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Theories of State Recovery under CERCLA for Injuries to the Environment

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THEORIES OF STATE RECOVERY UNDER CERCLA FOR INJURIES TO THE ENVIRONMENT

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)[1] provides for liability, cleanup,[2] emergency response,[3] and compensation for the release[4] of hazardous substances[5] that injure natural resources.[6] Passed in the last days of the 96th congressional session,[7] the statute is designed to fill in existing gaps in the Resource Conservation and Recovery Act of 1976 (RCRA).[8] Congress thus created a comprehensive scheme to remedy natural resource injuries.

In addition to its extensive provisions for cleanup and emergency re-

1. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, §§ 1–308, 94 Stat. 2767 (codified at 42 U.S.C. §§ 9601–57 (1982)).

2. "Cleanup" is defined in two ways: "removal" and "remedial action." "Removal" is designed to protect against immediate environmental hazards and includes "cleanup or removal of released hazardous substances," actions to monitor, assess and evaluate the release (or threatened release) of hazardous substances, the "disposal of removed material," or other actions necessary to "prevent, minimize or mitigate damage to the public health or welfare or to the environment." 42 U.S.C. § 9601(23) (1982). "Remedial action" connotes a permanent solution to environmental contamination. *Id.* § 9601(24). It includes, for example, storage, confinement, perimeter protection using dikes, trenches, or ditches, clay cover, diversion, destruction, segregation of reactive wastes, dredging, excavation, repair or replacement of leaking containers, and provision of alternative water supplies. *Id.*

3. The President is authorized to respond to an actual (or threatened) release of a pollutant or contaminant that presents an "imminent and substantial danger" to the public health or welfare. *Id.* § 9604(a)(1).

4. "Release" includes the entire range of events that can cause hazardous substances to invade the environment: spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment. *Id.* § 9601(22).

5. "Hazardous substances" are defined by reference to the Federal Water Pollution Control Act, the Solid Waste Disposal Act, the Clean Air Act, and the Toxic Substances Control Act. *Id.* § 9601 (14). This designation encompasses at least 700 chemicals. Breen, *Natural Resource Recovery by Federal Agencies—A Roadmap to Avoid Losing Causes of Action*, 13 ENVTL. L. REP. (ENVTL. L. INST.) 10324, 10324–25 (1983).

6. "Natural resources" include land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States or any state or local government. 42 U.S.C. § 9601(16) (1982).

7. The statute is an admittedly watered-down version of several predecessor House and Senate proposals. For an examination of CERCLA's legislative origins, see generally Eckhardt, *The Unfinished Business of Hazardous Waste Control*, 33 BAYLOR L. REV. 253 (1981). *See also* Note, *The Comprehensive Environmental Response, Compensation and Liability Act of 1980: Is Joint and Several Liability the Answer to Superfund?*, 18 NEW ENG. L. REV. 109, 120 n.57 (1982–83).

8. Resource Conservation and Recovery Act of 1976, Pub. L. No. 94-580, §§ 1001–8007, 90 Stat. 2795 (1976) (codified at 42 U.S.C. §§ 6901–87 (1982)). RCRA provided a comprehensive regulatory program for the treatment, storage and disposal of toxic waste. Its effect, however, was prospective only. It did not comprehend the many problems arising from past hazardous waste disposal. The CERCLA statute goes beyond RCRA in that its provisions are addressed at releases from abandoned and inactive waste sites, which are "perhaps the most serious environmental problem facing the Nation today." Note, *supra* note 7, at 112 n.22.

sponse, CERCLA created a cause of action for the United States, or any state, to recover "damages for injury to, destruction of, or loss of natural resources. . . ."[9] This cause of action can be brought against any entity responsible for operating a facility that disposes of hazardous substances,[10] an entity responsible for transporting hazardous substances,[11] or any entity contracting for disposal of hazardous substances,[12] if a release (or threatened release) of hazardous substances ensues.[13]

Congress also authorized the creation of a $1.6 billion Hazardous Substances Response Trust Fund ("Superfund");[14] the statute authorizes Superfund monies to compensate states for unsatisfied claims made for damages to their natural resources.[15] The states may tap the Superfund for the costs of "efforts in the restoration, rehabilitation, or replacement or acquiring the equivalent of any natural resources injured, destroyed, or lost as a result of a release of a hazardous substance."[16] The statute,

9. 42 U.S.C. § 9607(a)(4)(C) (1982). Although proposed predecessors to CERCLA had included compensation to individuals directly, the final version of the statute omitted this provision. *See, e.g.*, the Muskie-Culver Bill, H.R. 5291, 96th Cong., 2d Sess. (1980); the La Falce Bill, H.R. 5291, 96th Cong., 2d Sess. (1980); the Breaux Bill, H.R. 85, 96th Cong., 2d Sess. (1980). Nevertheless, courts have upheld private actions consistent with CERCLA's National Contingency Plan. *See, e.g.*, Jones v. Inmont Corp., 584 F. Supp. 1425 (S.D. Ohio 1984). *See also* Reed, *CERCLA Litigation Update: The Emerging Law of Generator Liability,* 14 ENVTL. L. REP. (ENVTL. L. INST.) 10,224 (1984).

10. 42 U.S.C. § 9607(a)(2) (1982).

11. *Id.* § 9607(a)(4).

12. *Id.* § 9607(a)(3).

13. *Id.* § 9631.

14. *Id.* The Superfund is financed jointly by industry and federal government appropriations. The $1.38 billion to be raised from industry is derived from a tax on oil, certain organic chemicals and heavy metals. 26 U.S.C. §§ 4611, 4661 (1982). The House Ways and Means Committee recently approved legislation increasing the Superfund to $10.2 billion for the five years beginning October 1, 1985, when the program is scheduled to expire. This increased Superfund is to be largely financed by a higher tax on crude oil. Birnbaum, *Superfund Extension with Big Increase in Oil Excise Tax Cleared by House Panel,* Wall St. J., Aug. 3, 1984, at 3, col. 3.

15. 42 U.S.C. § 9611(b) (1982). The statute specifies that claims must first be presented to any person who may be liable for injuries to natural resources. *Id.* § 9612(a). If such claims are not satisfied within 60 days, the claimant (state or federal) may begin a court action against the culpable party *or* the claimant may present its claim to the Superfund for payment. *Id.* When the liable party cannot be ascertained, the claimant may apply directly to the Superfund. *Id.* § 9612(b)(2)(B). Once the Superfund pays a claim, the United States acquires by subrogation the claimant's rights to recover from the liable party those costs for which the claimant has been compensated. *Id.* § 9612(c)(2).

All claims must be presented, or actions commenced, within three years from the date of discovery of the loss, or December 11, 1980, whichever is later. *Id.* § 9612(d). Therefore, states that were aware of injuries to their natural resources before the statute's effective date (December 11, 1980) had to have filed their claims by December 11, 1983. The result of this deadline was the predictable rush to file by December 11, 1983. Because of the lack of guidelines, however (*see* text accompanying note 17 *infra*), these claims do little more than track the language of the statute, asserting claims for "damages for injury to, destruction of, or loss of natural resources."

16. *Id.* § 9611(c)(2). CERCLA's language is very similar to language in the 1977 amendments to the Clean Water Act: "Sums recovered shall be used to *restore, rehabilitate or acquire the equivalent* of such natural resources. . . ." 33 U.S.C. § 1321(f)(5) (1982) (emphasis added). Although CERCLA's legislative history contains few references to the question of assessment of

however, utterly fails to provide standards for assessing damages for injuries to natural resources, except to ensure that "the measure of such damages shall not be limited by the sums which can be used to restore or replace such resource."[17] CERCLA directs the President to promulgate regulations for the assessment of damages for injuries to natural resources not later than December 11, 1982.[18] To date no such regulations have been promulgated.[19]

Courts are confronted with an increasing number of CERCLA claims for damages for injuries to natural resources[20] and must initially rely on the language of the statute in determining how to redress those injuries. Although the statute directs the courts to "restore, rehabilitate, or acquire the equivalent,"[21] it does not define the scope of these remedies. Given this absence of definition, courts will have wide latitude in devising appropriate remedies tailored to particular environmental injuries.[22] Courts

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damages for injuries to the environment, the legislative history of the Clean Water Act Amendments of 1977 is more substantial:

> New subsection (f)(4) and (5) make governmental expenses in connection with damage to or destruction of natural resources a cost of removal which can be recovered from the owner or operator of the discharged source. . . . For those resources which can be restored or rehabilitated, the measure of liability is the reasonable costs actually incurred by Federal or State authorities in replacing the resources or otherwise mitigating the damage. Where the damaged or destroyed resource is irreplaceable (as an endangered species or an entire fishery), the measure of liability is the reasonable cost of acquiring resources to offset the loss.

H. CONF. REP. NO. 830, 95th Cong., 1st Sess. 92, *reprinted in* 1977 U.S. CODE CONG. & AD. NEWS, 4424, 4467.

CERCLA, while clearly adopting the standard of damages codified in the 1977 Clean Water Amendments, explicitly allows for an even greater measure of damages:

> Sums recovered shall be available for use to restore, rehabilitate, or acquire the equivalent of such natural resources by the appropriate agencies of the Federal Government or the State government, *but the measure of such damages shall not be limited by the sums which can be used to restore or replace such resources.*

42 U.S.C. § 9607(f) (1982) (emphasis added). Thus, CERCLA clearly envisaged an even more far-reaching standard of damages for injuries to the environment than that codified in the Clean Water Act. This broader standard is identical to that codified in the Outer Continental Shelf Lands Act, 43 U.S.C. § 1813(b)(3) (1982).

17. 42 U.S.C. § 9607(f) (1982).

18. *Id.* § 9651(c)(1). The Department of the Interior was assigned responsibility for the rules' promulgation. Exec. Order No. 12,316, 46 Fed. Reg. 42,237 (1981).

19. 48 Fed. Reg. 34,768 (1983) (to be codified at C.F.R. Ch. 11). The Department of the Interior appears to be taking an issue-by-issue approach to its regulations (starting with groundwater and oil spill damage). *Id.* at 34,771–772. When the regulations are promulgated, however, they may not settle the question of appropriate standards for assessment of damages for injuries to natural resources.

New Mexico and Louisiana and five other states have filed suit to compel the Department of the Interior to promulgate its regulations. Goldberg v. Clark, 15 ENV'T REP. (BNA) 249 (June 15, 1984). The government's failure to promulgate regulations for assessment of natural resources damages was held not to be sufficient grounds for dismissal of a state's claim for natural resource damages in United States v. Reilly Tar & Chem. Corp., 546 F. Supp. 1100 (D. Minn. 1982).

20. Louisiana alone has filed 153 CERCLA claims.

21. 42 U.S.C. § 9607(f) (1982).

22. To date, no CERCLA litigtion has reached the issue of damages determination. At least one

will not, however, lack guidance altogether. Cases dealing with actions to remedy injuries to the environment will provide relevant analogies to CERCLA claims.[23] This Comment analyzes the applicability and scope of theories of state recovery for environmental injuries to CERCLA's statutory scheme.

THEORIES OF RECOVERY FOR ENVIRONMENTAL INJURIES

Restoration

According to CERCLA's language, the "President, or the authorized representative of any State, shall act on behalf of the public as *trustee* of such natural resources to recover for such damages."[24] The role of the state in seeking damages under CERCLA may well be analogous to the common law public trust doctrine which mandates that the state act on behalf of its citizens to protect the state's natural resources.[25]

A trust is a "right of property, real or personal, held by one party for the benefit of another."[26] The trustee has the affirmative obligation to manage the corpus for the benefit of the beneficiary, to protect the ben-

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court has sensibly ordered that the issue of damages be tried before the issue of liability in a complex multi-party CERCLA case. United States v. Price, ___F. Supp.___, 14 ENVTL. L. REP. (ENVTL. L. INST.) 20,501 (D. N.J. May 31, 1984).

23. Indeed, assessment of damages for injuries to the environment may be an area particularly unsuited to administrative rulemaking, and uniquely suited to case-by-case adjudication. Since individual judgments are inevitably the result of "complex, site-specific litigation," common law principles may be a more fruitful source of standards than the Department of the Interior's forthcoming regulations will be. Reed, *supra* note 9, at 10,224.

24. 42 U.S.C. §9607 (f) (1982) (emphasis added). The statute does not require that the state own the damaged natural resources in order to bring its claim. The statute requires only that the resources be within the State "or belonging to, managed by, controlled by, or appertaining to" the State. *Id.* Ownership of the natural resources is irrelevant unless the state's claim is based on injuries to state-owned resources from which the state benefits as a "market participant." *See* Water Law Study Committee, *The Impact of Recent Court Decisions Concerning Water and Interstate Commerce on Water Resources of the State of New Mexico* 58–62 (A Report to Governor Toney Anaya and the Legislative Council Pursuant to Laws, 1983, ch. 98) (available at the University of New Mexico School of Law). In that capacity the state is like a private individual, buying and selling a commodity. Arguably, such a claim would not be actionable under CERCLA since the statute does not explicitly provide a private right of action. *See* note 9, *supra*. If such a state claim were actionable, however, the traditional common law measure of damages would be diminution in market value. *See* Belle Fourche Pipeline Co. v. Elmore Livestock Co., 669 P.2d 505 (Wyo. 1983); Dep't of Envtl. Protection v. Ventron Corp., 182 N.J. Super. 210, 440 A.2d 455 (1981), *modifed and aff'd*, 468 A.2d 150 (1983). This standard, however, is inconsistent with CERCLA's language: "restore, replace, or acquire the equivalent." *See* Dore, *The Standard of Civil Liability for Hazardous Waste Disposal Activity: Some Quirks of Superfund*, 57 NOTRE DAME LAW. 260, 280 (1981).

25. The groundwork for the public trust doctrine was laid in Illinois Cent. R.R. Co. v. Illinois, 146 U.S. 384 (1892). The U.S. Supreme Court dictated that the title Illinois held to the navigable waters of Lake Michigan was a title held in trust for the benefit of the citizens of Illinois. *Id.* at 452.

CERCLA's reference to the federal and state role as "trustee" is not necessarily co-extensive with the public trust doctrine. The legislative history of the statute does not reflect any consideration of the scope or meaning of the word "trustee."

26. BLACK'S LAW DICTIONARY 1352 (5th ed. 1979).

eficiary's rights in the trust, and to seek compensation for injuries to the property.[27] The beneficiaries of a "public trust" are the public.[28] The state, as a trustee, has the right and duty to protect and preserve the public interest in the natural resources.[29]

Courts have acknowledged that one of the essential elements of the trustee's duty is to seek recovery for damages done to the corpus. In *Maryland v. Amerada Hess Corp.*,[30] Maryland sought recovery for the pollution of Baltimore Harbor waters caused by the rupture of an oil transfer line. The court observed that it knew of no rule of law which dictated that a state's legislative power precluded "[t]he state from bringing a common law suit to accomplish the same purpose and to redress the same wrong which a statute might seek to correct."[31] Common sense dictated that if the state had the power to legislate for the public good, the state also had the "inherent power" to protect the public welfare by pursuing common law causes of action.[32]

In gauging the measure of damages to resources held in public trust, the state must be mindful of its role as public trustee. When the state's natural resources are destroyed or damaged, the fiduciary's proper role is to restore or replace them. CERCLA explicitly authorizes damages encompassing the costs of "restoration" of injured natural resources.[33]

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27. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

28. *Id.*

29. Maryland v. Amerada Hess Corp., 350 F. Supp. 1060, 1066–67 (D. Md. 1972). At common law when states have asserted claims for damages as public trustees, courts have wrestled with the issue of whether the states have standing to seek damages for injuries to natural resources when the states do not own the resources. In Commonwealth v. Agway, Inc., 210 Pa. Super. 150, 232 A.2d 69 (1967), the court ruled that the state's interest in its game and fish was that of a sovereign and not an owner; therefore, the state could not collect damages for fish killed as the result of the pollution of creeks. Under its sovereign power, the state could regulate to preserve and control the natural resources, but the power was not that of an owner and could not support a civil action for damages. Similarly, in State v. Dickinson Cheese Co., 200 N.W.2d 59 (N.D. 1972), the court relied on Commonwealth v. Agway in ruling that because the state did not have a proprietary interest in the fish killed by defendant's pollution, the state's regulatory role could not maintain a recovery of damages.

Under CERCLA, however, states unquestionably have standing to pursue damages for injuries to natural resources. 42 U.S.C. § 9607(a)(4)(C) (1982). The public trust doctrine is essential to states bringing claims under CERCLA. It not only provides an indispensable theory of recovery but also a theory directly analogous to a goal of CERCLA—restoration of damaged resources which the states, as fiduciaries, hold in trust for the benefit of their citizens.

30. 350 F. Supp. 1060 (D. Md. 1972).

31. *Id.* at 1066.

32. *Id. Accord*, State Dep't of Envtl. Protection v. Jersey Cent. Power & Light, 125 N.J. Super. 97, 308 A.2d 671 (1973).

33. 42 U.S.C. § 9611(c)(2) (1982). CERCLA also authorizes recovery of "all costs of removal or remedial action . . . not inconsistent with the national contingency plan." *Id.* § 9607(a)(4)(A). These costs are distinct from restoration costs. Removal costs would encompass those costs incurred in protecting the environment from the immediate hazard presented by toxic contamination. They include costs incurred during cleanup or removal of released substances, and actions to monitor, assess or evaluate the release of hazardous substances. *Id.* § 9601(23).

In *United States v. Robinson,* an action for injunctive relief brought under the Rivers and Harbors Appropriations Act[34] and Clean Water Act,[35] the court ordered the defendants to restore a marsh to its original natural state.[36] The defendant had placed fill material ("a pollutant") on his own wetland property, located adjacent to navigable water.[37] After extensive factfinding, which included taking judicial notice of the "vital roles" played by the wetlands in the quality of the surrounding environment, the court ordered the implementation of a comprehensive restoration plan.[38]

The *Robinson* court apparently anticipated no problem in restoring the polluted wetlands to their former pollution-free status. In cases involving oil spills or hazardous waste dump sites, however, restoration is frequently impossible. In *Commonwealth of Puerto Rico v. S.S. Zoe Colocotroni,*[39] Puerto Rico sued to recover for environmental damage caused to its coastline after more than 5,000 tons of crude oil were pumped into the water to refloat an oil tanker which had gone aground. The district court

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Although directed at a permanent remedy for environmental contamination, costs of "remedial action" also do not encompass restoration costs. The recoverable costs of remedial action authorized by CERCLA include costs of storage, confinement, clay cover, segregation of reactive wastes, repair or replacement of leaking containers, and provision of alternative water sources. *Id.* § 9601(24). They do not encompass actual restoration of the environment to its pre-pollution condition.

In addition to recovery of "all costs of removal or remedial action," CERCLA authorizes recovery of "any other necessary costs of response" consistent with the national contengency plan. *Id.* § 9607(a)(4)(B). In United States v. Northeastern Pharmaceutical Chem. Co., Inc., 579 F. Supp. 823 (W.D. Mo. 1984), the court found the defendants liable for the government's "response" costs, including investigations, monitoring and testing to identify the extent of the release and danger to the public health, welfare, or the environment, planning and implementation of a response action, and recovery of costs to enforce CERCLA, including the costs of the staffs of the EPA and the Department of Justice attorneys' fees. *Id.* at 850.

Finally, CERCLA also authorizes recovery of "damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury." 42 U.S.C. § 9607(a)(4)(C) (1982). Since funds recovered may be used to "restore, rehabilitate, or acquire the equivalent" of the damaged natural resources, CERCLA explicitly makes damages recoverable for restoration in addition to sums recovered for cleanup and remedial actions. *Id.* § 9607(f).

34. 33 U.S.C. § 403 (1982).

35. 33 U.S.C. §§ 1251, 1311(a), 1319(d) (1982).

36. 570 F. Supp. 1157, 1166 (M.D. Fla. 1983).

37. *Id.* at 1160. The United States brought a civil action to enjoin the defendant from discharging fill material into the wetland and to compel him to do restoration work.

38. *Id.* at 1166. The plan would "require the removal of approximately 1,340 cubic yards of dirt at an approximate cost of $4,020, less a potential resale of the fill at approximately $1,340. In addition, the approximate cost of moving the trailer ($400) and removing the concrete patio ($120) brings the total removal cost to about $3,200. To replant this area, using 6-inch needle rush plugs, would require approximately 1,600 culms on three-foot centers at a cost of $1.25 each, for a total replanting cost of $2,000. . . . Therefore, the total cost of restoring and replanting the *Juncus* marsh . . . should be approximately $6,000." *Id.* at 1164. The court did recognize, however, that the best time to replant a *Juncus* marsh was during the winter months, so ordered the replanting to begin after November 1, 1983, and to be completed by January 1, 1984. *Id.* at 1166. *See also* United States v. Tull, 20 Env't Rep. Cas. (BNA) 2198 (E.D. Va. Sept. 28, 1983) (action brought under Clean Water Act; defendant was ordered to restore wetlands illegally filled without permit).

39. 456 F. Supp. 1327 (D.P.R. 1978), *rev'd,* 628 F.2d 652 (1st Cir. 1980), *cert. denied,* 450 U.S. 912 (1981).

found that an affected area of swampland could be restored,[40] but the court of appeals disagreed with the lower court's assessment of the feasibility of such a restoration program: "Replanting new trees in this same oil-soaked environment seems pointless if no attempt is to be made to counteract the effects of the oil."[41]

The *Colocotroni* decision reveals one of the difficulties with restoration as a theory of damages assessment in cases involving injuries to the environment: the difficulty of proving the feasibility of restoration.[42] The feasibility of restoration may depend to a large degree on the success of a previous cleanup effort which, in turn, may depend on available scientific technology.

The success of a previous cleanup effort may depend on any one of a number of factors. The rapidity with which the cleanup effort was undertaken is one of these factors.[43] The impact of the cleanup countermeasures on the environment is another significant factor determining the success of a cleanup effort.[44] When technology can remove only 75 percent of the oil spilled on a particular swamp, or when hazardous waste seeping from a dump site can be only partially recaptured, restoration may be a futile gesture. The circuit court in *Colocotroni* required "a practicable plan for actual restoration."[45] Absent proof of the feasibility of the plan presented, the court refused to uphold the district court's award of restoration costs.[46]

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40. [T]hese areas can best be reestablished by the intensive planting of mangrove and restoration of this area to its condition before the oil spill. The evidence shows that the planting of mangrove runs at about $16,500 per acre, thus bringing the cost of replanting 23 acres to $379,500. The evidence further demonstrates that the planting will require a five year monitoring and fertilizing program which will cost $36,000 per year for $180,000 or the five years.

456 F. Supp. 1327, 1345 (D.P.R. 1978).

41. Puerto Rico v. S.S. Zoe Colocotroni, 628 F.2d 652, 677–78 n.25 (1st Cir. 1980), *cert. denied*, 450 U.S. 912 (1981). The circuit court therefore vacated the lower court's award of $559,500 to the plaintiffs for replanting 23 acres with container-grown mangrove trees. 628 F.2d at 678.

42. *See* Bleicher, *What Oil Spills Should the Government Assess?*, in ALI-ABA COURSE OF STUDY: TOXIC SUBSTANCES AND HAZARDOUS WASTES 512, 515 (1980).

43. *See* Note, *Allocating the Costs of Hazardous Waste Disposal*, 94 HARV. L. REV. 584, 587 (1981).

44. As one commentator has noted, "[w]hen post-spill countermeasures employ detergents or sinking agents to disperse oil, they spread toxic hydrocarbons in the water. This causes greater damage to marine life than if no treatment of spilled oil were attempted." Wood, *Requiring Polluters to Pay for Aquatic Natural Resources Destroyed by Oil Pollution*, 8 NAT. RES. LAW. 545, 576 (1976).

45. 628 F.2d at 677. CERCLA also requires that funds may only be used for restoration, rehabilitation, or acquisition of the equivalent of any natural resources after a *plan* for the use of CERCLA funds for such purposes is developed and adopted by the affected federal agencies and the Governor of any affected State. 42 U.S.C. § 9611(i) (1982). This requirement applies except in a situation requiring action to avoid an irreversible loss of natural resources or in another similar emergency situation. *Id.*

46. The plaintiff's own experts had testified that existing mangrove trees were dead or dying because of the presence of residual oil in the sediments. 628 F.2d at 678 n.25.

A related problem with the restoration standard is the difficulty of pinpointing the "health" of the pre-pollution environment. The affected area may already have been degraded by previous pollution before the particular oil spill or other act of pollution spawning the litigation.[47] Alternatively, natural upheavals such as floods or hurricanes may have caused similar damage in the past or could be predicted to erase restoration efforts in the future.[48]

Despite the shortcomings of the restoration theory of damages assessment, it is the theory mandated by the state's role as public trustee. Restoration is also the theory most compatible with CERCLA's directive to "restore, replace or acquire the equivalent" for injured natural resources. The district court in *Colocotroni* found that "the affected flora and fauna were part of a trust held for the people by the Commonwealth of Puerto Rico. Perforce, the Commonwealth must have the ability to have the corpus of said pubic trust reimbursed for the diminution attributable to the wrongdoers."[49] The court erred in finding that Puerto Rico's interest in that case would be satisfied by *reimbursing* the corpus of the trust;[50] rather, the damage to the corpus could only be remedied by restoring the natural resources to their pre-oil spill condition.

If Puerto Rico sought relief today under CERCLA, it should request injunctive relief to compel restoration of the damaged environment. Although the injunctive relief sought would not technically be "damages," it would nevertheless be consistent with CERCLA's overriding purpose to redress injuries to the environment caused by releases of hazardous substances.[51] Alternatively, Puerto Rico could commit to undertaking restoration of the damaged resources itself. In that case, it would legitimately seek compensation for its own costs of restoration.[52]

47. This was a theory advanced as a defense to liability in *Colocotroni*. Defense experts had testified that some of the damaged mangroves were victims of "pre-existing high salinity in West Mangrove rather than oil pollution." 628 F.2d at 661. This testimony was not even discussed in the district court opinion.

48. *See* Bleicher, *supra* note 42, at 514–15.

49. 456 F. Supp. at 1344 n.42.

50. Puerto Rico's Environmental Quality Board had not claimed that it had any intention of actually purchasing 92 million invertebrate marine animals for introduction into the oil-soaked sediments. 628 F.2d at 676.

51. If the court were to order the defendant to restore the environment, it would either have to remain involved in monitoring the defendant's restoration efforts, or delegate the monitoring responsibility to an appropriate branch of state government or a special master. Further, the court would probably require the defendant to post a bond to guarantee that the work would be done. *See, e.g.*, United States v. Tull, 20 Env't Rep. Cas. (BNA) 298 (E.D. Va. Sept. 28, 1983) (court ordered the defendant to post a $300,000 bond if he elected to restore illegally filled wetlands rather than pay a $250,000 fine).

52. There still would be a problem of assessing restoration costs before actual restoration of the damaged environment was completed.

Alternative Remedies

The restoration theory of damages is a stringent standard. Therefore, courts may be reluctant to require complete restoration of the environment following pollution. Alluding to the practical difficulties inherent in restoration efforts and to equitable considerations, several courts have sought to devise alternative remedies to redress injuries to the environment.[53] CERCLA explicitly allows for remedies other than restoration: "Sums recovered shall be available for use to restore, rehabilitate, or *acquire the equivalent* of such natural resources. . . ."[54] The availability under CERCLA of remedies alternative to restoration is inconsistent with the state's role as public trustee. Nevertheless, the common law theory of *parens patriae* may provide a foundation for state alternative remedies relief.

"Parens patriae" means "parent of the country." Traditionally the *parens patriae* concept had its roots in the notion that part of the state's role as sovereign and guardian of its people was to protect the interests of those citizens legally incapable of protecting their own interests.[55] To establish standing under the theory of *parens patriae,* the state must base its claim on the protection of a quasi-sovereign interest.[56] Quasi-soveriegn interests are a "set of interests" which the state has in the well-being of its citizens.[57] Quasi-sovereign interests are not sovereign interests, proprietary interests or private interests which the state "[p]ursues as a nominal party."[58] The U.S. Supreme Court has ruled, however, that a state has a quasi-sovereign interest in the health and welfare of its populace,[59] pollution-free air and water,[60] and the general economy of the state.[61]

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53. *See e.g.*, United States v. Bradshaw, 541 F. Supp. 884, 886 (D. Md. 1982).

54. 42 U.S.C. § 9607(f) (1982) (emphasis added).

55. Historically, a *parens patriae* cause of action originated from the "royal prerogative." *See* Note, *State Protection of Its Economy and Environment: Parens Patriae Suits for Damages,* 6 COLUM. J.L. & SOC. PROBS. 411, 412–13 (1970).

56. Alfred L. Snapp & Son, Inc. v. Puerto Rico, ex rel., Barez, 458 U.S. 592, 601 (1982).

In CERCLA claims, state standing is not an issue because CERCLA expressly provides that states and the federal government may sue to recover damages for injuries to natural resources. 42 U.S.C. § 9607(a)(4)(C) (1982).

57. *Alfred L. Snapp,* 458 U.S. at 602.

58. *Id.*

59. Pennsylvania v. West Virginia, 262 U.S. 553, 592 (1923).

60. Georgia v. Tennessee Copper Co., 206 U.S. 230, 238 (1907).

61. Hawaii v. Standard Oil Co. of Cal., 301 F. Supp. 982, 987 (D. Hawaii 1969).

In its quasi-sovereign capacity,

> [T]he State has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and inhabitants shall breathe pure air. . . . It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a great scale by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destructions they have suffered, should

A state, under the *parens patriae* theory, undoubtedly will be able to assert a quasi-sovereign interest in its natural resources on two fronts: the health and welfare of the state's citizens[62] and the health and welfare of the state's economy.[63] Environmental pollution not only may have direct and substantially serious consequences on the physical health of a state's citizens but also may detrimentally affect a state whose economic well-being rests, at least to a significant degree, on revenue generated by its natural resources.

Parens patriae is an appropriate theory for recovery of damages when the state as protector of a quasi-sovereign interest is seeking to redress injuries to its natural resources.[64] The state, in basing its cause of action

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not be further destroyed or threatened by the act of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source.

Georgia v. Tennessee Copper Co., 206 U.S. at 237–38.

62. In determining whether a state has standing to sue under *parens patriae*, two relevant factors are whether a significant portion of the state's population has been adversely affected by the challenged activity and whether the injury is one which the state, if it could, probably would attempt to address through its lawmaking powers. In so determining, the indirect effects of the alleged injury may also be considered. *Alfred L. Snapp*, 458 U.S. at 607.

Applying this standard to the issue of natural resources damages, it is clear that even though case-by-case analysis will be required, many injuries to natural resources will affect directly and indirectly a significant portion of a state's population. While many consequences of resources pollution may not be realized immediately, the effects are often long-range and severe. Ecosystems may be fatally or severely impacted, the precise repercussions of which may not be felt for decades or centuries. Adverse human health reactions may not be manifested for many years, threatening the lives and livelihoods of not only the living but also the yet-to-be-born. *See* Maine v. M/V Tamano, 357 F. Supp. 1097, 1101 (D. Maine 1973). And clearly, states have not only the desire but the power through their rulemaking prerogatives to regulate the uses and abuses of their natural resources. In many instances, however, the states' desires to ban or to strictly regulate the presence of polluting industries within their boundaries are preempted or banned by federal regulation or dormant commerce clause power.

63. *Alfred L. Snapp*, 458 U.S. at 605.

64. While CERCLA authorizes recovery of damages for injuries to natural resources (42 U.S.C. § 9607(a)(4)(C) (1982)), the issue of whether damages may be awarded under *parens patriae* is not settled. The U.S. Supreme Court has been confronted only twice with *parens patriae* cases seeking damages. Georgia v. Pennsylvania R.R. Co., 324 U.S. 439 (1945) (price-fixing conspiracy); Hawaii v. Standard Oil Co. of Cal., 405 U.S. 251 (1972) (anti-trust violation). In both cases, the Court upheld the propriety of the *parens patriae* claims but, upon grounds unrelated to the *parens patriae* theory, denied the award of damages. Georgia v. Pennsylvania R.R. Co., 324 U.S. at 452 (damages denied because the Interstate Commerce Commission had approved the allegedly collusive rates, and, therefore, an award of damages would serve as an inappropriate rebate); Hawaii v. Standard Oil Co. of Cal., 405 U.S. at 265 (damages denied because section 4 of the Clayton Act did not provide for damage relief for injury to the state's general economy). In neither case, however, did the Court dispute the validity of damages recovery in *parens patriae* suits.

In interpreting the Supreme Court's failure to rule out the recovery of damages under *parens patriae*, the federal district court in Maine v. M/V Tamano reasoned that "the plain implication to be drawn from both [Supreme Court] cases is that, absent some substantive bar, the Court was willing to allow damages to a State suing as *parens patriae*." 357 F. Supp. 1097, 1101 (D. Maine 1973) (injuries to coastal waters and marine life arising from an oil spill). The court ruled that since the Supreme Court had not expressly disqualified an award of damages under *parens patriae*, Maine could seek damages for injuries to its natural resources provided that the state could assert a damages claim separate and distinct from any individual claim for damages. *Id.* In dispelling any fear or

on a theory of *parens patriae,* will be seeking to compensate its citizens for injury to the state's health and environment caused by damage to the state's natural resources. This is analytically distinct from a state's action as public trustee to restore the corpus of the public trust. Compensation under a theory of *parens patriae* is consistent with CERCLA's directive to "acquire the equivalent" of damaged natural resources, and may allow the courts greater latitude in fashioning appropriate remedies than may be available under the restoration theory of recovery.[65]

The statute, while stipulating that states may "acquire the equivalent" of injured natural resources, does not provide any standard for determining how "the equivalent" will be measured. The district court in *Colocotroni* determined that the appropriate standard for damage to the environment caused by the oil spill was, absent feasible restoration, monetary compensation for destruction to plant and wildlife.[66] The court rejected requiring actual restoration because replacing the marine animals would have been a futile gesture where they "could not be expected to survive if returned to their natural habitat."[67]

The circuit court rejected the district court's monetary compensation plan for damage assessment. The court emphasized the distinction between a practicable plan for actual restoration and the use of the alleged replacement value of 92 million invertebrate animals "as a yardstick for estimating the quantum of harm caused to the Commonwealth."[68] The court found that the latter theory had "no apparent analog in the standards for measuring environmental damages."[69] Although this statement may be true, the concept of using replacement value as a method of assessing monetary compensation for injuries to the environment should not be dismissed out of hand. It is difficult to draw a principled distinction between money compensation to a victim for an injured part of his body,

double recovery, the Court asserted that by definition, under *parens patriae,* Maine would be setting forth a claim independent of any individual claim. *Id.* at 1102.

65. 42 U.S.C. § 9607(f) (1982).

66. 456 F. Supp. at 1344–45. The court determined that 92,109,720 marine animals were killed by the oil spill. It then calculated the cost of replacing those organisms by referring to marine supply catalogs, and determined that the lowest possible replacement cost figure totaled $5,526,583.20. *Id.*

67. 628 F.2d at 677. In arriving at a "replacement cost" theory of damages, the *Colocotroni* district court relied on an early Ninth Circuit opinion, Feather River Lumber Co. v. United States, 30 F.2d 642 (9th Cir. 1929). *Feather River Lumber* involved a civil action for damages for destruction of a public forest by fire. The circuit court accepted the government's assessment of damages, which was based on calculation of the number of damaged and undamaged trees on one-tenth acre sample plots located throughout the 4,000 acre forest. The court accepted market value of the merchantable timber as one method of estimating the extent of damage, and also allowed the government to recover its expected restoration costs for replanting young trees. 30 F.2d at 644. There is no indication that requiring actual restoration of the area would not have been feasible, so the court's willingness to award money damages may simply be a reflection of the relief sought in that case.

68. 628 F.2d at 677.

69. *Id.*

and money compensation to a group of victims for an injury to their environment.[70]

The chief obstacle to monetary compensation is the almost insurmountable problem of valuation of damaged natural resources. Most injured natural resources are outside the scope of the market economy, so it is difficult to determine their "value" for purposes of compensation. In *Colocotroni,* the district court referred to biological supply catalogs to determine the "value" of the 92,109,720 marine organisms killed as a result of the oil spill.[71] While the simplicity of this method of calculating the value of damaged natural resources is appealing, it suffers from at least four inherent defects. First, it depends on an accurate count of the affected resource. Such accuracy of measurement is frequently impossible. Second, the supply catalog method is limited to resources that can be sold commercially. Relatively few resources are commercially exploited. Third, this method of valuation does not take into account the damage that is suffered by the entire ecosystem as a result of injury or destruction of one resource. Finally, this method of valuation completely fails to comprehend the aesthetic and recreational values of the damaged resource.[72]

The *Colocotroni* circuit court rejected monetary compensation, reasoning that when "direct restoration of the affected area is either physically impossible or so disproportionately expensive that it would not be reasonable to undertake such a remedy," alternative compensation might be appropriate.[73] The court suggested two alternatives: acquisition of comparable lands for public parks, or reforestation of a similar proximate site where the presence of oil would not pose the same hazard to ultimate

70. Despite the difficulties of measuring certain damages, the civil liability regime for petroleum pollution should collect money judgments for oil-damaged natural resources for the same reason that courts grant cash judgments for priceless objects and for 'pain and suffering': because estimated money recoveries perform valuable social functions despite their imprecise derivations.

Wood, *supra,* note 44, at 608 (1976).

71. 456 F. Supp. at 1344–45.

72. For example, if all the fish in a stream are killed by the presence of hazardous wastes in that stream, the citizens of a state may suffer in many different ways. First, they have lost the fish. That loss might be fairly compensated by awarding them the commercial value of those fish, assuming that the fish were commercially valuable. The entire environment of the stream, however, will also be affected by the extinction of the fish. Birds, insects, wild animals and aquatic plants will be affected. The effect on the stream's environment may also adversely affect the state's citizens. Furthermore, the citizens' ability to enjoy the stream will be impeded. People will no longer be able to fish in the stream, or enjoy the pleasure of knowing that they could go fishing there if they chose to do so. Although economists have attempted to create models for valuation of even these difficult to measure benefits, such models inevitably fail to take into account all of the beneficial uses of a particular natural resource. *See* Note, *Assessment of Civil Monetary Penalties for Water Pollution: A Proposal for Shifting the Burden of Proof Regarding Damages,* 30 HASTINGS, L.J. 651, 672–79 (1979).

73. 628 F.2d at 675–76.

success.[74] The court cautioned that whatever alternative remedy was fashioned,

> [T]he damages awarded . . . should be reasonable and not grossly disproportionate to the harm caused and the ecological values involved. The ultimate purpose of any such remedy should be to protect the public interest in a healthy, functioning environment, and not to provide a windfall to the public treasury.[75]

The alternative-site method of compensation for destruction of natural resources was used by the court in *United States v. Florida Keys Community College*.[76] The United States sought restoration of an open water slough adjoining Florida Bay, which defendants had filled, without a permit, in violation of the Rivers and Harbors Appropriations Act[77] and the Clean Water Act.[78] The court agreed with the government's view that the original slough was an environmentally significant area, which had formerly supported healthy red and black mangrove trees, sea grasses, and beneficial algae, on which fed many fish and wading birds.[79] The court found, however, that previous mangrove planting had had only limited success in the area.[80] Despite the slough's "clear environmental importance," the court found that the area's previous appearance and odor had been sufficiently unpleasant to justify consideration of alter-

74. *Id.* at 676.

75. *Id.* The court did not, however, provide any further insight as to the meaning of the terms "reasonable" and "grossly disproprotionate."

At least one commentator has suggested that "restoration costs should be classified as 'grossly disproportionate' when they are three to four times greater than the ecological value of the natural resources involved." Grady, *Commonwealth of Pueto Rico v. S.S. Zoe Colocotroni: State Actions for Damage to Non-Commercial Living Natural Resources*, 9 ENVTL. AFFS. 397, 426 (1980). The treble or quadruple figure was determined by analogy to patent infringement and antitrust actions, where plaintiffs are authorized to recover three times the damages they sustain. *Id.* at 462 n.176. This method of damage compensation assessment was only recommended for cases where actual restoration was feasible. The commentator reasoned that such a method "is reasonable and desirable because it is based on damage to the ecosystem as a whole, which is exactly the harm for which a state is seeking to recover when non-commercial living natural resources are destroyed." *Id.* at 427. It is difficult to discern why the treble value ceiling on restoration costs is inherently equitable. All restoration is "based on damage to the ecosystem as a whole," whether it happens to cost more or less than the treble ecological value figure.

In contrast, the author recommended alternative methods, such as determining the reasonable costs of alternative-site restoration, or acquisition of comparable lands for public parks, in cases whre actual restoration of the affected area is not practicable. *Id.* The author's recommendation of different methods of assessment of damages when restoration is feasible, and when restoration is not, mirrors Congressional intent in enacting the 1977 Amendments to the Clean Water Act, 33 U.S.C. § 1321 (1982), another important federal pollution control statute. *See* discussion *supra*, note 16.

76. 531 F. Supp. 267 (S.D. Fla. 1981).

77. 33 U.S.C. § 403 (1982).

78. 33 U.S.C. §§ 1311, 1344 (1982).

79. 531 F. Supp. at 272.

80. *Id.*

natives to restoration to its previous state.[81] Because an alternative area capable of development and enhancement existed, the court offered the defendants the choice of doing necessary planting, modification and bottom work at the alternative site to provide a comparable beneficial environment, or restoring the original site to its original course and capacity.[82]

Acquisition of comparable land and restoration of an alternative site are not the only options available to redress injuries to the environment in lieu of actual restoration. Indeed, neither of these alternatives may be practicable. The *Colocotroni* circuit court's first alternative, acquisition of comparable lands for public parks, assumes first that "comparable lands" are available. This assumption may well be groundless in states with no available land at all or where the cost of acquiring such land is prohibitive. Second, even if land is available, the state's environment may benefit to a greater extent by a different use of funds. The state's Department of Environmental Protection might prefer funds earmarked for research aimed at improving scientific capability of cleaning up releases of hazardous substances, or other projects on pollution control, management of natural resources, or other significant public interests.[83]

The *Colocotroni* court's second alternative, restoration of a similar proximate site, also may be impracticable. There may be no similar site in the affected state, but state residents might benefit from the development of a completely different natural resources area. For example, if the dumping of hazardous wastes had destroyed a desert area in New Mexico the state might prefer to have a forested area maintained as a wilderness area than to have a different desert area restored to its natural habitat. Here, too, state Departments of Environmental Protection should be encouraged to provide input on state environmental priorities.

Alternative methods of compensation for natural resources damage offer advantages of flexibility and equity in cases where the damaged resources are either irreplaceable or lacking in market value. Further, the approach provides courts with an alternative when their perception is that the cost of restoring the damaged area so far exceeds the ecological value of the damaged resource that it appears to place the state in a *better* position than it was in before the damage was committed.[84] Alternatively,

81. *Id.* at 275.

82. *Id. See also* Osborne v. Iowa Natural Resources Council, 336 N.W.2d 745 (Iowa 1983), where the court ordered the appellee to provide a 25 foot wide strip of land for wildlife habitat on each side of a downstream natural channel, impermissibly altered by the appellee. The court found that "it was entirely reasonable and proper for the council to require Osborne to compensate for his destruction by improving the habitat of wildlife." 336 N.W.2d at 750.

83. *See* Wood, *supra* note 44, at 599.

84. *See* Grady, *supra* note 75, at 426. This perception is particularly acute when the damaged resource was not "healthy" before the damage, e.g., in cases involving already-brackish groundwater. The "equitable alternative" method of compensation may be particularly appropriate in such cases.

the courts may wish to utilize this approach when they are aware that any award of money damages will not be spent by the state to restore or replace its damaged natural resources but, rather, will simply be added to general state funds. Finally, the alternative method of compensation approach is consistent with the state's role as *parens patriae* in bringing the action for damages for injuries to the environment. In its capacity as protector of its citizens' interests in the environment, the state seeks compensation for injuries to natural resources. State citizens may well derive greater benefit from a newly-created public park than from a lengthy process of restoration of an area that provided dubious benefit in the first place.

CONCLUSION

CERCLA creates a state cause of action for recovery for injuries to natural resources. The statute expressly provides that sums recovered shall be used to restore, rehabilitate, or acquire the equivalent of the damaged resources. Despite the absence of explicit guidelines for damages assessment, the statutory language unambiguously provides the standard.

States seeking to recover damages should tailor their requests for recovery to CERCLA's clear directives. Although the statute does not define the scope of restoration, rehabilitation, or acquisition of the equivalent, states are not without guidance. Cases confronting the issue of damages for injuries to natural resources can be used to effectuate CERCLA's overriding purpose to protect and restore the environment following the adverse consequences of hazardous waste disposal. Therefore, states should not be inhibited by the apparent absence of guidelines for damages assessment. Rather, states should take advantage of the latitude inherent in the statute, and fashion requests for damages that balance CERCLA's directives with the exigencies of the injured states' particular situations.

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