Leroy Paddock, *The Need for a Principled Expansion of the Role of Local Government in Environmental Enforcement*, 16 WM. MITCHELL L. REV. 949 (1990); Peter Mitchell & Evan Brown, *Local Government: A Social Resource for Environmental Control*, 8 ENVTL. & PLAN. L.J. 41 (1991); Stephen M. Reck, *The Expanding Environmental Consciousness of Local Government: Municipalities That Have Banned Styrofoam and the Legal Consequences*, 11 U. BRIDGEPORT L. REV. 127 (1990); James P. Young, *Expanding State Initiation and Enforcement Under Superfund*, 57 U. CHI. L. REV. 985 (1990); Richard B. Bates, Comment, *Thinking Globally and Acting Locally: St. Paul's Plastic Packaging Ordinance*, 11 HAMLINE J. PUB. L. & POL'Y 151 (1990).

47. Perhaps the main reason why the states have not protested the federal involvement is that the EPA pays for a large percentage of cleanup bills.

48. Robert Meltz, *Federal Regulation of the Environment and the Taking Issue*, 37 FED. B. NEWS & J. 95 (1990).

49. George C. Freeman, Jr., *Inappropriate and Unconstitutional Retroactive Application of Superfund Liability*, 42 BUS. L. 215 (1986).

50. Richard F. Cauley, *Constitutionality of Warrantless Environmental Inspections*, 15 COLUM. J. ENVTL. L. 83 (1990).

51. For discussions of the effect joint and several liability has had in the area of hazardous waste, see Feder, *supra* note 6; Robert J. Fowler, *A Comparative Analysis of Liability for Environmental Damage*, 7 ENVTL. & PLAN. L.J. 271 (1990); James F. Manji, *Hazardous Wastes: Cleaning Up Your Act*, AUTOMATION 34 (May 1990); Joan T. Schmit, *Historical Development and Use of Joint and Several Liability*, 42 CPCU J. 144 (1989); Lawrence S. Coven, Comment, *Liability Under CERCLA: After a Decade of Delegation, the Time is Ripe for Legislative Reform*, 17 OHIO N.U. L. REV. 165 (1990).

Joint and several liability, plus the fact that just about anyone can be sued, has led to an insurance crisis. Insurance companies cannot confidently or accurately determine the degree of risk for a particular firm, because the firm may be found liable for another firm's actions. Yandle, *supra* note 8, at 761. For more on this point, see Martin T. Katzman, *CHEMICAL CATASTROPHES: REGULATING ENVIRONMENTAL RISK THROUGH POLLUTION LIABILITY INSURANCE* (1985). See also *AIU Ins. Co. v.*

can be grossly disproportionate to the harm they might have caused. Theoretically, a company that contributes a single barrel of hazardous waste to a dump site can be held liable for the entire cost of the cleanup. Over the past decade, the EPA has used joint and several liability as a club, pursuing big companies with deep pockets, while often ignoring the waste generators who are most responsible for the waste problems.

For example, in one Missouri case, the EPA chose to sue just four of the almost 300 waste generators that used a particular waste site, even though it had a list of more than 100 offenders from which to choose.⁵² One of the four defendants, IBM, was responsible for less than one percent of the total waste.⁵³ In order to retrieve part of its expenses for being found liable, IBM and the other three defendants had to sue 175 waste generators and several government agencies that had used the site,⁵⁴ a practice not uncommon in joint and several liability cases. In the case of Helen Kramer Landfill in New Jersey, the federal government sued twenty-five companies and the state of New Jersey also sued the same companies plus twenty-five others.⁵⁵ Some of the companies that were sued in turn sued 239 other waste generators that had contributed to the waste problem.⁵⁶ Furthermore, nearly all of them are suing their insurance companies for reimbursement.⁵⁷ It is not surprising, then, that many insurance companies refuse to cover Superfund situations, because the

Superior Court, 799 P.2d 1253 (Cal. 1990); Eugene R. Anderson et al., *Liability Insurance Coverage for Pollution Claims*, 59 Miss. L.J. 699 (1989); Ralf Buckley, *Framework for Environmental Insurance*, 7 ENVTL. & PLAN. L.J. 229 (1990); Joan W. Gillespie, *Insurers' Liability Under CERCLA: Shifting Hazardous Waste Site Cleanup Costs to the Insurance Industry*, 31 WASH U. J. URB. & CONTEMP. L. 259 (1987); Thomas M. Hamilton & Eric L. Routman, *Cleaning Up America: Superfund and Its Impact on the Insurance Industry*, 41 CPCU J. 172 (1988); Jonathan M. Moses & Milo Geyelin, *Michigan Backs Insurers on Pollution Issue*, WALL ST. J., Aug. 28, 1991, at B4; Carol E. Reese & Joseph T. Burke, *AIU v. Superior Court: the California Supreme Court Decides the First of Many Environmental Insurance Coverage Disputes*, 9 CAL. REAL PROP. J. 43-4 (1991); Howell A. Burkhalter, Comment, *Liability for CERCLA Cleanup Costs — Are Insurers the Victims of Judicial Activism?*, 26 WAKE FOREST L. REV. 221 (1991); Debi L. Davis, Comment, *Insureds Versus Insurers: Litigating Comprehensive General Liability Policy Coverage in the CERCLA Arena — A Losing Battle for Both Sides*, 43 Sw. L.J. 969 (1990).

52. Bovard, *supra* note 5, at 10 (citing *Superfund Improvement Act of 1985: Hearings Before the Comm. on the Judiciary*, 99th Cong., 1st Sess. 253 (1985)).

53. *Id.*

54. *Id.*

55. Feder, *supra* note 6, at 1.

56. *Id.*

57. *Id.*

potential liability is unlimited and insurers cannot calculate premiums with any degree of confidence.

Superfund's joint and several liability exacerbates harm to the environment. Companies that generate hazardous waste often hesitate to clean it up, because they face potential unlimited liability. Joint and several liability dampens the incentive for waste generators to find new production and waste treatment techniques. In many cases, dredging up dormant chemicals may make a problem worse, because the cleanup spreads toxic waste that previously was stationary.⁵⁸

Superfund is unfair because it allocates the cost of cleanup to the wrong parties. The persons who have caused the problem should be the ones who pay for it. That is the only fair solution. But, under Superfund, the hazardous waste generators are not the ones who pay — at least not in proportion to the pollution they have caused. Heavy polluters often pay the same as — and sometimes less than — light polluters.⁵⁹

In addition, the present system taxes producers rather than polluters.⁶⁰ An equitable system would tax those companies that cause a great deal of pollution at a higher rate than those that pollute only a little or not at all.⁶¹ Such a user-fee approach is more equitable because payments are based on the extent to which a particular generator has contributed to the problem.⁶² But Superfund does not employ a user-fee approach. The 1986

58. Taylor, *supra* note 21, at 20.

59. See *supra* text accompanying notes 52-54.

60. Murray L. Weidenbaum, *An Economic Approach to Hazardous Wastes*, Address to the Annual Chemical Progress Week Luncheon (Mar. 17, 1987), OP 61 (Center for the Study of American Business, Washington U., St. Louis, Mo.), Mar. 1987, at 10. All "producers" in an industry are forced to pay, even though some of them do not pollute, or pollute very little compared to other companies in the same industry. The EPA assesses penalties, which the companies then pay. See *id.*

61. The author is not advocating the use of taxation or user fees to solve the problem of pollution but merely recognizes that such approaches are more market oriented than the command system that is the alternative favored by most environmentalists and members of Congress. It should be kept in mind that pollution is a violation of property rights. If property rights were better defined and protected by law, pollution would be much less of a problem. But government does not protect property rights when it allows polluters to trespass on the property of others. However, a detailed discussion of this point must await another time.

62. However, it should be pointed out that taxing or fining a polluter increases the cost of polluting; it does not always reduce the amount of pollution generated or prevent the polluter from polluting in the first place. If the penalty for polluting is too low, polluters will not be deterred. See U.S. GENERAL ACCOUNTING OFFICE, ENVIRONMENTAL ENFORCEMENT: PENALTIES MAY NOT RECOVER ECONOMIC BENEFITS GAINED BY VIOLATORS, GAO/RCED-91-166, at 8-9 (June 1991).

amendment to Superfund levied a tax on the chemical and oil industries. Taxpayers also pick up part of the tab. Companies in these industries pay regardless of their culpability. And other polluters, including companies in other industries, nonprofit organizations like hospitals and universities, municipalities and government agencies, often pay nothing, even though they contribute to the hazardous waste problem.⁶³ The Department of Defense alone generates more hazardous waste than the largest five chemical companies combined, yet it often is not asked to pay a dime for cleaning up the wastes it has generated.⁶⁴

Another problem with Superfund is that the EPA interprets the law so that anyone can be sued who might have contributed in any way to the hazardous waste problem,⁶⁵ including a bank that lent money to a polluter.⁶⁶ The community of potentially

63. See *supra* text accompanying notes 52-54.

64. A 1986 General Accounting Office study showed that of 72 federal facilities inspected, 33 had violated EPA requirements and 22 had been cited for serious violations. Weidenbaum, *supra* note 60, at 12. Some violators had been out of compliance for several years. *Id.* at 13.

The EPA also is biased in the way it applies joint and several liability to government polluters. While the EPA almost always uses joint and several liability, because this approach makes it easier to collect, the EPA sometimes abandons this approach when the federal government is involved. See Bovard, *supra* note 5, at 11 (citing *Superfund Improvement Act of 1985: Hearings Before the Senate Committee on the Judiciary*, 99th Cong., 1st Sess. (1985)) (noting that in one case the EPA allowed the Air Force to pay for the percentage of waste it contributed to a waste site rather than holding it liable for the entire cleanup).

65. Anne D. Webber, *Misery Loves Company: Spreading the Costs of CERCLA Cleanup*, 42 VAND. L. REV. 1469 (1989).

66. This fact is causing lenders major problems. The EPA has gone after lenders who have foreclosed on the property of hazardous waste generators. The lenders are sometimes found liable depending upon the facts and circumstances. In 1990, Congressman John L. LaFalce introduced legislation (H.R. 4494) that would relieve lenders of liability in situations where the lender has foreclosed. Senator Jake Garn introduced similar legislation in the Senate. However, these bills were never passed. Mr. LaFalce introduced another bill in 1991 (H.R. 1450) aimed at relieving lenders, trustees, and some others of liability for acquiring hazardous waste property, and Senator Garn has introduced similar legislation which is presently incorporated into a Senate banking bill. See John J. LaFalce, *Lending Liability Legislation*, MORTGAGE BANKING, July 1990, at 77, 78. At least two other bills aimed at limiting Superfund lender liability were referred to House committees and were never passed: the Superfund Liability Clarification Act (H.R. 1643), introduced on March 22, 1991; and the Superfund Equitable Liability and Improved Cleanup Act (H.R. 5609), introduced by Rep. Owens on July 9, 1992.

For a discussion of lender liability, see Steven B. Bass, *The Impact of the 1986 Superfund Amendments and Reauthorization Act on the Commercial Lending Industry: A Critical Assessment*, 41 U. MIAMI L. REV. 879 (1987); David R. Berz & Peter M. Gillon, *Lender Liability Under CERCLA: In Search of a New Deep Pocket*, 108 BANKING L.J. 4 (1991); Joel R. Burcat, *Environmental Liability of Creditors: Open*

responsible persons is expansive. It is not uncommon for the EPA to sue shareholders,⁶⁷ corporate officers,⁶⁸ parent and successor corporations,⁶⁹ lessors and lessees,⁷⁰ landowners,⁷¹ execu-

Season on Banks, Creditors, and Other Deep Pockets, 103 BANKING L.J. 509 (1986); John J. LaFalce, *Lending Liability Legislation*, MORTGAGE BANKING, July 1990, at 77, 78; Margaret Murphy, *The Impact of "Superfund" and Other Environmental Statutes on Commercial Lending and Investment Activities*, 41 BUS. L. 1133 (1986); Philip J. Schworer & Catherine M. White, *Environmental Problems and Their Effect on Lending Institutions*, 18 N. KY. L. REV. 175 (1991); Timothy R. Zinnecker, *Lender Liability Under CERCLA and the Fleeting Protection of the Secured Creditor Exemption*, 44 SW. L.J. 1447 (1991).

For some leading cases in this area see, *In re Bergsøe Metal Corp.*, 910 F.2d 668 (9th Cir. 1990)(creditor must be actively involved in management to be liable); *United States v. Fleet Factors Corp.*, 901 F.2d 1550 (11th Cir. 1990)(lender liable because it had ability to control or influence borrower's operations); *Guidice v. BGF Electroplating & Mfg. Co.*, 732 F. Supp. 556 (W.D. Pa. 1989); *United States v. Maryland Bank & Trust Co.*, 632 F. Supp. 573 (D. Md. 1986)(bank that foreclosed and held property for more than four years was liable); *United States v. Mirabile*, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20,997 (E.D. Pa. 1985)(no liability where bank foreclosed on hazardous waste site, sold it four months later, and held title merely to protect its interest).

67. See *United States Northeastern Pharmaceutical & Chem. Co.*, 810 F.2d 726 (8th Cir. 1986); *New York v. Shore Realty Corp.*, 759 F.2d 1032 (2d Cir. 1985); *Vermont v. Staco, Inc.*, 684 F. Supp. 822 (D. Vt. 1988); Elizabeth A.G. Geltman, *Shareholder Liability for Improper Disposal of Hazardous Waste*, 95 COM. L.J. 385 (1990); Nell Minow & Michael Deal, *Corporations, Shareholders and the Environmental Agenda*, 12 CARDOZO L. REV. 1359 (1991); Todd W. Rallison, Note, *The Threat to Investment in the Hazardous Waste Industry: An Analysis of Individual and Corporate Shareholder Liability Under CERCLA*, 1987 UTAH L. REV. 585 (1987).

68. See *Northeastern Pharmaceutical*, 810 F.2d at 726; *Shore Realty*, 759 F.2d at 1032; Dean M. Cordiano & Deborah J. Blood, *Individual Liability for Environmental Law Violations*, 64 CONN. B.J. 214 (1990); Jeffrey M. Gaba, *Interpreting Section 107(a)(3) of CERCLA: When Has a Person "Arranged for Disposal?"* 44 SW. L.J. 1313 (1991); Andrew M. Goldberg, *Corporate Officer Liability for Federal Environmental Statute Violations*, 18 B.C. ENVTL. AFF. L. REV. 357 (1991); Thomas J. Niekamp, Comment, *Individual Liability of Corporate Officers, Directors, and Shareholders for Violations of Environmental Laws*, 14 OHIO N.U. L. REV. 379 (1987).

69. See *Smith Land & Improvement Corp. v. Celotex Corp.*, 851 F.2d 86 (3d Cir. 1988); *Idaho v. Bunker Hill Co.* 635 F. Supp. 665 (D. Idaho 1986); *United States v. Kayser-Roth Corp.*, 724 F. Supp. 15 (D.R.I. 1989); *Missouri v. Independent Petrochemical Corp.*, 610 F. Supp. 4 (E.D. Mo. 1985); *United States v. Shell Oil Co.*, 605 F. Supp. 1064 (D. Colo. 1985); Frederick W. Addison, III & Elizabeth E. Mack, *Creating an Environmental Ethic in Corporate America: The Big Stick of Jail Time*, 44 SW. L.J. 1427 (1991); Charles E. Dadswell, Jr., *The Corporate Entity: Is There Life After CERCLA?*, 7 COOLEY L. REV. 463 (1990); Daniel H. Squire et al., *Corporate Successor Liability Under CERCLA: Who's Next?*, 43 SW. L.J. 887 (1990).

70. See *Burlington N. R.R. Co. v. Dant & Russell, Inc.*, (*In re Dant & Russell, Inc.*), 853 F.2d 700 (9th Cir. 1988); *United States v. Monsanto Co.*, 858 F.2d 160 (4th Cir. 1988), *cert. denied*, 490 U.S. 1106 (1989); Angela J. Somers, *CERCLA and the Bankrupt Lessee: Dant & Russell Rejects Lessor's Priority Claim*, 6 REAL EST. FIN., Summer 1989, at 26.

tors and trustees,⁷² and bankrupt estates, regardless of their connection with a site. In one case, the EPA sued a scrap recycler just because its name was in a landfill owner's address book.⁷³

Aside from the adverse effects of employing joint and several liability,⁷⁴ it is questionable whether the Superfund law ever authorized its use.⁷⁵ The language of the law and its legislative history do not clearly indicate Congress' intent that liability should be joint and several.⁷⁶ The EPA has been using the joint and several liability approach because it is the easy way out and courts have been letting them get away with it.

Superfund harms American competitiveness abroad. Excessive and costly litigation adds billions of dollars in costs to American industry. These costs either shrink the bottom line or are passed on to consumers in the form of higher prices.⁷⁷ The European approach is very different. The European Community's lia-

71. See *Shore Realty*, 759 F.2d at 1032 (property owner strictly liable for release or threat of release); *United States v. Argent Corp.*, 21 Env't Rep. Cas. (BNA) 1354 (D.N.M. 1984) (landlord liable for tenant cleanup); Sandra E. Marcus, *The Price of Innocence: Landowner Liability Under CERCLA and SARA*, 6 TEMP. ENVTL. L. & TECH. J. 117 (1987); Note, *The Innocent Too Shall Pay: EPA's Settlement Policy Under CERCLA for De Minimis Landowner Liability*, 51 U. PITT. L. REV. 727 (1990).

72. See *Midlantic Nat'l Bank v. New Jersey Dep't Env'tl. Protection*, 474 U.S. 517 (1986); *Ohio v. Kovacs*, 469 U.S. 274 (1985); *Penn Terra, Ltd. v. Department of Env'tl. Resources*, 733 F.2d 267 (1984); Joseph L. Cosetti & Jeffrey M. Friedman, *Midlantic National Bank, Kovacs and Penn Terra: The Bankruptcy Code and State Environmental Law — Perceived Conflicts and Options for the Trustee and State Environmental Agencies*, 7 J.L. & COM. 65 (1987).

73. Feder, *supra* note 6, at 6.

74. Another adverse effect of joint and several liability is that it raises barriers to entry into an industry by raising its costs of doing business. With joint and several liability, the government, in effect, is turning competitive industries into non-competitive cartels in which large firms have the advantage because they are the only ones who can afford to self-insure. See U.S. GENERAL ACCOUNTING OFFICE, *HAZARDOUS WASTE: ISSUES SURROUNDING INSURANCE AVAILABILITY*, GAO/RCED-88-20, at 34-35 (Oct. 1987); see also Yandle, *supra* note 8, at 761. Economic regulation often raises barriers to entry and limits competition, thus creating a cartel effect that favors large, presently existing firms. For a discussion of this point as applied to environmental regulation, see Michael Maloney & Robert McCormick, *A Positive Theory of Environmental Quality Regulation*, 25 J.L. & ECON. 99 (1982).

75. See *Liability Under Cercla: After a Decade of Delegation, the Time is Ripe for Legislative Reform*, 17 OHIO N.U. L. REV. 165, 192-93 (1990).

76. See *id.*

77. Costly litigation is causing much damage to small and marginally profitable companies — those who can least afford it. According to one estimate, Superfund also is probably costing jobs — 30,000 a year in the chemical industry alone, and perhaps one million in related industries. See Copulos, *Superfund Extension*, *supra* note 2, at 9.

bility system, based on the "polluter should pay" principle, is more predictable and clearly defined.⁷⁸ Punitive damages are practically unheard of, and insurance companies are not afraid to issue policies to cover risk, because they know what the risks are. This predictability reduces companies' production costs, since they can buy coverage at reasonable rates. Furthermore, this certainty allows companies to allocate their resources to their most productive uses, something American companies cannot do under the present regime. The long-term effect of these differences between the American and European approaches is bound to weigh heavily against American business.

The proposals that have been made to reform Superfund are not adequate and may even make problems worse.⁷⁹ Some insurance companies are proposing a quasi no-fault system⁸⁰ to be administered by the federal government and paid for by industry. This quasi no-fault system would be unfair.⁸¹ Rather than forc-

78. For a comparison of the U.S. and EEC approaches, see George L. Freeman, Jr. & Kyle E. McLarrow, *The Proposed European Community Directive on Civil Liability for Waste — The Implications for U.S. Superfund Reauthorization in 1991*, 46 BUS. LAW. 1 (1990).

For discussions of the European approach, see Bryan Harris, *EEC Laws on Environmental Protection*, 137 NEW L.J. 1058 (1987); Richard D. Irving & Dennis C. Benamati, *Selected Readings on Environmental Law and Policy in the Soviet Union, Great Britain and the European Economic Community*, 4 CONN. J. INT'L L. 501 (1989); Owen Lomas, *Environmental Protection, Economic Conflict and the European Community*, 33 MCGILL L.J. 506 (1988); Dirk Vandermeersch, *The Single European Act and the Environmental Policy of the European Economic Community*, 12 EUR. L. REV. 407 (1987); Antonio Vercher, *The Use of Criminal Law for the Protection of the Environment in Europe: Council of Europe Resolution (77) 28*, 10 NW. J. INT'L L. & BUS. 442 (1990); A.J. Waite, *An English Perspective of U.S. and U.K. Environmental Regulation*, 5 NAT. RESOURCES & ENV'T. 33 (Summer 1990).

79. Some have called for using a "club" approach — the view that Superfund could be made to work if the EPA would get tougher and sue more persons faster. See Clean Sites Inc., *Making Superfund Work: Recommendations to Improve Program Implementation 5-16* (Jan. 1989) (unpublished manuscript, on file with the *UCLA Journal of Environmental Law and Policy*).

80. See AMERICAN INTERNATIONAL GROUP ET AL., *PUTTING CLEANUP FIRST: THE NATIONAL ENVIRONMENTAL TRUST FUND* (June 1991).

81. This plan would have all businesses that contribute waste pay for old site cleanups without regard to the extent of their contribution to the problem. Another inequity of this plan is that businesses are responsible for only part of the hazardous waste problem. Various governmental agencies and nonprofit organizations have also contributed a substantial percentage of the total hazardous waste that needs to be cleaned up, yet they would contribute nothing under this plan. AMERICAN INTERNATIONAL GROUP ET AL., *supra* note 80, at 4. The breakdown of potentially responsible persons (PRPs) that are responsible for waste is as follows: manufacturing, 38.9%; municipal landfills, 16.54%; industrial landfills, 6.46%; recyclers, 8.49%; Departments of Energy and Defense, 5.04%; mining, 2.03%; and others, 22.5%. AMERICAN INTERNATIONAL GROUP ET AL., *SUPERFUND LIABILITY: WHO ARE THE*

ing the perpetrators of hazardous waste to pay the full cost, a no-fault plan would spread the cost to polluters and non-polluters alike, in effect subsidizing hazardous waste perpetrators at the expense of clean companies and the general public. With no penalty for continuing to generate hazardous waste, companies would have no incentive to "clean up their act" or find more efficient ways to process their waste products.⁸² Also, arguably, tripling the EPA budget — which this plan proposes — merely triples the amount of money available for the EPA to waste.⁸³

III.

WHAT SHOULD TAKE SUPERFUND'S PLACE?

In addressing the nation's hazardous waste problem, Congress and the state legislatures should seriously consider a free market approach⁸⁴ firmly based on property rights. Although groundwater pollution is perhaps the worst result of hazardous waste,⁸⁵ the concept of property rights in groundwater has been practically abandoned.⁸⁶ Yet the property rights approach has been

PRPs? (1991) (citing U.S. ENVIRONMENTAL PROTECTION AGENCY, SUPERFUND: FOCUSING ON THE NATION AT LARGE 8 (Sept. 1990)).

82. The proposed quasi no-fault system would tax businesses to pay only for the cleanup of old sites. Polluters of new sites would still be liable under the Superfund rules — rules that are causing a number of problems, as mentioned above. AMERICAN INTERNATIONAL GROUP ET AL., *supra* note 80, at 6.

83. See Roger J. Marzulla, *Superfund '91 — Congress' Chance to Clean Up Its Act*, RISK MGMT., Apr. 1990, at 32, 36; see also *supra* notes 31-39 and accompanying text.

84. For discussions of various market approaches to environmental problems, see Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law: The Democratic Case for Market Incentives*, 13 COLUM. J. ENVTL. L. 171 (1988); Terry L. Anderson & Donald R. Leal, *Going with the Flow: Marketing Instream Flows and Groundwater*, 13 COLUM. J. ENVTL. L. 317 (1988); Robert W. Hahn & Robert N. Stavins, *Incentive-Based Environmental Regulation: A New Idea from an Old Idea?*, 18 ECOLOGY L.Q. 1 (1991); Joel A. Mintz, *Economic Reform of Environmental Protection: A Brief Comment on a Recent Debate*, 15 HARV. ENVTL. L. REV. 149 (1991); Paul R. Portney, *Reforming Environmental Regulation: Three Modest Proposals*, 13 COLUM. J. ENVTL. L. 201 (1988); Clifford S. Russell, *Economic Incentives in the Management of Hazardous Wastes*, 13 COLUM. J. ENVTL. L. 257 (1988); Richard B. Stewart, *Controlling Environmental Risks Through Economic Incentives*, 13 COLUM. J. ENVTL. L. 153 (1988); Zach Willey & Tom Graff, *Federal Water Policy in the United States — An Agenda for Economic and Environmental Reform*, 13 COLUM. J. ENVTL. L. 325 (1988).

85. Contaminated groundwater was one of the main reasons Congress established Superfund, yet the EPA allocates a smaller portion of its budget to locations where the danger of groundwater pollution is high than where it is low. See Yandle, *supra* note 8, at 761-62; Harold C. Barnett, *The Allocation of Superfund, 1981-1983*, 61 LAND ECON. 255 (1985).

86. See Yandle, *supra* note 8, at 761-62; Barnett, *supra* note 85, at 255.

successful in the past in establishing both oil and water rights.⁸⁷ Local governments could grant groundwater deeds that give private owners interests in groundwater. After these property rights are established, owners will be able to defend their rights in groundwater just like other kinds of property, making polluters liable for damages. Once groundwater is regarded as a privately-owned asset rather than a commonly-owned free good, generators of hazardous waste will be much more hesitant to dump their wastes onto someone's property.⁸⁸

If Congress should be involved at all, it should aim to repeal any laws⁸⁹ that make it more difficult to file individual and citizen suits⁹⁰ against polluters. Perhaps Congress also should pass laws that make it easier for individuals and businesses to sue anyone who has infringed their property rights. Once private parties have solid standing to sue for property damage, federal, state or local governments will not need to be involved because individuals and businesses will be capable of protecting their own interests. What individuals and businesses need are clearly defined property rights so that courts will know what interests are being infringed. The common-law nuisance suit is ideal for defending against environmental degradation of private property, but nuisance law will not be useful until property rights are clearly defined and individuals are permitted by law to file suits for environmental infringement of those property rights.

The property rights approach to environmental problems has been used in the western United States with a great deal of suc-

87. See Yandle, *supra* note 8, at 761-62; Barnett, *supra* note 85, at 255.

88. For a market approach to groundwater rights, see Anderson & Leal, *supra* note 84, at 317.

89. Many federal, state, and local laws interfere with market activity without any corresponding general benefit. One of the main premises underlying the "public choice" school of economics is that many laws are passed to further the agendas of special interest groups at the expense of the general public. Willey and Graff suggest that laws that facilitate the voluntary exchange of water rights promote efficient allocation and use of water. See Willey & Graff, *supra* note 84, at 349-51. Various other laws that restrict the trading of property rights could also be repealed with beneficial consequences. For a discussion of how federal government policy is actually harming the environment, see Anne Sholtz & Kenneth Chilton, *Acid Rain and Tradeable Permits: How Congress Hobbles the Power of the Marketplace*, OP 83 (Center for the Study of Am. Business, Washington U., St. Louis, Mo.), May 1990, at 1.

90. For a discussion of the citizen suit solution, see Barry Breen, *Citizen Suits for Natural Resource Damages: Closing a Gap in Federal Environmental Law*, 24 WAKE FOREST L. REV. 851 (1989); Michael S. Greve, *The Private Enforcement of Environmental Law*, 65 TULANE L. REV. 339 (1990).

cess.⁹¹ If a similar approach were taken to groundwater pollution,⁹² there would be little need for federal involvement or for laws like Superfund, which has been a total failure. The environment would benefit, and taxpayers and businesses would not have to continue paying billions of dollars for a program that has failed to do what it set out to do — improve the environment.

A decade has passed since Superfund became law. The 1986 amendments, while intended to fix some of Superfund's problems, have probably made things worse.⁹³ Superfund has failed, and the law is too structurally flawed to be repaired by further amendments. Superfund does more damage with each passing month. Outright repeal is called for — the sooner the better. After Superfund is repealed, Congress should take a hard look at what it wants to accomplish, then determine how best that should be done.

91. For discussion of a property rights approach to environmentalism, see Terry L. Anderson, *Free Market Environmentalism: Rethinking the Way We Think*, CIS POL'Y REP. Aug./Sept. 1988, at 19; Terry L. Anderson & Donald R. Leal, *Inside Our Outdoor Policy*, POL'Y ANALYSIS (Cato Inst., Wash., D.C.), SEPT. 29, 1988, AT 1; ECONOMICS AND THE ENVIRONMENT: A RECONCILIATION, *supra* note 4; Walter Block, *Dumping on the Economy: Why Artificial Prices Encourage Waste*, J. PRICING MGMT. 21 (1991); Weidenbaum, *supra* note 60.

92. For a discussion of how a property rights approach might successfully be applied to groundwater, see TERRY L. ANDERSON, WATER CRISIS: ENDING THE POLICY DROUGHT, 93-110 (1983); Vernon L. Smith, *Water Deeds: A Proposed Solution to the Water Valuation Problem*, 26 ARIZ. REV. 7 (1977).

93. Almost half of the sites that treat, store, or dispose of hazardous waste decided to shut down since the enactment of Superfund (either because they could not or would not meet the federal hazardous waste requirements) — which has caused a number of economic dislocations. U.S. GENERAL ACCOUNTING OFFICE, HAZARDOUS WASTE: LIMITED PROGRESS IN CLOSING AND CLEANING UP CONTAMINATED FACILITIES, GAO/RCED-91-79, at 2 (May 1991).