Natural Resource Damages, Superfund, and the Courts

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In addition, the Natural Resources Committee of the Administrative Law Section of the American Bar Association sponsored a symposium focused on this Article on October 14, 1988. Participants included representatives from the Department of Interior, Solicitor's Office and Office of Policy Analysis, the New York State Attorney General's Office, the National Wildlife Federation, and private law firms. The author thanks the Committee Chair, Owen Olpin, for organizing the symposium.

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At the beginning of the Environmental Decade of the 1970s, thoughtful students of the new field of environmental law observed an interesting phenomenon. While a homeowner could enjoin a neighbor from harming his or her land and could recover damages for injury to it, public natural resources lacked a clear champion. The states possessed limited common law authority to protect public resources, and the federal government had to rely on explicit legislative mandates before acting. In the absence of broad governmental power to recover damages for injury to public natural resources, a few critics even began to explore ways in which the resources themselves could be assigned private guardians. Against this background, in a little-noticed provision of the 1980 hazardous waste cleanup law widely known as the “Superfund,” but titled the Comprehensive Environmental Response and Compensation Act (CERCLA), Congress created the first federal and state resources trustees and empowered them to seek damages for injury caused by toxic wastes to public natural resources.1


The Superfund law is not perfect. Indeed, federal lawmaking sometimes suggests Chancellor Bismarck's admonition that one should not inquire how legislation and sausages are made. Nevertheless, it appears to be adequate to the task of obtaining substantial recoveries to be spent on resource restoration and replacement, as long as the federal government fully implements the resource damages through statutorily-mandated guidelines. Already state and federal governments have obtained over $30 million in natural resource damages in settlements of Superfund cleanup cases. Further, the United States is seeking $1.8 billion from Shell Oil Company for damages at the Rocky Mountain Arsenal near Denver and has embroiled itself in controversy for offering to settle its $50 million claim for natural resource damages to New Bedford Harbor for a few million dollars.

The Department of the Interior, however, has taken an overly conservative approach to implementing the natural resource damage provisions. One provision of the Department's guidelines in particular poses a major hurdle to optimal natural resource damage recovery. The Department maintains that the common law limits the damages that trustees can sue to recover the lesser of either (1) lost resource use values or (2) restoration or replacement costs. This Article probes at length into the relationship between Superfund and the common law to show that Congress does not view traditional common law doctrines as a limitation on the scope of Superfund's remedial and compensatory provisions.

What is at stake in the interpretation of the damage provisions is whether lost or damaged public natural resources will be replaced or restored so that the enjoyment of natural resources can continue substantially unimpaired. More than the loss of timber, waterfowl, or harvestable species of fish and shellfish is threatened. The loss of songbirds, natural vistas, endangered species habitat, and entire stable ecosystems is also involved. Surely the value of lost songbirds, for example, is not to be measured just by their caged value, or even by the willingness to pay for them measured by birdwatchers' pur-

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2 This figure was generally agreed upon in discussions among officials of the Department of Interior, Solicitor's Office and Office of Policy Analysis, the New York Attorney General's Office, and attorneys for industry and public interest groups at the ABA symposium discussed supra note 1.
4 United States v. AVX Corp., C.A. No. 83-3882-Y (D. Mass.) (moving papers filed by the National Wildlife Federation in opposition to a proposed partial consent decree are on file with the author).
chases of field guides, binoculars, and transportation, as appears to be the case under current federal rules. The question for the trustees, agencies, and the courts, then, is whether the Superfund will be used to help meet the cost of maintaining public natural resources at existing levels, not only for their approximate market values, but for their wider uses and their "existence" and "option" values as well. The way to ensure this result is greater restoration and replacement of natural resources, measured at the full cost of restoring the uses which the public has lost.

This Article enters upon treacherous ground because it attempts to predict how governmental institutions will behave in implementing an innovative statute. On the one hand, the courts may be tempted to agree with the Department of Interior's restrictive approach and to limit recovery for injury to natural resources by reading restrictive common law concepts governing liability, causation, and damage recovery into the statute. On the other hand, the Article concludes that the natural resource damage provisions are part and parcel of the Superfund and that the courts are likely to interpret them no less broadly than they have interpreted the rest of Superfund's provisions for which they already have been persuaded that Congress relaxed the requirements of the common law. The courts are likely to conclude that, in all parts of Superfund, including the natural resource damage provisions, Congress intended to go well beyond prior requirements of law, fashioning a powerful

5 The existence or vicarious value "of a natural resource . . . derives solely from an individual's knowledge that the resource exists. For example, an individual may derive satisfaction purely from the knowledge that Alaska's Denali National Park exists, even if he has never visited Denali and is sure that he will not do so in the future." Glossary of Terms, paper prepared for the Resources for the Future Conference (Washington, D.C. June 16–17, 1988) (on file with author). "Bequest and Existence Values are derived from knowledge that a resource is preserved, even though an individual may have no intention to personally use the resource. Existence value is often motivated by altruism. For example, citizens may wish to leave a pristine river to future generations (known as bequest value) or may wish to preserve fish and animal life in a natural condition and, as a result, be willing to pay to preserve or restore the service flows of the natural resource (known as existence value)." Schulze, Use of Direct Methods for Valuing Natural Resource Damages 1–2, paper prepared for the Resources for the Future Conference. The seminal paper is Krutilla, Conservation Reconsidered, 57 Am. Econ. Rev. (pt. 2) 777 (1967).

6 "Option Value is derived from individuals' desire to preserve the option of use of a natural resource, even if they are not currently using it. Thus, a fisherman who did not fish in a river this year may be willing to pay to clean up the river today to have the option of future use." Schulze, supra note 5, at 1; see also Weisbrod, Collective-Consumption Services of Individual-Consumption Goods, 78 J. Econ. 471 (1964) (stating that a number of significant commodities exist that may be of a pure individual-consumption variety, but also possess characteristics of a pure collective-consumption good).
corrective and compensatory mechanism based on a broad theory of cost-internalization.\(^7\)

To effectuate this sweeping policy goal, Congress included in CERCLA relaxed liability, broad federal power to determine cleanup scope and financial responsibility, civil penalties, rebuttable presumptions, and summary administrative and judicial proceedings, which are legislative devices that Congress has frequently included in modern welfare legislation. The courts uphold and even extend such statutes, despite the anti-interventionist bias of the common law.\(^8\)


A. General and Natural Resource Damage Provisions

The Superfund creates a cleanup program for abandoned and inactive hazardous waste disposal sites and chemical spills.\(^9\) It is an extension of both the Resource Conservation and Recovery Act, which created a strict regulatory regime for active hazardous waste disposal sites, and the liability and cleanup provisions of the Clean Water Act.\(^10\) Federally-funded cleanups are the most visible portion of this site cleanup program. Such cleanups are responsible for the general public perception that the heart of Superfund is direct federal cleanup.\(^11\) Cleanups are subject to a plethora of statutory and

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\(^7\) Some members of Congress sought to deter future harmful conduct by imposing risk and cost sharing in Superfund, but it is clear that the primary purpose of the legislation was correcting hazardous situations at the expense of responsible parties. See generally Shavell, Liability for Harm Versus Regulation of Safety, 13 J. of Legal Stud. 357 (1984) (discussing merits of using liability and regulation to reduce risks).


\(^11\) Under the 1980 legislation, revenues were to be collected over a five-year period ending in 1985, with the $1.38 billion collected from taxes on the manufacture of petroleum products and certain inorganic chemicals and $220 million from general federal revenues. CERCLA, 42 U.S.C. § 9631(b)(1)(A), (2) (repealed 1987). Under the 1986 reauthorization, SARA enlarged the fund to $6.65 billion and extended its life through 1991. The fund is financed by taxes on oil and chemicals, I.R.C. §§ 4611, 4661, 4671 (1986); an environmental tax on corporate income, I.R.C. § 59A (1986); and by general appropriations of up to $250 million per year, SARA, Pub. L. No. 99-499, § 517(b), 100 Stat. 1613, 1773. The Superfund also receives cleanup costs and penalties recovered from responsible parties. See 42 U.S.C. § 9607. Congress was not willing to approve a Senate-proposed $2.5 billion victim compensation fund, which would have added federally fueled pressure to the 14 percent-plus inflation
administrative rules through the National Contingency Plan (NCP). A National Priority List (NPL) of sites has first call on the Superfund and other cleanup efforts.

These reporting, inventorying, and Superfund-expenditure requirements saddle the federal government with the obligation to see that sites are cleaned up. The statute also places ultimate financial responsibility on the concerns that used the sites and created the dangerous conditions. The parties potentially responsible for site spill cleanup are generally the same as the parties responsible for paying natural resource damages. These parties include current and past owners and operators of vessels and facilities, waste generators or other persons who "arranged" for treatment, disposal, or transport of waste, and transporters who selected a disposal or treatment facility that required a Superfund response.

Once the government specifies a remedy after a remedial investigation and feasibility study (RI/FS), the government itself may clean up a site and bring suit later to shift the costs to responsible parties. In the alternative, the government may seek to have the responsible parties carry out the cleanup that it has specified. Lia-
bility extends to costs incurred by federal or state governments or by other persons. 17 Parties are financially responsible even though they may have already paid substantial sums into the Superfund through the taxes that Superfund imposes. Still, Congress clearly wants EPA to negotiate voluntary cleanups with private parties before expending Superfund revenues. 18

Personal injuries are not recompensable, but restoration, replacement, and damages to natural resources are. 19 The Superfund comprehensively covers “land, fish, wildlife, biota, air, water, ground water, drinking water supplies and other such resources” owned, managed, held in trust, or otherwise controlled by the United States, a state, a local government, or an Indian tribe. 20 Liability includes “damages for injury to, destruction of, or loss of natural resources, including the reasonable cost of assessing such injury, destruction, or loss” resulting from the release of a hazardous substance. 21

Because resources themselves do not have standing to sue, 22 Congress invented the resources guardian or trustee. 23 Liability is to the federal government or to the states as trustees of the affected natural resources. Most important, to ease the trustees’ difficult task, any determination of damages made by the trustee in accordance with natural resource damage regulations promulgated under the Act has the force of a rebuttable presumption in any judicial or administrative proceeding for recovery. 24

Obviously, the natural resource damage regulations—an important innovation that breaks new ground by having agencies and courts share the responsibility for establishing cause and harm—are of paramount importance. 25 The regulations specify standard proce-

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17 Id. § 9607(a)(A), (B) (Supp. IV 1986).
20 Id. § 9601(16).
24 Id. at § 9607(f)(2)(C). The regulations also identify the best procedures for determining direct and indirect injuries, taking into consideration such factors as replacement value, use value, and the ability of the ecosystem or resource to recover. 42 U.S.C. § 9651(c)(2) (1982).
25 42 U.S.C. § 9651(c)(2). For convenience, citations to all the relevant rule makings for the
dures for simplified assessments requiring minimal field observation, called “type A” assessments. These assessments typically will be done with a simple computer model. “Type B” assessments address larger impacts case-by-case and require a significant amount of field work.

The only avenue to recovery of natural resource damages is through private responsible parties, although CERCLA allowed claims against the federal Superfund prior to the 1986 amendments. Damages for resource injuries caused before CERCLA was enacted theoretically are not available, but, since 1986, the statute includes the “discovery rule.” The states have adopted this rule in increasing numbers in recent years as their statute of limitations on toxic personal injury claims. The discovery rule enables a party to file a claim for harm that is “discovered” long after exposure to a disease agent, for example, when cancer appears after a long latency period. Thus, actions for natural resource damages must be filed within three years of the later of the date of discovery of the loss and its connection to the release, or the date on which the regulations were promulgated. At sites or facilities where remedial action is pending, an action for damages must be commenced within three years after completion of the remedial action.


26 CERCLA § 9611 still provides for natural resource claims against the Superfund so long as all administrative and judicial remedies to recover from the liable parties have been exhausted. 42 U.S.C. § 9611(b)(2)(A) (1982 & Supp. IV 1986). Covered costs include the cost of assessing the injuries to natural resources from a release and compensation for the costs of restoring or replacing the resources. Id. § 9611(c)(1)–(2). No Superfund money may be used for the natural resources if the President determines that all of the Fund is needed for response to health threats. Id. § 9611(e)(2). Provisions of § 9611, however, have been rendered temporarily inapplicable by SARA § 517(a), which amended the Internal Revenue Code of 1986 to exclude Superfund expenditures for natural resource purposes under § 9611. 26 U.S.C. § 9507(c)(1)(A) (Supp. IV 1986).


28 42 U.S.C. § 9613(g)(1). The trustee must give the President and any potentially responsible party sixty days notice before filing suit. Also, a trustee may not commence action for
B. The Trusteeship of Natural Resources

The concept of state or federal government acting as a trustee is not new. The concept functions like trust arrangements made by either legislatures by special enactment or by the courts on an ad hoc basis after a hearing, for example, for the senile or for unborn children in contested wills. The California legislature has even given public-interest organizations standing to sue to protect works of fine art.29

To counteract environmental disruption, the states have brought suits parens patriae or under the public trust doctrine of the common law to protect natural resources, as well as under certain public trust statutes.30 Courts have steadily expanded the public trust concept beyond application to submerged lands, the foreshore, and navigable waters to encompass injuries to parks, non-navigable water, air, land, wetlands, ecological values, and water quantity as well as quality.31 The doctrine retains vigor, as evinced by the Supreme Court's decision last year in Phillips Petroleum Co. v. Mississippi,32 but has roots in early nineteenth century state law.33 Yet the law has still not settled whether a state suit parens patriae will support an action for damages as well as injunctive relief.34 Perhaps for this reason, about sixty percent of the states have authorized actions for money damages for injury to fish and wildlife.35

The federal government exercises broad trust-like authority under organic legislation for parks, forests, and public lands. The only close

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29 CAL. CIVIL CODE § 989(C) (West Supp. 1988).
34 Halter & Thomas, Recovery of Damages for Fish and Wildlife Losses Caused by Pollution, 10 Ecology L.Q. 5, 10 (1982).
35 Id. at 9.
federal analogy to state trust concepts, however, is the federal legal trusteeship of Indian tribes and lands. 36 Hence, no federal trust doctrine goes as far as the Superfund in making money damages available when public natural resources are injured. Because the concept of a trustee of natural resources is specifically legislated by Superfund, 37 with the broad implied fiduciary obligations that accompany the trust relationship as it exists throughout Anglo-American law, one may ask whether the trustee owes obligations toward natural resources—the "corpus" of the trust—that are not spelled out in Superfund. Like bank officials who are liable to beneficiaries for their mishandling of trust funds, a natural resource trustee's failure to perform fiduciary duties toward resources may be actionable at the instance of private citizens, the beneficiaries of the trust. Arguably, section 310 of Superfund (the citizen's suit provision) affords a basis for such action. 38

In the broadest sense, of course, government officials are "trustees" of resources that they are charged by statute to administer in the public interest. No special fiduciary duties attach to this routine administration of public natural resources, although a leading commentator on the evolution of environmental law has observed that, on the state level, the public trust doctrine may function procedurally like the state version of the federal judicial "hard look" doctrine. 39 Routine judicial review of administrative action aside, any cause of action against the federal government for alleged failure to administer public resources properly must be explicitly granted by statute. But the Superfund is different: it specifically mentions the "trustee," sets up an appointment process, gives the trustee certain duties, and empowers the trustee to bring legal actions to protect the trust corpus. The trustee is not an ordinary government official; a trust is not a routine resources management tool.

39 1 W. ROGERS, ENVIRONMENTAL LAW § 2.20, at 162-64 (1986). Rogers further notes, however, a difference between "hard look" procedural review and application of the public trust doctrine: the public trust doctrine is designed to protect the public "from reallocations favoring narrow constituencies." Id. at 164. Allowing private parties to injure public natural resources in return for payment of damages for lost public use values erodes the public trust concept of impeding the flow of resources away from the public domain. Restoration or replacement is more appropriate under the public trust concept of natural resources.
C. Program Implementation

1. Implementation of the Site Cleanup and Natural Resource Damage Programs

The Superfund program has worked well for quick emergency containment of spills and fires, and has stimulated negotiated cleanups at the older, more stable sites. Yet, to date, only twenty-nine sites have been cleaned up from the NPL of 951 sites. The government’s own estimate of future cleanups sets the “half-life” of site cleanup past the millennium (twenty-five to thirty sites a year), with the current list to be completed around the year 2020 at a total cost of tens of billions of dollars. Federal studies indicate that many more sites may eventually be placed on the NPL, with the result that cleanups may stretch sixty years into the future.

Amendments to Superfund in 1986 were redolent of the tinkering and “mid-course corrections” that Congress made in other major environmental statutes in the last decade. The Superfund amendments failed to address major ambiguities in the liability provisions of the statute, denied funding adequate to correct the abandoned waste site problem, and did not effectively alter the schedule for cleanup. Further, many believe that the injection of regulatory standards from other environmental statutes directly into the veins of the struggling remedial program may prove to be a coagulant fatal to Superfund in the next few years. By defining how “clean” a cleanup must be by applying regulatory standards from other environmental statutes—standards that arguably should be used only for entire categories of point sources of industrial pollution—Congress may have denied EPA flexibility vital to tailoring remedies case-by-case to address the tremendous variety of Superfund sites.

41 Moorman, supra note 40, at 3-4 (referring to presentation made by J. Winston Porter).
44 Moorman, supra note 40 (discussing how the Applicable or Relevant and Appropriate
The natural resource damage recovery and remedial programs have moved forward slowly, but for different reasons in each case. While EPA has poured enormous effort into the remedial program, and has obtained favorable judicial precedents for its broad interpretation of strict and joint and several liability, causation, and defenses, the Department of Interior has given the natural resource damage provisions little attention.\(^{45}\) The remedial program thus has too many chefs in the kitchen, while the natural resource damage provisions have too few.

The Department of Interior did not draft the rules governing natural resource damage assessments until after the two-year statutory deadline for their promulgation had expired,\(^{46}\) and did not finish the rules until 1987, four years after the deadline period.\(^{47}\) As has frequently happened with guidelines under other environmental statutes, states and environmental groups had to sue to force production of these rules.\(^{48}\) Similarly, environmental groups and ten states have challenged the final rules, alleging that they provide inadequate compensation.\(^{49}\) Some members of Congress attacked the Department’s performance and tried to change it in the 1986 amendments.\(^{50}\) A suit to recover natural resource damages from the federal Superfund resulted in a federal circuit court decision rejecting as dilatory the administration’s “preauthorization” scheme for processing several billion dollars in natural resource damage claims filed by state trustees.\(^{51}\)

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\(^{46}\) 42 U.S.C.A. § 9651(c) (West Supp. 1988).


2. Integration and Coordination of Remedies, Removals, and Natural Resource Damage Recovery

The text of Superfund leaves many key problems unresolved, as is usual with complex legislation that delegates implementation to an administrative agency. Rulemaking to address these unanswered questions is partially provided in the EPA’s NCP and by the EPA’s NPL of sites. The Department of Interior also produced the natural resource guidelines by notice-and-comment rulemaking.

The process of EPA elaboration of Superfund’s meaning has not ended, however, with notice-and-comment rulemaking. EPA has prepared hundreds of pages of informal Guidance Memoranda that spell out EPA’s program plans and expectations in exhaustive detail. It taxes the abilities of Superfund lawyers to keep track of what guidance EPA has proposed, finalized, withdrawn, and awarded in this gray world of agency policy-making. Whether these materials are “law” is a less settled question.

The NCP, the Department of Interior’s guidelines, and EPA Guidance Memoranda govern the relationship of the natural resource damages program to the dominant removal and remedial programs. EPA and the Department’s implementation policy for the natural resource damage provisions of Superfund seems to be comprehensive at first. Federal action under the removal and remedial programs and actions under the natural resource damage program begin more or less together, but then they gradually diverge. First, EPA must notify trustees if a potential natural resource injury exists. (Like-
wise, if the trustee learns of the potential injury first, the trustee must notify EPA.)\textsuperscript{55} In a remedial situation, based largely on data in the RI/FS, the trustee conducts a "pre-assessment screening" to see if a full assessment is necessary.\textsuperscript{56} The trustee must verify that ordinary response actions will not remedy the natural resource injury adequately.\textsuperscript{57} If a full assessment is necessary, the trustee must prepare an assessment plan covering assessment costs and scientific and economic methodologies.\textsuperscript{58} The potentially responsible parties have to be invited to help define and participate in the assessment.\textsuperscript{59} The trustee is supposed to coordinate assessment preparation with the lead agency under the NCP.\textsuperscript{60}

In the assessment plan, the trustee must establish that injury in fact did occur and that the responsible party's discharges or releases caused the injury.\textsuperscript{61} The standards for discharge, release, and causation appear to parallel the generous standards of the removal and remedial programs, as they should.\textsuperscript{62} In quantifying the damage, the trustee must determine the decrease in the "level of services" which the resource provides by comparing the service level before injury to that which will exist after the response is completed.\textsuperscript{63} Finally, the trustee must seek either cost of restoration or replacement or diminution of use values, whichever is less.\textsuperscript{64} The Department of

If the OSC/RPM's preliminary assessment of a release indicates that natural resources have been or are likely to be damaged, the trustee is to be notified so that the trustee may initiate appropriate action under 40 C.F.R. § 300.74(b). These potential actions include requesting the lead agency to seek judicial or administrative action under CERCLA § 106 to abate imminent hazards to the public health, welfare, or environment; requesting the lead agency to remove the hazardous substance or to provide for remedial action under CERCLA § 104; and initiating action against the responsible parties under CERCLA § 107(a). 40 C.F.R. § 300.74(b)(1)–(3). The trustee's main responsibilities, however, are to assess damages in accordance with CERCLA § 301(c), to seek recovery of the damages and assessment costs from the responsible parties, and to devise and carry out a plan for the restoration, rehabilitation, or replacement of the natural resource. \textit{Id.} § 300.74(a).

\textsuperscript{55} 43 C.F.R. § 11.20(b) (1986).
\textsuperscript{56} \textit{Id.} § 11.23(a). This two-step process is strongly reminiscent of the threshold determination of whether a proposed federal action will have a significant enough impact on the environment to require an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA), and is just as likely to cause controversy in the future. \textit{See generally} D. MANDELKER, NEPA LAW AND LITIGATION § 8:46 (1984).
\textsuperscript{57} 43 C.F.R. § 11.23(e)(5).
\textsuperscript{58} \textit{Id.} § 11.31(a)(1), (2).
\textsuperscript{59} \textit{Id.} § 11.31(a)(4).
\textsuperscript{60} \textit{Id.} § 11.23(f).
\textsuperscript{61} \textit{Id.} § 11.61(a).
\textsuperscript{62} \textit{See infra} note 134 and accompanying text.
\textsuperscript{63} 43 C.F.R. § 11.72.
\textsuperscript{64} \textit{Id.} § 11.35(b)(2).
Interior's regulations make clear that only injury to "public," not "private," interests are recoverable, that damages are compensatory not punitive, and that any recovery is only for harm beyond that remedied in a Superfund response action.

Two observations are appropriate here about the administrative implementation of the natural resource damage provisions. First, damage to natural resources alone will not cause EPA to place a site

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65 Id. § 11.35(b)(2).
66 See id. § 11.80(b).
67 See id. § 11.70. Notice that the various procedures mentioned here do not capitalize upon two important opportunities. First, they do not require the RI/FS process and the record of decision (ROD) to become the primary vehicle for pursuing natural resource cleanup and damage recovery in remedial situations. A separate natural resource damage process gradually diverges, albeit with coordination. Placing primary emphasis on the basic RI/FS-ROD process might strengthen the natural resource damage program, although some site cleanups may be slowed further by the slowness with which federal trustees may discharge their responsibilities.

EPA's internal directives on the RI/FS and ROD processes only briefly mention the natural resource damage assessment process. See Guidance on Remedial Investigation Under CERCLA, EPA Office of Solid Waste and Emergency Response (OSWER), (OSWER Directive No. 9355.0-06B June 1, 1985) (§ 6.7.2 calls for coordination with the Department of Interior's Office of Environmental Project Review when natural resources are affected); EPA OSWER, Guidance on Feasibility Studies Under CERCLA (OSWER Directive No. 9355.0-05C June 1, 1985) (§ 4.5.7 calls for consultation with the Bureau of Land Management, the Forest Service, and the Fish and Wildlife Service as potential sources of useful advice). The directive on preparation of decision documents dictates that the involvement of other federal agencies in the RI/FS process is "appropriate." EPA memorandum by Jack W. McGraw, Acting Assistant Administrator, Preparation of Decision Documents for Approving Fund-Financed and Potentially Responsible Party Remedial Actions Under CERCLA at 3 (OSWER Directive No. 9340.2-01 Feb. 27, 1985). The directive does not call for such participation in the final ROD or enforcement decision. Id. at 4. It is interesting that the Departments of Interior and Agriculture, the nation's largest public land managers, are not included in the short list of examples of agencies to be consulted. Id. at 3. A more recent directive calls for notice to the trustee as required by CERCLA § 122(j) and promises that "additional guidance on coordination with Federal Trustees will be developed." EPA OSWER, Implementation Strategy for Reauthorized Superfund: Short Term Priorities for Action, (OSWER Directive No. 9200.3-02 Oct. 24, 1986). The additional guidance is not yet developed.

Second, the procedures required by the Department of Interior's regulations do not make provision for natural resource damage administrative orders. Federal policy might formalize through Guidance Memoranda the federal trustee's request that restoration be carried out or damages be paid. The guidance provision for an administrative hearing might achieve two objectives that would strengthen the trustee's hand: (1) treble damages for refusal to comply with an administrative order if suit must be brought to compel compliance; and (2) use of the rebuttable presumption in an administrative proceeding, as the statute requires. The Department of Interior takes the view that the statutory provision for use of the rebuttable presumption in administrative proceedings applies only to claims against the Fund.

Thus, the author cannot agree with Habicht's positive endorsement of the federal administrative guidance. See Habicht, The Expanding Role of Natural Resources Damages Claims Under Superfund, 7 VA. J. NAT. RESOURCES L. 1, 17-18 (1987).
on the NPL. Health risk is at the core of NPL status. NPL status is, however, necessary for top priority federal attention. The Superfund does not require a site to be on the NPL for natural resource trustees to seek damages, but trustees will face tremendous obstacles if their target sites are not on the list. Indeed, there has been litigation over the ability of responsible parties to recover costs from others when the expenditures were incurred prior to NPL status or were arguably incurred in a fashion inconsistent with the NCP.\textsuperscript{68}

Second, because a natural resource damage assessment may be “tacked on” to cleanup plans at priority NPL sites, they may not receive adequate attention. According to lawyers for responsible parties, EPA has had difficulty getting the trustees to formulate damage assessments in a timely manner. Personnel for resource damage assessments is limited. The Superfund cannot be used to pay for natural resource damage assessments after the 1986 Amendments.\textsuperscript{69} Where RI/FS costs may approach $1 million, only a few thousand may be available for determining natural resource damages. Finally, observers report that, in some instances, resource damage claims appear to have become an expendable chip in bargaining over cleanup settlements. Consequently, natural resource damage evaluations may be incomplete, recoveries may be less than desirable, and remediation may be delayed.

A possible conclusion is that the remedial and natural resource damage programs should proceed separately from each other. This view contradicts the current approach of close administrative coordination. To an extent, it also contradicts both logic and intuition, but administrative realities may in fact confound both from time to time.

III. SUPERFUND WITHIN THE CONTEXT OF FEDERAL REMEDIAL AND COMPENSATORY LEGISLATION

Congress has not been as eager to enact remedial and compensatory environmental measures as it has preventive environmental regulatory statutes. Still, Superfund is part of a federal paradigm for remedial and compensatory legislation that has been gradually

\textsuperscript{68} Artesian Water Co. v. New Castle County, 659 F. Supp. 1269, 1277–79 (D. Del. 1987) (holding that in order for party to recover response costs, response action must be consistent with NCP); Pinole Point Properties, Inc. v. Bethlehem Steel Corp., 596 F. Supp. 283, 289–90 (N.D. Cal. 1984) (stating that consistency with NCP, not appearance on NPL, is all that is required for recovery of response costs).

emerging for a number of years. If the agencies and courts interpret and implement the natural resource damage provisions of Superfund consistently with this basic paradigm, recoveries will be easier to obtain and will span a variety of types of injury. This result is possible because the paradigm assumes the relaxation of standards of liability, proof, and procedure that otherwise would apply under the common law and traditional norms of the judicial process.

A. The Recent Emergence of Federal Remedial and Compensatory Legislation

Historically, all environmental law was common law. At common law, if substantial problems of proof and legal action could be overcome, courts would award money damages to compensate a private person for "environmental" harm or would prevent potential injury by awarding a prohibitive injunction. By the twentieth century, as part of a wider movement promoting legislative solutions to social problems, federal and state governments had put in place a few rudimentary statutes to prevent environmental harm. The common law had proved too narrow to deal comprehensively with the community-wide disruptions typical of environmental degradation. These early statutes addressed future harms and redressed public rather than private wrongs. By the 1970s, Congress and state legislatures had enacted sweeping precautionary and environmental protection measures. The common law has been reduced to providing interim relief, pending likely regulation.

70 Most commentators agree that the common law is a seriously flawed system for providing general environmental redress. A minority think that there are distinct advantages in having common law judges decide environmental cases. See Furrow, Governing Science: Public Risks and Private Remedies, 131 U. PA. L. REV. 1403, 1456–64 (1983).

The movement from common law to statute that has taken place over recent decades throughout the American legal system has implications far beyond the confines of environmental law. See G. Gilmore, The Ages of American Law 95 (1977). As one noted judge wrote, "The hydra headed problem is how to synchronize the unguided missiles launched by legislatures with a going system of common law." Traynor, Statutes Revolving in Common Law Orbits, 17 CATH. U.L. REV. 401, 402 (1968). Yet the possibilities for a fruitful, creative tension between common law and statute have been noted and encouraged by several outstanding scholars of our jurisprudence. See, e.g., Friendly, The Gap in Lawmaking—Judges Who Can't and Legislatures Who Won't, 83 COLUM. L. REV. 787 (1963); Landis, Statutes and the Sources of Law, in HARVARD LEGAL ESSAYS 213 (1934); Pound, Common Law and Legislation, 21 HARV. L. REV. 383 (1908); Stone, The Common Law in the United States, 50 HARV. L. REV. 4 (1936). Searching for a role for courts in a statute-dominated era, Dean Calabresi has explored whether courts should take it upon themselves to invalidate outmoded statutes that no longer fit within the wider fabric of American law. See G. CALABRESI, A COMMON LAW FOR THE AGE OF STATUTES 163–66 (1982).
The statutory displacement of the damages remedy has occurred at a much slower pace than displacement of the preventive injunction. Legislatures have been slow to provide remedial funds or compensation to wronged parties, whether from the public treasury or through a government-supervised transfer of funds from the persons responsible for harm. The main reason for this slower pace is the reluctance of legislatures to supplant the fault and cause-based civil law system. Despite this reluctance, legislatures have become more willing to act where harm is broadly diffused and its causes equally widespread and uncertain. In fact, in recent years, legislatures have deliberately relaxed the strict common law requirements for fault and causation in order to fashion broad redistributive corrective and compensatory programs that supplant the common law tort compensation system.\(^{71}\)

Congress has acted frequently enough in recent years to establish a general paradigm or template for federal ameliorative, restorative, and compensatory legislation. Superfund is not the first statute to fit the emerging template, nor is it the first to provide funds for repair and compensation for natural resource damage.\(^{72}\) Although

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\(^{72}\) For those who believe Superfund to be unprecedented, a look at these statutes is instructive. Indeed, §§ 104(a) and 106 are taken virtually verbatim from earlier legislation. Anderson, Negotiation, supra note 52, at 277. Superfund's funding mechanism is not unique; the pattern for this provision was established years earlier in the oil spill liability and abandoned mine reclamation acts. 33 U.S.C. § 1321(c)(2), (e) (1982) (oil spill liability); 30 U.S.C. §§ 1221–1232 (1982 & Supp. IV 1986) (mine reclamation). Another of CERCLA's features, suits against responsible parties to recoup response costs when the conduct giving rise to the liability occurred before enactment of the law, is also found in Asbestos School Hazard Detection and Control Act of 1980, 20 U.S.C. § 3607 (1982).

Superfund may appear to be a potpourri of elements invented or borrowed from other models in the corpus of federal legislation. It appears to draw upon all the basic legislative strategies used by Congress thus far to legislate environmental problems. One hardly needs to be reminded that Congress has relied primarily upon command-and-control regulation in controlling pollution. In Superfund, Congress did not require the EPA to set ambient or performance standards specifying the degree or type of cleanup required at the sites. The 1980 Superfund legislation only called for quasi-legislative rulemaking in the National Contingency Plan; agency policy in fact was set out in informal guidance memoranda that were not regulatory in nature. Anderson, Negotiation, supra note 52, at 287–92. In 1986 at the EPA's request, however, Congress specified that site remedies must meet all "legally applicable . . . [or] relevant and appropriate" standards required by the other environmental regulatory statutes. 42 U.S.C. § 9621(d)(2)(A) (Supp. IV 1986). This brief language makes Superfund much more like the Clean Water Act and the Clean Air Act, although this onerous requirement flies in the face of the need for individually tailored cleanup at most sites. See, e.g., Brown, The Settlement Dilemma (A Tragedy in Two Acts), 5 HAZ. WASTE REP. 12 (Dec. 12, 1983); Rogers, Three Years of Superfund, 13 Envtl. L. Rep. (Envtl. L. Inst.) 10,362 (1983); Superfund—How to Rebuild a Badly Damaged Program?, 2 ENVTL. F. 17 (June 1983) (panel
Congress did not spell out its approach clearly, the federal courts, spurred by EPA and Justice Department arguments that the statute had to be given the broadest possible reading, have completed the discussion). Conversion of Superfund to a quasi-regulatory statute, more like the Clean Water and Clean Air Acts was perhaps inevitable, because the EPA is quintessentially a regulatory agency. Its basic mission and raison d'être is regulation. (If one uses a hammer often, then everything begins to look like a nail.). Other hallmarks of federal environmental regulation are (1) shared responsibility with the states and (2) action-forcing deadlines. In Superfund, Congress delegated limited authority to obligate federal funds, to participate financially (generally 10%), and to settle claims. Yet Congress dropped all pretense of sharing basic responsibility with the states by refusing to delegate to them the implementation of federal standards. The usual action-forcing deadlines were conspicuously absent from Superfund in 1980, but as agency estimates of the time needed to complete the task reached into the next century, Congress disciplined the EPA (not the states) in 1986 by putting the EPA on a schedule of quotas for cleanup.

Superfund is also a multi-billion dollar public works program and in this respect suggests the Clean Water Act approach, which combines industrial point-source category regulation with massive funding for municipal sewage treatment plants. CWA, 33 U.S.C. §§ 1281-1328 (1982). The Clean Water Act also attempts to internalize costs to industrial discharges to publicly owned treatment works but leaves the municipalities to shoulder most operational costs. Still, the Clean Water Act provides for future water purification only, passes the funds to the states, does not authorize direct federal construction projects, and does not recover full costs for the broad array of water polluters. Id. Parallels to federal spill and disaster legislation over the years are much closer, although it is striking how little attention these resemblances have received from courts, legislators, and policy analysts. New Deal programs like the Civilian Conservation Corps and the Tennessee Valley Authority foreshadowed Superfund. Congress also adopted a number of Superfund-like federal relief acts over the years to permit the federal government to assist state and local governments in responding to disasters. In the last fifteen years federal programs specifically designed to attack hazardous conditions that cannot be ameliorated except by direct clean-up action have proliferated. The text addresses the closest parallels.

Environmental legislation is rarely "self-executing," that is, rarely does a federal environmental law state a broad environmental protection standard and entrust its interpretation and enforcement to the courts as do, for example, the Michigan Environmental Protection Act (Anderson-Rockwell Environmental Protection Act, MICH. COMP. LAWS ANN. § 14.528(201)-(207) (West 1970)) or the Sherman and Clayton Antitrust Acts (15 U.S.C. §§ 1-36 (1982 & Supp. IV 1986)). Large agencies interpret and apply detailed environmental standards in the first instance, with courts playing a limited back-up role. Superfund is no exception. Superfund contemplates deferential judicial review of policymaking, judicial enforcement if administrative enforcement fails or is challenged, preserves individuals' common law remedies for damages, and provides, as do most environmental regulatory statutes, for an immediate resort to the courts by the government when an imminent and substantial endangerment threatens natural resources.

Superfund is also like other environmental statutes in other respects. Superfund copies the reporting and information disclosure requirements of other environmental laws, especially since the imposition in 1986 in SARA of the public right to know requirements in the wake of the Bhopal disaster in India. Shabecoff, Industry To Give Vast New Data On Toxic Perils, N.Y. Times, Feb. 14, 1988, at 1, col. 1. In its national contingency plan and national priority list, which bring out the systematic and comprehensive side of the statute, Superfund appears much like the environmental planning statutes such as the National Environmental Policy Act, Federal Policy in Management Act, and the National Forest Management Act.
task. Not since the National Environmental Policy Act of 1969 have the federal courts played such a seminal role in shaping a statute into a coherent and powerful tool to carry out federal environmental objectives. Their aggressive role has obvious implications for the future implementation of Superfund's natural resource damage provisions.

B. The Elements of Federal Remedial and Compensatory Legislation

The emergence of a general federal approach to ameliorative and compensatory legislation has ramifications that reach far beyond the scope of this Article. Further, the elements of this paradigm are not equally applicable to an analysis of Superfund’s natural resource damage provisions. In brief, the basic elements of this paradigm are:

1. Liability Standards
   In the federal paradigm, strict and joint and several liability are mainstays. Liability without regard to fault is widely acknowledged as vital to the theory of modern accident injury compensation. Interestingly, Superfund does not expressly mention either strict liability or joint and several liability. Relying on legislative history, the courts have inferred that both apply to Superfund. Predecessor statutes providing for oil and hazardous substance cleanup in deepwater ports, along the route of the trans-Alaskan oil pipeline, and over the continental shelf and other submerged lands, impose the same liability.

2. Funds and Fees
   Federal cleanup funds were established by the 1972 Clean Water Act, the 1974 Deepwater Port Act, the 1978 Oil Spill

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76 Deepwater Port Act of 1974 § 1517(d), (e), 33 U.S.C. § 1517(d), (e) (Supp. IV 1986).
80 Id. § 1517(f).
Superfund, and the 1973 Trans-Alaskan Pipeline Authorization Act. Generally, Congress imposed fees on the generators of hazards to create and replenish these funds. Although Congress designated these funds to clean up future spills, Superfund largely addresses past conduct. In this regard, Superfund more clearly resembles the black lung benefits and abandoned mine reclamation programs.

3. Government-initiated Remediation

Superfund's predecessors also placed the burden on the federal government of taking direct action, but only if prompt private remediation was not possible. Private parties with a defense could often recoup their remediation costs from other responsible parties. These earlier statutes preserved subrogation and contribution more clearly than in Superfund.

4. Administrative Decisionmaking and Fact Finding

We live in an "administered" society. Under the paradigm statutes, federal agencies carry out study and cleanup; they control the apportionment of responsibility between state and federal governments; they write regulations defining hazard, responsible parties, remediation and compensation eligibility, and remediation priorities.

In addition, federal agencies largely determine the role courts will play through guidelines and agency enforcement policies. Under Superfund, the courts make the final damage awards, but the statute authorizes the Department of Interior to write regulations that provide the district courts with guidelines on the sufficiency of evidence or proof necessary to prevail in a natural resource damage suit. Such statutory authorization represents but one instance of how, under the emerging paradigm, the courts' traditional decisionmaking processes are subtly redefined to make them more like administrative tribunals than traditional common law courts.

5. Shifting the Burden of Proof

Whether or not coupled with agency regulations, the practice of shifting the burden of going forward with the evidence to

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82 Id. § 1653(c)(4), (5).
83 The former requires coal mine operators to pay into a federal fund to compensate pre-1974 injuries and to be held liable to miners who discover that they have the disease after 1974, while the latter imposes a fee on the current coal mining industry for cleanup of abandoned mines. 30 U.S.C. § 1232 (1982).
86 Id. § 1321(g), (h). The Clean Water Act demonstrates that when Congress wants to establish a right, such as contribution, it can do so by express language.
88 The phrase "burden of proof" loosely refers to three separate burdens that must be
the generators of hazards is well established as part of Congress's overall strategy. Legislatures and courts create presumptions to shift the burden of proof to correct an imbalance resulting from one party's superior access to the evidence, to favor certain claims for social and economic reasons, and to facilitate the prompt resolution of claims.89 To a claimant, such a presumption may pose a redoubtable barrier if scientific causation is difficult to establish between a hazard generator and the victim, or if the measure of damages is subject to scientific debate over evaluation techniques.

Of these elements, the first, fourth, and fifth are of primary concern in analyzing Superfund's natural resource damage provisions, because Congress made extensive use of them in fashioning the natural resource damage recovery mechanism. Nowhere was the change more significant—and revealing—than in the departures Congress made from historic common law liability requirements.

IV. SUPERFUND AND THE COMMON LAW

The relationship between the common law and the natural resource damage provisions of Superfund is vital. Modern social welfare legislation takes the common law as part of its "deep background."90 Although Superfund in important respects draws upon public works legislation, command-and-control regulation, and disaster and spill programs, the most important source of law with respect to interpretation of the natural resource damage provisions has become the common law. In part, Superfund relies so heavily on common law because the courts are presumed to know and apply the common law. In addition, the Department of Interior views the common law as a limitation upon how broadly natural resource damage regulations can be written. Courts may disagree with the De-
department's reading, but, given the language of the legislation, the courts may not give claimants the benefit of a rebuttable presumption except where their claims have been made under the regulations.

If Superfund were heavily based upon traditional common law, the common law might act as a brake upon full natural resource damage recovery. But, if the statute is not constrained by traditional common law doctrines, trustees may succeed in obtaining larger awards which can then be applied to natural resources enhancement. In fact, Congress enacted Superfund provisions that impose liability beyond that required by common law and remove barriers to liability that would conventionally be available. Although these provisions represent only an awkward attempt to proceed beyond traditional common law, federal courts have executed fully the intent behind these provisions in the past eight years.

A. Strict Liability

The courts and the EPA today maintain that potentially responsible parties are strictly, jointly, and severally liable for cleanup or its costs. This liability applies as clearly to natural resource cleanup, restoration, and damages as it does to site and spill cleanup on private property.

Common law strict liability and Superfund strict liability resemble each other, but only to a point. The salient attribute of common law strict liability is that defendants will be found liable even if they have not violated any standard of care and even if they are not morally blameworthy. Through common law strict liability, defendants are forced to internalize the costs of damages that result from their activities by incorporating those costs into the price of goods or services. Strict liability is not a theory for shifting loss to or for punishing a "wrongdoer" but is a means for determining who will


93 See, e.g., Cities Service Co. v. State, 312 So. 2d 799, 804 (Fla. Dist. Ct. App. 1975). "The doctrine of strict liability at its core reflects the judgment that even if some harm is inevitable, the social value of some enterprises is greater than their costs, but if an enterprise's benefits exceed its costs, fundamental fairness requires at least that profits be net of any harms inflicted." F. ANDERSON, D. MANDELKER & A.D. TARLOCK, ENVIRONMENTAL PROTECTION: LAW AND POLICY 636–37 (1984).
ultimately bear the risks associated with activities that, in the broader scheme of things, may be socially desirable. 94

To this point, the two versions of strict liability converge. Beyond this point, however, there is a difference between what Congress saw in "strict liability" and what the trained common lawyer sees. First, common law courts have considerable discretion to decide which activities are hazardous. 95 They may balance injury against the value of the activity to the community if strict liability is appropriate. 96 In contrast, in the Superfund Congress instructed an agency to designate which wastes were hazardous and did not provide that high social utility would excuse any category of responsible parties. 97

94 The Senate Committee seemed to say that waste disposers had not been morally culpable or negligent in adopting prior waste disposal practices. Discussing the S. 1480 strict liability scheme, the Senate Committee Report remarked that often the choice of a responsible party is not between an innocent victim and a careless defendant, but between two blameless parties. In such cases the costs should be borne by the one of the two innocent parties whose acts instigated or made the harm possible. S. REP. No. 848, 96th Cong., 2d Sess. 33–34 (1980).

95 See Restatement (Second) of Torts § 520 (1977).

96 Several courts have been unwilling to extend strict liability to the activities that result in pollution-related injury, because those activities did not constitute a non-natural use of the land. See, e.g., Fritz v. E.I. Du Pont de Nemours & Co., 75 A.2d 256 (Del. Super. Ct. 1950); Turner v. Big Lake Oil Co., 128 Tex. 155, 96 S.W.2d 221 (1936). Cf. Cities Service Co. v. State, 312 So. 2d 799 (Fla. Dist. Ct. App. 1975) (defendant held strictly liable for damages resulting when its phosphate slime reservoir broke even though mining activities were common in the area). See also, Note, Strict Liability for Generators, Transporters, and Disposers of Hazardous Wastes, 64 MINN. L. REV. 949, 969 (1980).

Fleming James has remarked on the inappropriateness of community values as an additional factor to be considered in deciding if an activity is abnormally dangerous. F. JAMES, THE LAW OF TORTS § 14.4 (1956). (There is no reason that very valuable, but hazardous, activities should be exempted from strict liability; the explanation for the Restatement approach must lie in the inability of tort law to turn entirely away from fault.). The fact that courts purporting to apply strict liability consider defendant's conduct and the utility of his activities was not lost on environmental groups testifying on CERCLA's progenitors. The groups appraised the common law with uncommon insight and accuracy. See Hearings on Hazardous Chemicals Under the Federal Water Pollution Control Act Before the Subcomm. on Water Resources of the House Comm. on Public Works and Transportation, 96th Cong., 2d Sess. 188 (1980) (statement of A. Blakeman Early, on behalf of the Sierra Club); Hazardous and Toxic Waste Disposal: Hearing on S. 1341 and S. 1480 Before the Subcomm. on Envtl. Pollution and Resource Protection of the Senate Comm. on Envtl. and Public Works, 96th Cong., 1st Sess. 371 (1979) (statement of the Environmental Defense Fund, et al.).

97 Congress, in other words, has balanced relevant factors politically and decided to subject all statutorily defined hazardous wastes to a strict liability regime. Section 3(a)(1) of S. 1480, as reported out of the Senate Committee on Environmental and Public Works, July 11, 1980, specifically identified hazardous waste handling activities as ultrahazardous. There are, in the legislative history, numerous statements to the effect that for the purpose of CERCLA the manufacture, use, transportation, treatment, storage, disposal, and release of hazardous substances are ultrahazardous activities. See 126 CONG. REC. H11,799 (daily ed. Dec. 3, 1980)
Second, at common law a plaintiff must prove injury or imminent irreparable harm of a substantial nature. The Superfund dispenses with this requirement and adopts the preventive and precautionary endangerment standard which Congress has placed in most environmental regulatory legislation.

Third, the common law requires the plaintiff to show that the defendant's conduct proximately caused injury. In a radical departure from common law norms, the Superfund does not require proof that the waste generated, transported, or otherwise handled by a responsible party is the very waste that created a hazardous condition necessitating response activities. Thus, after incurring response costs consistent with the NCP, a plaintiff seeking reimbursement need only prove that the defendant is in the class of parties identified by the statute. Superfund does not require the plaintiff to prove that the defendant's waste was, for example, leaching into the groundwater. Rather, the plaintiff need only prove that the defendant's waste was present at the site that was cleaned up. Hence, Superfund liability may be more like enterprise or market share liability than traditional strict liability. The explanation for this difference in causal analysis is that Superfund provides a remedy for hazardous conditions and does not fix liability for ultra-hazardous or abnormally dangerous activities.

Fourth, a common law plaintiff may be subjected to a variety of defenses, including contributory negligence, assumption of the risk,
public duty of the defendant to engage in the activity, a plaintiff's unusual sensitivity, and intervening acts of others. In contrast, Superfund defenses under the reimbursement provisions are exclusive and different. Finally, Superfund imposes financial liability limits unknown to the common law.

As these differences illustrate, strict liability, a statutory doctrine imbedded in a modern administered welfare statute, departs significantly from the common law under Superfund. Common law balancing, causal requirements, defenses, and the like have no place in the statutory scheme. Congress's plan for implementing the stat-

106 CERCLA § 107(b) limits defenses to acts of God, acts of war, and acts or omissions of certain third parties. 42 U.S.C. § 9607(b) (1982). Section 522 of both Restatements of Torts have consistently stated that one conducting an ultrahazardous or abnormally dangerous activity is liable for harm even if the harm "is caused by the unexpectable (a) innocent, negligent or reckless conduct of a third person, or . . . (c) operation of a force of nature." RESTATEMENT OF TORTS § 522 (1938); RESTATEMENT (SECOND) OF TORTS § 522 (1977). In a caveat, the Institute has declined to express an opinion whether harm resulting from a third party act deliberately intended to bring harm about should be a defense to a claim of strict liability.
108 Certain sections of CERCLA affirmatively support imposition of a unique legislative type of "strict liability." Yet a judge trying to find specific statutory text indicating congressional intent to impose broad strict liability can grasp at only a few fragments; Congress left its texts incomplete in what must be called a mess.
Section 107 does declare forthrightly that four classes of responsible parties "shall be liable for" the cleanup costs associated with hazardous waste sites and for certain damages to natural resources. 42 U.S.C. § 9607(a) (1982 & Supp. IV 1986). Section 107 does not establish a standard of care for responsible parties, nor does it or its legislative history contain any suggestion that proof of reasonable care, or even utmost care, would absolve an astonishingly diverse array of parties—including those with extremely tenuous connections with sites—from the cost of cleanup. The defenses that are available to responsible parties—acts of war, God, and certain third parties—are not typical of the type of defenses that would be available if the § 107 plaintiff had to prove negligence. For example, if the standard of liability were negligence, one would expect that contributory negligence or assumption of the risk would constitute defenses. Yet § 107(b) precludes such defenses. Id. § 9607(b). A standard of negligence is involved in § 107(b)(3) which provides that an otherwise responsible party shall not be liable when the actual or threatened release is the result of "an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship . . . with the defendant (except where the sole contractual arrangement [is with] a common carrier by rail), if the defendant establishes . . . that he (a) exercised due care . . . and (b) took precautions against foreseeable acts or omissions . . . ." Id. § 9607(b)(3). The mention of a single fault-based defense for a common carrier contractor for waste shipment by rail shows strict liability is the rule, not the exception. See id. The third-party defense of CERCLA § 107(b)(3) relieves disposers of responsibility for the consequences of the conduct of parties unrelated to them either by contract, agency, or employment unless their acts or omissions were foreseeable. Id. The common-carrier-by-rail exception is the only time the defendants' due care will be available as a defense where privity exists. Plausible policy reasons for exempting defendants from liability for shipments
See, financially from a commercial activity internalize the health and environmental costs of that from hazardous waste disposal will be expected collectively to internalize the costs of cleaning up past disposal. "Strict liability, the foundation of S. 1480, assumes that those who benefit financially from a commercial activity internalize the health and environmental costs of that activity into the costs of doing business. Strict liability is an important instrument in allocating the risks imposed upon society by the manufacture, transportation, use and disposal of inherently hazardous substances." S. REP. No. 848, 96th Cong., 2d Sess. 13 (1980). "The most desirable system of loss distribution is one in which the prices of goods accurately reflect their
federal district and circuit courts seem almost unanimously to have endorsed this view.\textsuperscript{109}

\textbf{B. Joint and Several Liability}

A second intriguing example of the interplay of common law and legislation exists in Congress's handling of joint and several liability in Superfund. Joint and several liability and strict liability followed virtually identical paths of legislative evolution.\textsuperscript{110} As with strict

full costs to society." \textit{Id.} at 34. "The Stafford-Randolph compromise does not create new costs. It puts the costs on the sector most responsible for pollution and which benefits most from chemical production instead of on the victim or on the government, as it stands now." 126 \textsc{Cong. Rec.} S14,972 (daily ed. Nov. 24, 1980) (remarks of Sen. Tsongas). Nothing more, nothing less. If Congress meant anything more, it failed utterly to say so.

It is also true that the rationale offered for removing express strict liability was to leave the common law undisturbed. \textit{See infra} note 171 and accompanying text (Simpson-Stafford colloquy). But this seems to be an afterthought, offered up to obscure the real reason the phrase was removed: the bill's opponents could be placated to some extent by making the statute less explicit, a classic gambit used to secure passage of controversial legislation, no matter how much it may vex the justices. As we have seen, the common law was modified in five important aspects in Superfund.


\textsuperscript{110} Again, the statute does not explicitly impose joint and several liability; the phrase never appears in the statute. CERCLA § 101(32), 42 U.S.C. § 9601(32) (1982 & Supp. IV 1986), adopted the "standard of liability" of the Clean Water Act § 311, 33 U.S.C. § 1321 (1982), but unlike strict liability, joint and several liability arguably is not a "standard" of liability. Even if CWA § 311 does govern whether joint and several liability is to be applied under CERCLA, CWA § 311 seems to authorize rather than mandate a court to impose it. "Opinion of counsel" letters from the Department of Justice and the Coast Guard obtained by Rep. Florio and inserted in the final House debates so argue. 126 \textsc{Cong. Rec.} H11,788–89 (daily ed. Dec. 3, 1980) (letter of Alan A. Parker, Assistant Attorney General, Office of Legislative Affairs, and G.H. Patrick Bursley, Chief Counsel, U.S. Coast Guard) [hereinafter Parker]. Mr. Parker argued that because CWA § 311 allowed contribution, one must assume joint and several liability. He went on to argue that since CERCLA § 107(e)(2), 42 U.S.C. § 9607(e)(2) (1982), confirms a right to contribution, joint and several liability is implied under CERCLA. Parker, \textit{ supra}. Opportunities for the imposition of joint and several liability under CWA § 311 presumably are rare, because most oil spills involve but a single source. It appears that at the time CERCLA was enacted, no court had interpreted CWA § 311 as imposing joint and several liability. \textit{But see} United States v. A & F Materials Co., 578 F. Supp. 1249, 1254–55 (S.D. Ill. 1984) (relying on § 311 in determining that CERCLA imposed common law standards of joint and several liability). Likewise, Congress explicitly required joint and several liability in the draft bills, but dropped it from the final legislation, as it did a statutory right to contribution. Both § 3701(a)(2) of H.R. 7020 and § 4(a) of S. 1480 contained express provisions establishing strict, joint, and several liability. The legislative history indicates that Congress intended to impose joint and several liability. Although Senator Helms argued that the deletion of the joint and several language from the compromise bill that became CERCLA meant that such liability was not to be applied under the Act, 126 \textsc{Cong. Rec.} S15,004 (daily ed. Nov. 24, 1980), the better view is expressed by the sponsors of the bill. Senator Helms was an opponent of the bill, therefore his statements are entitled to little weight in construing the
liability, Congress was unclear what it intended by applying a common law concept *sub silentio* in a complex environmental cleanup statute. On the one hand, it seemed to want joint and several liability to follow "traditional and evolving principles of common law." On the other hand, the active participants in the legislative process appeared to be completely unaware of the confusing diversity of common law on point. Perhaps sensing this confusion, the chief House sponsor indicated that the bill would encourage the development of a federal common law of joint and several liability. Those following the debate believed that the courts would allow the government to collect its expenses or impose cleanup tasks on one or a few responsible parties and exit the case. There was no discussion of apportionment, that is, whether and to what extent each responsible party's share could be easily identified. These parties apparently would obtain court-supervised contribution from the remaining parties.

The state law weaves a tangled web, despite facile reference to black-letter rules contained in the Restatement of Torts by some
federal district courts in Superfund cases.\textsuperscript{114} Many members of Congress might have been surprised to learn that, under the common law most applicable to the waste site cleanup problem, the state court nuisance decisions, the rule allowed no joint and several liability as recently as thirty years ago. Rather, the court had to apportion.\textsuperscript{115} Moreover, some jurisdictions still insist that courts must apportion independently-caused nuisance damages according to each defendant’s share, stoutly maintaining in a triumph of reason over experience that in all cases the nuisance theoretically is no more or less than the sums of its discrete parts, and that the court must isolate each part, despite the practical problems of proof that often arise.

Debate over the fine points of state common and statutory law governing joint and several liability and contribution may “have heretofore been reserved to the quiet halls of academe and tweedy law professors,” but, for a long time after CERCLA was enacted, practitioners and government lawyers spoke of little else.\textsuperscript{116} The debate was occasioned by Congress’s silence on the issue of what law governed. Had the federal district courts applied the existing state common law of joint and several liability, apportionment, and contribution in deciding reimbursement and cleanup cases, chaos would have resulted. Instead, because Congress kept the common law well in the “deep background,” the federal courts were able to begin to fashion a federal common law.

V. ADMINISTRATIVE DECISIONMAKING AND FACT FINDING UNDER SUPERFUND

Superfund contains a provision that, on close analysis, may prove to be the most salient example in federal law of the alteration (some might say the corruption) of evidentiary standards to serve a legislative policy goal. The provision authorizes the Department of Interior to write regulations that, in effect, direct the courts to give extra weight to evidence on natural resource damage that is computed in a particular manner using approved methodologies.\textsuperscript{117}

\textsuperscript{116} Rodberg, Apportionment of Damages in Hazardous Waste Litigation, in HAZARDOUS WASTE LITIGATION 184, 185 (1982).
\textsuperscript{117} Supra note 25 (type A and type B rules).
Because of this alteration of evidentiary standards, the Department of Interior's regulations could become a sort of "primer" or scientific evidentiary manual instructing federal judges about how to analyze and apply complex technical methodologies for assessments of natural resource injuries. This provision, make no mistake, is highly novel. Courts are used to reviewing agency actions to determine if they are within the law, if the agency has based formal decisions on the substantial evidence in the agency’s record, or if more informal determinations are reasonable and may not be said, in the ritualistic phrase, to be arbitrary and capricious.\(^{118}\)

But it is quite another thing to authorize a federal agency to give a federal judge detailed directions on how to think about expert testimony in a plenary trial court action for damages. Some judges may become confused, even a little truculent. They may feel that they know a thing or two about how to find facts in a trial on the evidence. If Congress wanted the agency to determine the facts, judges may reason, then it could have vested the decision in an agency tribunal. On judicial review, the court then would gladly defer to the agency.

Not only may courts balk, exact statutory precedents apparently do not exist for the natural resource damages regulations. Congress has considered authorizing agencies to write regulations that give evidentiary weight to endorsement by federal agencies of particular personal injury etiologies and methodologies. The author made such a proposal in testimony to Congress in 1978.\(^{119}\) The twelve-member congressional study commission on toxic injury compensation endorsed the concept in 1982\(^{120}\) and similar proposals appear in model state statutes\(^{121}\) and articles.\(^{122}\) The heart of such proposals are federal agency regulations, variously called "criteria documents," "presumption documents," or "carcinogen catalogs," that would draw upon the literature on toxic substances and would certify to the trial court that a toxicant's disease-causing characteristics merit generous

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\(^{120}\) Superfund Study Group, supra note 11, pt. 1.


statutory presumptions and burden shifts that the court would apply in finding the facts and determining awards.

The Superfund's natural resource damage regulations and the rebuttable presumption parallel each other exactly. The problems that natural resource trustees have in proving substantial but difficult-to-measure environmental harms to public natural resources warranted both assistance for the courts by an expert agency, on the one hand, and presumptive, preferential evidentiary weight for the agency's determinations, on the other hand, even if Congress chose to vest the final word in the courts and not in the agency.

VI. BURDEN OF PROOF AND THE REBUTTABLE PREJUMPUSION

A procedural innovation can have as large or greater an impact on the outcome of a trial as can a doctrinal shift, as common law judges realized long ago. Borrowing from the courts, legislatures have mandated burden shifting in modern welfare statutes to promote policy objectives. In adopting the device of shifting the burden of proof, however, legislatures have sometimes strayed quite far from the burden shifting that the courts first employed in jury trials. As with the doctrines of strict liability and joint and several liability, Congress in Superfund adopted a burden-shifting rebuttable presumption that goes far afield from traditional procedural devices for allocating power to the judge and jury.123

Ordinarily, the plaintiff bears the burden of going forward with the evidence at every point in a trial.124 But the courts and legislatures created rebuttable presumptions to shift the burden of proof to correct the imbalance resulting from one party's superior access to the evidence, to facilitate the prompt resolution of claims, and to favor certain claims for social and economic reasons.125 These purposes were more easily achieved by reallocating power between judge and jury, which was the primary impact of creating presumptions.

A. Burden of Proof: The Judge v. the Jury

Power between judge and jury was realigned by reducing the otherwise heavy burden that a plaintiff would bear in going forward with the evidence at trial. In a jury trial, the rebuttable presumption

123 Supra note 24 (rebuttable presumption).
124 See supra note 88 and accompanying text.
125 See supra note 89 and accompanying text.
ordinarily has the effect of getting the claim to the jury more rapidly and under more favorable jury instructions than would otherwise be the case.\textsuperscript{126} In adopting a rebuttable presumption in Superfund, Congress intended to give the trustees a better chance of prevailing in cases involving difficult-to-prove ecological damage. By creating this presumption, then, Congress has placed its imprimatur on federal administrative determinations of methodology and fact.

The Superfund prescription goes further, however. The new prescription departs significantly from the current rules applicable to rebuttable presumptions in general. Under the current federal rule of evidence applicable to rebuttable presumptions,\textsuperscript{127} the intent, and certainly the effect, of the rule is to increase the number of cases decided by a jury. The policy of the rule is to increase the power of the jury in deciding factual controversies by reducing the power of the judge. By applying presumptions, a judge may try to keep a controversy from the jury or may try to require it to decide the case in a particular way.\textsuperscript{128}

Nevertheless, under Superfund it is unlikely that jury trials will occur, despite the Supreme Court's recent decision in \textit{Tull v. United States}\textsuperscript{129} and despite dicta in a recent Eighth Circuit decision to the effect that natural resource damages are "legal" in nature and therefore require a jury trial.\textsuperscript{130} No court has permitted a jury trial as yet in an action for Superfund response costs.\textsuperscript{131} One reason for no

\textsuperscript{126} The burden of proof [persuasion] is in practice largely a question of the proper phrasing of jury instructions; the burden of producing evidence determines whether the case is to be decided by the judge or the jury. Second, the issue of burden of proof arises only at the time of jury instructions, while the burden of producing evidence is at issue any time one or the other of the parties asks for a preemptory ruling from the court; \textit{i.e.}, on motions for nonsuit, directed verdict, or judgment notwithstanding the verdict. Third, the burden of proof can be shifted only as the result of the proof of a presumption, while the burden of producing evidence can switch from one side to the other as the result of the introduction of evidence as well as by operation of a presumption.

\textsuperscript{127} \textit{Fed. R. Evid. 301.}


\textsuperscript{130} See also \textit{United States v. Northeastern Pharmaceutical \& Chem. Co.}, 810 F.2d 726, 749 (8th Cir. 1986) (holding that because federal government's effort to recover response costs under CERCLA and RCRA constituted a request for equitable relief and not for legal damages, defendants had no right to a jury trial), \textit{cert. denied}, 108 S. Ct. 146 (1987).

\textsuperscript{131} See \textit{United States v. Ward}, 23 Env't Rep. Cas. (BNA) 1391, 1413 (E.D.N.C. 1985);
jury is that cleanup costs are "equitable" in nature, that is, restorative and restitutive, and do not penalize conduct so as to trigger a constitutionally guaranteed jury trial.\textsuperscript{132}

In addition, all "damages" recovered under Superfund, even "damages" for lost use between the time of injury and the time a final judicial determination is made, must be spent on repair or replacement of the lost natural resources.\textsuperscript{133} These statutorily required expenditures fulfill the traditional equitable purpose of restitution. This interpretation of the statute is also supported by recent Supreme Court cases holding that, where Congress has created modern statutory "public rights," these rights do not fall within the category of rights that the Founders intended to protect by jury trial.\textsuperscript{134}

Finally, Superfund itself implies that a jury trial will not be available, because the statute authorizes the rebuttable presumption, not only in claims brought to court, but also in administrative determinations, in which no jury ever sits.\textsuperscript{135} The availability of the presumption in administrative proceedings provides further evidence that Congress did not have traditional presumptions in mind, with their emphasis on judge-jury interactions, when it enacted the natural resource damage presumption.

\textbf{B. Use of Rebuttable Presumptions in Other Federal and State Statutes}

Modern legislative burden shifting has served not only to reallocate power between judge and jury but to move well beyond the strictures of causal proof which the common law requires. Presumptions that appear in numerous state workers' compensation laws almost always have survived judicial challenge,\textsuperscript{136} as have the generous presumptions that Congress placed in legislation to compen-

\textsuperscript{132} U.S. CONST. amend. VII.
\textsuperscript{133} 42 U.S.C. § 9607(f)(1).
\textsuperscript{135} 42 U.S.C. § 9607(f)(2)(C).
\textsuperscript{136} For decisions and cases involving over ten state statutes, see SUPERFUND STUDY GROUP, supra note 11, pt. 2, at 325, 336-37. For a discussion of the strengths and weaknesses of presumption in state occupational disease compensation statutes, see Note, Compensating Victims of Occupational Disease, 93 HARV. L. REV. 916 (1980).
sate coal mine workers for "black lung" disease.\textsuperscript{137} Such state and federal statutes shed light on how courts may interpret the Superfund's provision for a rebuttable presumption favoring the natural resource trustee's claim, and on how the Department of Interior might revise its natural resource damage regulations.

The presumptions in these statutes ensure that a wide variety of personal injuries are fully compensable and make a claimant's burden quite light in most instances. In fact, the trend is so strong that critics now claim that, if legislatures continue to replace traditional tort law causation and fault requirements with no-fault recovery funded by entities with only a tenuous connection with the injury, economic incentive and affordable insurance will disappear.\textsuperscript{138} Whether or not the critics are correct, Superfund's rebuttable presumption for natural resource damage deserves the same generous interpretation that other state and federal legislatively mandated rebuttable presumptions have received.

The expansiveness of modern legislative burden shifting can perhaps be illustrated best by examining briefly the 1970 federal legislation to compensate victims of black lung disease, a respiratory condition that afflicts miners and families who have breathed coal dust for long periods of time.\textsuperscript{139} The Secretary of Health and Human Services defines black lung disability by regulation, just as the Secretary of the Interior issues natural resource damage regulations under Superfund. Presumptions favor a claimant seeking recovery for death, black lung disease (pneumoconiosis), or respiratory impairment,\textsuperscript{140} just as a natural resource trustee enjoys a rebuttable presumption if a claim for damages is made under the Department of Interior's regulations.

For pre-1974 injuries, black lung claimants could proceed against a federal fund analogous to Superfund (and taxed to the mining industry).\textsuperscript{141} Beginning in 1974, black lung claimants must usually recover under state worker compensation laws or from mine oper-


\textsuperscript{138} Schmalz, Superfunds and Tort Reforms: Are They Insurable?, 38 Bus. Law 175, 176–79 (1982).


\textsuperscript{141} Superfund Study Group, supra note 11, pt. 2, at 118–24.
ators, the analogues to the Superfund's potentially responsible parties. Similarly, after 1986, natural resource trustees must proceed directly against potentially responsible parties. For recovery from operators, black lung claimants must use the procedural provisions of an older and yet more sweeping federal compensation statute, Longshoremen's and Harbor Workers' Compensation Act, a strict liability, employment-based statute providing for death benefits, permanent total and partial disability, and medical services. This latter statute also calls for regulations. Further, if a claimant merely establishes the fact of injury, a statutory presumption arises that all other relevant requirements for compensation have been met. Only substantial evidence to the contrary can rebut the presumption.

The draft Superfund legislation also included a rebuttable presumption favoring the personal injury claimant. The personal injury provision was removed at the last moment. Significantly, the bill listed over a dozen types of injury for which damages would be recoverable, in addition to natural resource damage. The rebuttable presumption was to facilitate recovery for medical expenses. Only natural resources survived the final triage, probably because natural resource damage recovery was popular with state governments. Victim groups were not well organized at the time.

VII. Application of the Natural Resource Damage Provisions by the Agencies and the Courts

Congress intended Superfund to be interpreted broadly. The courts have held that Superfund made potentially responsible parties even minimally involved with waste sites and spills individually, collectively, and strictly liable for all aspects of an agency-designed cleanup, by whomever performed, and whatever the cost. In this light, Superfund is a federal bill collectors' statute, identifying such a broad group of debtors that Congress may have reached the limit

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142 Id.
143 See supra note 26.
144 33 U.S.C. §§ 901-950 (1972)
146 S. 1480, 96th Cong., 2d Sess. § 4(a) (1980).
147 See infra note 165 and accompanying text.
149 See generally Glass, supra note 73, at 385.
of the constitutionally required rational nexus that must exist between the objectives of legislation and the scheme adopted to achieve them. Traditional fault-based theories of liability, defenses, causal requirements, measure of damage limitations, and procedural limits do not apply.

If Congress intended for these limitations to apply to the natural resource provisions, it gave no indication. Before the November 1980 elections, Congress was moving toward a simple and inclusive theory for the Superfund legislation: for every site or spill, complete remediation; for every injury already sustained by public or private property or persons, compensation. After the election, all damage compensation provisions were dropped—except damages to public natural resources. For them, the inclusive approach of the statute remained.

A. Department of Interior's Interpretation of the Natural Resource Damage Provisions

The Department of Interior has moved slowly and cautiously toward implementation of the regulations for damage recovery. Relying upon what it believes to be the common law rule, the Department has interpreted the statute to limit damage awards to either the diminution in value of a resource or the cost of replacing or restoring the resource, whichever is less.\(^\text{150}\) In addition, the Department's regulations award damages for harms incurred from the date of injury to the time awards are made for diminished use or restoration and replacement.

The Department's "either/or" rule severely constricts the natural resource damage recovery program, although other departmental interpretations of the natural resource damage provisions also restrict their effectiveness. Much hinges upon the Department's inter-

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150 The natural resource damage assessment regulations, 43 C.F.R. pt. 11 (1986), require the resource trustee to choose one of two economic methodologies for measuring damages. Id. § 11.33 (1987). The trustee is to select the lesser of replacement/restoration cost or diminution in use values as the measure of damages. Id. § 11.35(b)(2). When restoration or replacement of the damaged resource is not "technically feasible," damages are to be measured by diminution in use values only. Id. § 11.35(b)(3). Amendments to the damage assessment rules to conform to SARA have been published in final form, to take effect on March 23, 1988. Natural Resource Damage Assessments, 53 Fed. Reg. 5166 (1988).

Section 11.84(g)(1) of the damage assessment regulations provides that "if restoration or replacement is to form the basis of the measure of damages, the diminution of use values during the period of time required to obtain restoration or replacement may also be included in the measure of damages." Subsection (g)(2) describes the procedures for calculating the diminution in use values.
pretation of the statute. First, the interpretation precludes a trustee from pursuing either restoration or replacement costs when lost use seems small or lost use values when restoration or replacement damage is small. While this Article focuses upon the former problem, that is, the unavailability of restoration and replacement costs under the restrictive rule, some resource economists are just as concerned about limitations upon full recovery of lost use values. The Department’s approach also precludes mixed solutions such as some lost use compensation, some restoration, and some replacement. Second, the techniques mandated by the Department for valuing lost uses will often produce a lower damage estimate. Thus, restoration and replacement damages, while more reasonable and much easier to compute, will be awarded infrequently. Lost use values will be small because the rules permit only uses, strictly construed, to be counted. For example, if a lost resource has a value to citizens who do not use it but value its existence, or who want future use reserved as an option for future generations, these “non-use” values cannot be included in the damage assessment. Technically, the Department permits lost non-use values to be counted, but only when lost use values cannot be computed. Economists, however,  

152 See Kenison, Buchholz, and Mulligan, State Actions for Natural Resource Damages: Enforcement of the Public Trust, 17 Envtl. L. Rep. (Envtl. L. Inst.) 10,437–39 (1987). The authors, all in the Colorado Attorney General’s office at the time their article was written, covered the major criticisms. In addition to their observation that the Department’s definition of injury stresses physical and biological change instead of loss of public “services” (uses) of the damaged resource, see discussion at id. at 10,437. The authors point out that:

The requirements that: (a) restrict measurements of natural resource damages to resources that have “committed uses,” (b) limit damages to cost of restoration or lost value of “public” services, (c) limit use of intrinsic values only as a substitute for use value rather than as an additional category of value, (d) set an arbitrary and mandatory preference among measurement methods and (e) fail to include a flexible measure of damages for “special resources,” will significantly bias the damages recoverable by state and federal trustees.

Id. at 10,437.

See also the moving papers in National Wildlife Fed’n v. U.S. Dept of the Interior, No. 87-1266 (D.C. Cir.) (lawsuit challenging the natural resource guideline).


153 See supra note 5.
154 See supra note 6.
have never developed successful techniques for measuring non-use values alone, leaving use values out of the calculus. Their techniques wrap use and non-use values together to yield total values lost.

Third, the Department's interpretation of the natural resource damage provisions also restricts the provisions' effectiveness because, existence and option values aside, the techniques for computing just the lost use values are beset with major conceptual difficulties and measurement uncertainties. As a result, the techniques themselves tend to undervalue lost natural resources so that full restoration and replacement damages cannot be recovered. A sampling of measurement techniques sketches the case for primary use of restoration and replacement measures of damages. Rather than instruct the Department of Interior in detail as to the content of a new rule, the purpose of this Article is to demonstrate that Superfund does not require the restrictive choice of the lesser of lost use value or restoration/replacement as the measure of Superfund natural resource damages.

All methods approved by the Department focus on lost consumptive (for example, lumber, fish, game birds) and non-consumptive (for example, backpacking, scuba diving, birdwatching) uses of public natural resources. As noted, the Department essentially excludes option and existence values from consideration. Private markets may provide measures of damages, either because private resources identical to the public resources are traded in private markets or because inferential market appraisals can be made. But, individually and collectively, resource values in situ may exceed the surrogate prices that might be observed for them in available private markets. For example, values for the fish, shell fish, plants, and coral in a live reef cannot be reflected adequately in the prices charged for them by laboratory suppliers or shell and curiosity shopowners.

Direct consumer behavior will not produce prices if resources are not directly traded in markets, which is often the case with resources for which damages under the Superfund may be recovered. Econo-

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155 See supra note 1; see also E. YANG, R. DOWER & M. MENAFAEE, THE USE OF ECONOMIC ANALYSIS IN VALUING NATURAL RESOURCE DAMAGES: AN OVERVIEW (Envtl. L. Inst. 1983); Yang, supra note 151, at 10,311; Frishberg, Computing Natural Resource Damages, Calif. L. Bus., June 6, 1988, at 1, col. 1.

156 Supra note 152.

mists have developed methods to establish the money value of these resources. Aggregated travel expenses, entrance fees, the opportunity cost of travel time invested, and similar travel-related costs may reflect the value ("willingness to pay") of the natural resource visited. Evaluation of travel costs, however, while the most widely used measure of demand for outdoor recreation, applies only if travel has a significant impact on access to the resource. Travel cost valuation also suffers from researchers' inability to gather accurate data and from conceptual problems in valuing travel time, isolating damaged resources from undamaged ones, and establishing the condition of resources prior to injury ("the baseline").

Another indirect method, hedonic price valuation, does not fare better. This method tries to capture the value of a non-marketed resource as a measurable component of a marketed resource. For example, polluted air lowers housing prices and wages: price and wage differentials between clean and dirty air areas are taken as the value of the damages to the air. Yet, isolating lower public natural resource values as the cause in wage and price differentials is exceedingly difficult except in a very few instances. Further, resource availability will not affect wages and prices for many natural resource users. Indeed, many natural resources are highly valued because they have few nearby neighbors, for example, marshes, natural parks, and forests.

Another methodological line of attack, contingent valuation methods, depends upon asking interviewees directly what they would pay to maintain a resource in its present condition. These methods depend upon a complete and accurate description of the resource and upon the interviewees' honesty and ability to imagine that money actually changes hands. Strategic responses by interviewees may skew these expressed preferences, however, as opposed to preferences revealed in actual market behavior.

At the heart of these methodologies lies the concept that a use cannot be counted as lost and its money value counted as damages if another resource is available that provides the same services. Under the Department of Interior's approach, valuation techniques should fix the money value of the lost resources' uses or "services"
that cannot be provided by the next best alternative. For example, damages at a destroyed lobster fishery would be measured by the added cost of access to a substitute fishery, differences in market value between the two fisheries' lobsters, and other indicia of the value of the government formerly owned or controlled but has since lost.

Likewise, recovery for damage to a recreational beach would be limited to the money value of attributes unique to that beach, that is, its accessibility, swimming opportunities, suitability for sunbathing, and the like. In more precise economic terms, the Department's approach seeks to recover lost economic rents from resources it controls. For both the fishery and beach, these rents are measured by the money value of the extra effort a lobster fisherman or beach visitor would have to make to receive the same price (lobster) or satisfaction (beach) at a substitute, "next best" fishery or beach.

The problem with this economic framework is substitutability. Perfect substitution is conceptually contentious right at the outset. Many would argue that traditional notions of fungibility that might apply to cars, clothes, and houses, for example, simply do not apply to, say, marshes, rivers, and woodlands. Comparative degrees of less-than-perfect substitutability for marshes, bays, beaches, forests, scenic overlooks, birding sites, aesthetic rock formations, and scenic rivers are no less daunting than perfect substitution. Defendants will argue perfect or close substitutability while trustees will argue uniqueness, each marshalling their economic experts, but courts will probably be most impressed by the conceptual difficulty of comparing resources and of valuing lost resources with the techniques and frameworks offered. Economists usually have undervalued "soft" aesthetic and recreational values in similar circumstances.

This analysis brings the focus back to the Department's choice to force a selection of the lesser of diminution of use values and the cost of restoration or replacement, if the rebuttable presumption applies. If the trustee could focus on the costs of restoration or replacement from the outset, the result would more nearly conform to the overall congressional purpose in enacting Superfund: restoration of contaminated sites as near as possible to their prior condition. In any event, the statute requires that any and all damages recovered be spent on cleanup or replacement. Forced resort to lost use values as the measure of damages would simply reduce the amount available for cleanup or replacement in most cases.

Restoration and replacement are much easier to estimate than diminution of use values. Instead of approximating lost uses, esti-
mators compute the expense, for example, of dredging contaminated soil, containing and immobilizing wastes too extensive to relocate, and reintroducing plant and animal species. The problem that the estimators face resembles that facing the preparers of RI/FS at conventional Superfund sites, and the expertise garnered in this process may prove useful in estimating restoration of damaged natural resources. Admittedly, ecologists, botanists, biologists, and other scientists may disagree about the adequacy and feasible extent of restoration or replacement, despite recent progress in the new field of “restoration ecology.” But at least comparisons can be made “in kind” between the biological character of the resource before the injury, its scenic value, and the services it rendered, on the one hand, and the same attributes as provided by the restored resource or its replacement, on the other hand.

By using estimations of restoration and replacement, reduction of lost values to suspect dollar sums becomes unnecessary. Lost use, option, and existence values are restored to the extent restoration or replacement is successful. It is true that to require restoration, that is, to restore the supply of a lost resource without limiting it somehow by considering demand, is to open the door to hugely expensive restoration projects. Benefit and cost must be kept in proportion, but surely techniques for doing so are well within the talents of economists, perhaps the same economists who developed the travel cost, hedonic, and contingent valuation methodologies.

Unfortunately, the Department of Interior’s interpretation forecloses a choice between restoration and lost use value that the Department—the federal trustee primus inter pares—would presumably want to preserve for itself, if the statute permits. And the statute does seem to permit a much broader reading. It authorizes recovery for injury, destruction, and loss, and it mentions replacement value and lost use as relevant to determining damages. Moreover, it states that the measure of damages “shall not be limited by” restoration or replacement cost. Consequently, the Depart-

161 See generally THE BREAKDOWN AND RESTORATION OF ECOSYSTEMS (Holdgate & Woodward eds. 1978); ECOLOGY AND RECLAMATION OF DEVASTATED LAND (Hutnik & Davis eds. 1969); Aber & Jordan, Restoration Ecology: An Environmental Middle Ground, 35 BIOSCIENCE 399 (1985).
163 Separate sections of CERCLA refer to measurement of damages. Section 9651(c)(2) calls for the regulations to “identify the best available procedures to determine such damages, including both direct and indirect injury, destruction, or loss and shall take into consideration
ment's interpretation not only falls to the "plain meaning" canon of statutory interpretation,\textsuperscript{164} it contradicts the legislative history of sections 4 and 6 of Senate Bill 1480, the Senate Superfund bill.\textsuperscript{165}

To support its reading, the Department relies on common law, citing the rule that, in general, the measure of damages is the lesser factors including, but not limited to, replacement value, use value, and ability of the ecosystem or resource to recover." Section 9607(f)(1) provides that the "measure of damages in any action . . . shall not be limited by the sums which can be used to restore or replace such resources."

\textsuperscript{164} Law professors sometimes cite the following tongue-in-cheek canon of statutory interpretation to their students: if the legislative history is ambiguous, it is permissible to consult the statute.

\textsuperscript{165} The legislative history provides guidance on the issue of the "lesser of" requirement. The following may seem tedious to students of broad public policy; however, it should interest a court reviewing the Department of Interior's regulations.

The bill that was finally adopted was not the same bill described and discussed in the House and Senate committee reports. In the House, Superfund consisted of two bills, H.R. 7020 and H.R. 85. The former was the Hazardous Containment Act of 1980, adopted by the House on September 23, 1980. It was aimed at releases from hazardous waste disposal sites and did not contain natural resource damage provisions. H.R. 85 was the Comprehensive Oil Pollution Liability and Compensation Act and was adopted on September 19, 1980. It was originally aimed at oil pollution of navigable waters and adjacent areas. It was amended to include hazardous substances and allowed the President or the states to assert claims for natural resource damages as trustees for natural resources within their respective jurisdictions. Any compensation collected under the House approach could be used only for restoration of the resource or acquisition of equivalent resources.

The Senate bill was the Environmental Emergency Response Act, S. 1480. It included broader natural resource damage provisions, allowing recovery by federal or state trustees and also by private persons for lost use, lost income, or impairment of earning capacity. The present language of CERCLA §§ 107(f)(1), 301(c)(2) comes almost verbatim from the original S. 1480. (Present § 107(f)(1) was § 4(b) of S. 1480 and present § 301(c)(2) was § 6(e)(1)(B) of S. 1480.). S. 1480, as passed, however, was an amendment in the nature of a substitute introduced by Senator Stafford on November 21, 1980, and debated on November 24, 1980. The amended S. 1480 combined elements from the two House bills and the original Senate bill. The natural resource damage provisions were scaled back to essentially their present form. The House adopted the amended Senate bill with some reluctance on December 3, 1980.

The original legislative history of the Senate bill is quite pertinent, regardless of changes elsewhere in the Act. One preserved similarity between S. 1480 and CERCLA is that both provide two avenues for recovery: court action against liable parties, and claims against the Fund. In both S. 1480 and in CERCLA today, recovery from the Fund is more limited than the full scope of liability provided for in the law.

Section 4 of S. 1480, the liability section, made responsible parties liable for "all damages for economic loss or loss due to personal injury or loss of natural resources . . . including:"

(A) injury, destruction or loss of real or personal property;
(B) loss of use of real or personal property;
(C) injury, destruction, or loss of natural resources, including cost of assessing such injury, destruction or loss;
(D) loss of use of natural resources regardless of ownership or management;
(E) loss of income or profits or impairment of earning capacity resulting from personal
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of the value of lost uses or the cost of replacement or restoration.\(^\text{166}\) The Department infers that Congress intended to adopt this conservative concept of damage measurement in the absence of "clearly expressed Congressional intent to deviate"\(^\text{167}\) from the common law. Yet the Department does not deny that liability is strict and joint and several, although Congress was no clearer in applying these doctrines to the remedial program.\(^\text{168}\)

The Department has stated the common law rule in its most restrictive form.\(^\text{169}\) Some cases suggest, however, that the diminution in value measure of damages that governs damage to private property should not restrict recovery for injury to public natural resources.\(^\text{170}\) In contrast, an Idaho federal district court has applied the restrictive version of the rule in a natural resource damage case

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injury, injury or destruction of real or personal property or natural resources regardless of property or resource ownership;
(F) out-of-pocket medical expenses including rehabilitation costs;
(G) taxes or other revenues lost by federal or state government for up to one year.


Section 4(b) made liability under § 4(a)(2)(C) run to the federal or state government which were authorized as trustees to recover the damages. Sums recovered were to be used to restore or replace the damaged resource, "but the measure of such damages shall not be limited by the sums which can be used to restore or replace such resources." Id. § 4(b).

Section 6 of S. 1480 enumerated the permitted uses of the Fund. Of the liabilities listed under § 4(a)(2), recovery was permitted only for costs of damages under (C), (E), and (F). The report of the Committee on Environment and Public Works explains that, under (C), the Fund makes money available to the trustees to restore or replace the resource. But "in a case where the election to pursue an action under this legislation in court is chosen, the measure of such resource damages shall not be limited to the sums which can be used to restore or replace such resources." S. REP. No. 848, 96th Cong., 2d Sess. 85 (1980) (emphasis added). The remedy available through court action thus was intended to be broader than the administrative remedy available through a claim against the Fund.

CERCLA preserved the dual remedy. Injured parties, including natural resource trustees, may recover from the responsible parties or from the Fund. Section 111 of CERCLA makes clear that the Fund is intended to reimburse actual expenditures, but recovery from responsible parties is intended to include all losses, not just out-of-pocket costs. While the common law limits damages to the lower of restoration cost or loss of use, the language originating in S. 1480 and preserved in CERCLA created a broader remedy.

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\(^{168}\) See supra notes 48, 108, 110 and accompanying text.
\(^{169}\) Traditionally the courts have favored diminution in value, but the recent trend is toward awarding restoration costs. Although courts favor awarding the remedy which "costs" less, usually diminution in value, this is not an absolute rule. The courts in some cases involving crop damage have awarded the cost of reseeding and the rental value of the land during restoration. See D. DOBBS, HANDBOOK ON THE LAW OF REMEDIES 312–18, 325–27 (1973).
that predated the Department's regulations and that was filed under state common law as well as the Superfund.\textsuperscript{171}

The Department's approach seems misdirected. If the Department's rules merely reiterate the common law, the provisions are supererogatory. Congress must have had an intent to create something new. In fact, one wonders if a state has a stronger case without the guidelines, under state \textit{parens patriae}, public trust, and public nuisance doctrines.\textsuperscript{172} Modern social legislation usually liberalizes traditional legal concepts that bar or impede ameliorative action and compensation. For example, traditional common law concepts were

\textsuperscript{171} Idaho v. Bunker Hill Co., 635 F. Supp. 665 (D. Idaho 1986) (the state brought suit under CERCLA and the common law against the present and former owners of a mine for natural resource damages caused by mining wastes). The state contended that a value-based measure of recovery is appropriate under this concept, i.e., the value of the natural resources as they exist after the damage or injury has occurred would be subtracted from the value of the resources as they existed prior to the damage (considering all uses, aesthetic value, and economic value). \textit{Id.} at 675. The defendants contended that the measure of recovery is the cost of assessing the damages and the cost of restoration or rehabilitation. \textit{Id.} at 675–76.

The \textit{Bunker Hill} court cited remarks by Senator Simpson during a colloquy with Senator Stafford, chief sponsor of the final Superfund bill. \textit{Id.} In the judge's paraphrase:

[Senator Simpson] noted that methods of measuring resource damages are in the stage of early development. However, he suggested that traditional tort rules for calculating damages should be observed as appropriate. He commented by way of example that the law awards the difference in value before and after the injury in some cases and where the injury can be restored to its original condition for less than the difference in value, the cost of restoration is the appropriate measure. \textit{Id.} at 676 (citing 126 CONG. REC. 30,986 (1980)). The court concluded that damages could be calculated both ways and that "the calculation which provides the least recovery in terms of dollars is the appropriate measure of damages." \textit{Id.} No other sources for the holding are cited.

Senator Stafford, the Senate's chief Superfund sponsor and floor manager, merely responded to Senator Simpson that damages for injury to natural resources could not be pursued until a restoration plan was developed and that rehabilitation and replacement of natural resources had to be accomplished in the most cost-effective manner possible. 126 CONG. REC. 30,986 (1980). Thus he simply did not respond either to Senator Simpson's concern that the statutory definition natural resources covered "a very broad array of economic and aesthetic values," \textit{id.}, or to his support for traditional tort recovery.

The wider colloquy between the two Senators shows something of the art of Senate legislative history making. Senator Simpson was attempting to induce Senator Stafford to narrow the scope of Superfund or even to deny that Superfund created strict joint and several liability. Senator Simpson was a strong opponent of the bill and dissented from the Senate Report, on the ground that the bill required natural resources to be restored. Senator Stafford did state that the words "strict, joint and several" did not appear in the bill, and that beyond the CWA § 311 liability standard, the bill did not embody "other forms of no fault liability or innovative Federal intrusion into the law now developing within individual State jurisdiction." \textit{Id.} Senator Stafford had sidestepped the issues. Whatever else this meant, CERCLA has been interpreted to create strict, joint and several liability. Chancellor Bismark would have admired Senator Stafford's sausage-making ability.

\textsuperscript{172} Atkeson & Dower, \textit{The Unrealized Potential of SARA: Mobilizing New Protection for Natural Resources}, 29 ENV'T 6, 8 n.5 (1987); see also Carlson, \textit{supra} note 31.
all extensively modified or superseded by Superfund. In particular, the natural resource damage provisions abandon the conservative common law approach mandating whatever damage recovery was least costly to the defendant.

Further, the provision requiring the government to write regulations that specify damage assessment methods was designed to assist trustees, not arrest their efforts at the threshold by codifying conservative common law doctrines that favor defendants. These doctrines have forced the courts to dismiss as speculative and insubstantial claims for damages for health, aesthetic, and environmental harms, claims which are widely acknowledged as important today. In response to such dismissals, Superfund gave the government the task of preparing natural resource damage recovery rules so that its expertise and technical specialization could be brought to bear on the complex task of measuring loss of aesthetic, conservational, recreational, and environmental values. The government's expertise is not needed if a court will merely apply familiar rules to rather obvious types of injury, such as, duck and geese kills through toxic spills on salt water. As a result, Congress apparently intended the regulations to function like criteria or presumption documents, which would ease the claimant's burden in personal injury cases. In contrast, trustees have no need for regulations that merely declare the common law. More likely, Congress placed the rebuttable presumption in the statute anticipating that the government would be adopting regulations that would press well beyond traditional damage awards. The rebuttable presumption facilitates recovery for difficult-to-quantify, difficult-to-characterize injuries that would not be compensated under common law. Trustees claiming under liberal damage guidelines would need not only the prestige and assistance of government expertise but the potent procedural device of shifting the burden of persuasion to the defendant. Consequently, the Department's interpretation denies trustees the assistance they need at the point they need it most. Moreover, the rebuttable presumption was intended

174 See supra note 89 and accompanying text (discussing how presumption would ease claimant's burden of proof).
175 Some critics think that under the restrictive Department of Interior interpretation of the natural resources damage recovery provision, state public trust and nuisance law offers a promising parallel pathway to fuller natural resource damages recoveries, pending a change in the guidelines. See, e.g., Carlson, supra note 31.
to play the role it played in the original Superfund bill's personal injury provisions, black lung compensation proceedings, state workers compensation claims, and other statutes. 176

An attorney dare not tread into the tribal kingdom of the Econ, particularly to quarrel with the Micro caste. 177 But the temptation is great to comment on the perception that the rule that the Department has adopted is generally sound from an economic viewpoint, especially when this point of view is encountered in a law review. 178 The problem is not so much with the conceptual framework of trying to define and capture for the public its lost economic rents. Rather, the difficulty is that environmental damage computations and selection of damage assessment methodologies involve great uncertainty. Lost use value is a difficult concept to define even qualitatively, but an even greater problem comes in quantifying the lost values. Small resource damage recoveries seem inevitable where the lost resource values may actually be very large, because the trustee and court are forced under the guidelines both to ignore existence and option values and to accept tightly circumscribed lost use values instead of replacement or restoration costs, if they want to apply the rebuttable presumption.

In its draft guidelines, the Department clearly acknowledged this problem and carved out an exception to its general policy limiting recovery to lost use value when restoration or replacement costs exceeded lost use value. This exception was limited, however, to "special resources," that is, resources set aside by statutes (for example, wildlife preserves, but not national forests or public lands) that reflect a political judgment that the value of such resources exceeds the resources' measurable use value. 179 Despite its recognition of a problem, the Department dropped the exception from the final guidelines, but offered to continue to consider it. 180 Later, the Department flatly rejected the approach. 181

Arguably, Congress had these "special resources" particularly in mind when it enacted the natural resource damage provisions. Un-

176 See supra note 165 and accompanying text for a discussion of personal injury provision contained in the original Superfund bill.
177 See generally Leijonhufvud, Life Among the Econ, 9 W. ECON. J. 327 (1973).
178 Developments—Toxic Waste Litigation, supra note 157, at 1569 (stating that common law approach of valuing lesser of restoration cost and lost value is generally consistent with economic theory).
180 Final Type B Rules, supra note 25, at 27, 725.
certainty pervades computation of “soft” lost uses on state and federal wetlands, forests, and public lands, for example, non-market values such as gene pools, bird watching, existence values, and option values. This uncertainty suggests two critical changes in the Department’s approach necessary to conform the Department to the purposes of the law. First, the statute should be read to permit the restoration or replacement even where economists cannot yet accurately compute the myriad of intangible but very real use values involved with natural resources. Second, the regulations should accept lost non-use values as compensable damages to natural resources.

In theory, the cost of replacement or restoration may be astronomical. The Department itself once proposed an approach, however, that courts would find acceptable although economists would not, of not allowing restoration costs (greater than lost use costs) to be recovered even for special resources if the costs would be “grossly disproportionate to the benefits gained.”

B. An Approach to Judicial Interpretation

In light of the foregoing, what can be said about how the courts will interpret and apply Superfund’s natural resource damage provisions? The statute lodges the ultimate authority to make damage awards in the federal district courts. State and federal trustees enjoy a special status as statutorily designated guardians of resources, and the Department of Interior determines which injuries are compensable and how much can be recovered. In the end, however, the courts must decide. In fact, their decisions ultimately will determine if the Superfund natural resource damage recovery provisions will be a potent remedy or an insignificant satellite of the spill and disposal site programs.

The courts will have to make an initial decision whether to grant to the resource damage provision the broad interpretation that they have accorded to the removal and remedial programs. Modern remedial and compensatory legislation follows a congressional paradigm that moves far beyond the common law. Despite courts’ historic tendency to construe narrowly statutes derogating from the common law, the courts have accepted Congress’s objectives and have even supplied missing elements and rationales where Congress acted hastily or indecisively.

182 Developments—Toxic Waste Litigation, supra note 157, at 1570.
Superfund undoubtedly provides the best recent example. Courts have held that liability under Superfund is strict and joint and several. It is hard to imagine that the courts would define liability for natural resources damage any more narrowly. Courts have relaxed causal requirements under the remedial program to an extent unimaginable at common law. Causation of resource damage is not likely to be more narrowly construed by the courts simply because natural resource injury is involved. To the contrary, one would expect the courts to recognize that establishing the cause of ecological and environmental injury is difficult to accomplish and that cause must be generously inferred if injuries are to be compensated for by their most likely agents.

Under the remedial program, the federal government has wide latitude to specify the remedy to be effectuated virtually without cost constraint. Some site cleanup costs already have reached tens and hundreds of millions of dollars. Yet, despite judicial reaffirmation of EPA’s plenary authority to obtain the cleanup it wants, even costly, near-perfect restoration, the agency has moved very slowly and has not in practice exerted its full legal authority. Resource damage awards large enough to permit the return of uses as close as possible to the environmental status quo before the injury seem very likely, subject to a rule of reason and a $50 million upper bound. EPA would not, however, order responsible parties to “clean up the Chesapeake Bay.”

In addition, courts are likely to agree that, by making the rebuttable presumption available, Congress wanted to ease the trustee-plaintiff’s difficult task of demonstrating environmental damage. The courts seem likely to grasp that, by conferring guideline-writing authority on the Department of Interior, Congress wanted the Department to enhance a trustee’s chances with the courts by endorsing complex methodologies for valuing injury to natural resources, methodologies which otherwise might be viewed skeptically by a non-scientific court of general jurisdiction. Hence, the rebuttable presumption provision and the guideline-writing provision go hand-in-hand: together they help persuade a court to award full resource damages in situations where the court would otherwise be reluctant to act.

The Department of Interior has not moved as vigorously in implementing the natural resource damage provisions as the EPA has in

183 Superfund establishes a $50 million liability limit per responsible party per release or incident, with certain exceptions. 42 U.S.C. § 9607(c).
implementing the removal and remedial programs, nor has the Department taken an expansive view of its guideline-writing authority. Arguing that both its power to specify methodologies and the effect of the rebuttable presumption may lead to unreasonably large resource damage recoveries, the Department has proceeded cautiously. How will the courts react to the Department’s approach? The answer must be given on two levels: judicial review of the Department’s guidelines, and actual judicial determination of specific damage awards.

A federal circuit court is now reviewing the guidelines to see if they comply with the law and whether they reasonably effectuate the resource damage provisions in light of the data that the Department compiled, the public comments that it received, and the inferences and reasoning processes that it employed in selecting the final guidelines. Cases challenging both the type A and type B guidelines have been filed and are awaiting oral argument in the District of Columbia federal circuit court. 184

To an administrative lawyer, such review is standard fare for federal rulemaking. Judicial review of administrative discretionary decisionmaking is commonplace in modern federal environmental policy making. Judicial challenges to an agency’s overall plans for implementing a statute frequently bring key role players back to rehash basic policies, this time with a judge rather than an agency rulemaker in charge. Often, private insider groups (major companies, Washington trade associations, and the leading environmental organizations) are pleased to have an opportunity through an “omnibus” lawsuit to sit down alone with the agency and each other to negotiate quietly and informally, subject to court approval by consent decree of the numerous parties’ proposed settlement. 185 The natural resource regulations seem on track for trial and judicial decision, however, because the parties seem committed to their differing interpretations of the statute.

The interpretation of a federal statute by the agency charged with its implementation ordinarily is entitled to deference by the reviewing court. 186 Application of this principle would seem to ensure that

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the current guidelines would survive judicial review. But EPA is indisputably the lead agency charged with implementing Superfund, not the Department of Interior. Officials from EPA appear before Congress in oversight hearings and monitor environmental conditions. They proposed many of the changes in CERCLA that Congress accepted in 1986. As a result, if a court defers to an agency interpretation, it will defer to EPA's view, not the Department's.

Deference to the Department's interpretation is also less appropriate because interpretation of statutory language, especially where common law doctrines and terminology may be involved, is particularly the province of judges. Judges ordinarily view themselves as more expert than the expert agency in discerning congressional intent where the meaning of traditional legal doctrines is involved. For example, on the question of whether Congress intended to limit resource damages to the lesser of diminution of use value and restoration or replacement costs—the traditional common law approach—there is no reason at all for the reviewing court to give special deference to the Department of Interior's interpretation.

Likewise, a court is quite capable of deciding for itself whether the Department's guidelines must stay closer to traditional notions of legal causation than does the EPA approach (already approved by the courts) which adopts a greatly relaxed causal nexus requirement. And a court should have no problem determining whether Congress intended only to mandate the common law market value damage assessment approach or whether Congress intended for the full array of non-market values (bird watching, hiking, etc.), existence values, and option values to be included. Certainly a court would ask whether limiting recoveries primarily to market values would have required Congress to bother with providing for the preparation of special guidelines or enacting the rebuttable presumption.

The Department of Interior's guidelines will eventually be available for application by trustees and district courts in determining actual resource damages in individual cases. What will happen at this second level of judicial implementation of the resource damage provisions? Some courts undoubtedly will apply the departmental guidelines and the rebuttable presumption and, assuming the present guidelines remain unchanged, will allow only what these rules permit, in particular the lesser of diminished use values and restoration or replacement costs. Yet, if other courts are persuaded that Congress did intend more liberal damages, they have the option of

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accepting the trustees' evidence on non-market uses, existence values, and option values. If the courts accept the trustees' arguments, they may award these types of damages under Superfund.

The difficulty with this approach is that the trustees must succeed without the benefit of the rebuttable presumption. Still, some federal district court judges may resent being tutored by a federal agency on what evidence to accept or reject in a plenary action for damages. Some courts conceivably could accept the broad interpretation given to strict liability, joint and several liability, causation, defenses, and restoration costs by other federal courts under Superfund, but reject the narrower approach to acceptable evidence of resource damages embodied in the Department of Interior's guidelines. Such courts would proceed to assess independently the trustees' claims in light of Superfund's overall remedial and compensatory policy.

VIII. CONCLUSION

This Article suggests that the courts will be sympathetic to the natural resource damage provisions of Superfund. A circuit court must soon review the Department of Interior's cautiously written guidelines to see if they fulfill the intent of the statute. There are cogent reasons why the court may find that the Department's approach falls short of statutory intent. If the guidelines do survive judicial review, the question for the future of the natural resource damage provisions in the federal district courts may come down to whether the district courts accept the Department of Interior's guidance on permissible damage recovery, or whether they take an independent tack and fashion their own approach. Too restrictive an approach by the Department of Interior, endorsed by this circuit court of appeals, may lead to "runaway" federal district courts. As a result, courts may conclude that Congress intended larger resource damage awards in particular cases than the Department of Interior's guidelines permit.

The rebuttable presumption is available at the election of the trustee. State trustees are free to ignore it and put before the courts methodologies and lost values that the Department has elected to pass over. And a departmental trustee may not be fulfilling his or her fiduciary duty toward resources if he or she fails to go beyond the employer's guidelines when it appears that a larger recovery can be won. Justice Department lawyers may soon be faced with the dilemma whether their obligation as counsel is to plead in the alternative: guidelines and presumption but a lesser claim; no benefit of guidelines and the presumption but a greater claim.
Federal district courts are used to vigorous prosecution of site cleanup cases by EPA and the Justice Department. They may resolve conflicts over resource claims by following the lead already established by courts in the remedial program, by listening carefully to the more enthusiastic state trustees, and by permitting private intervenors to enter cases where the federal trustee seems constrained by overly cautious federal policies. All of these possibilities exist because the thrust of the new federal paradigm for remedial and compensatory legislation authorizes and perhaps even compels the courts to go beyond the strictures of the common law in correcting the unprecedented environmental problems that modern society faces.

Admittedly, if courts strike out on their own, they may have to hear, not only from biologists and engineers about restoration or replacement of a damaged resource, but also from welfare economists, who will testify that certain difficult-to-quantify lost use values, existence values, and option values should be compensated for, despite the Department's approach. Such trials will involve more work for already overburdened federal district court judges. Some judges may prefer to let the Department do the thinking for them, partly to save time, partly to shorten technical presentations, and partly to honor the intent of Congress that the Department play a role. But federal judges are the type of individuals who would enjoy the challenging philosophical and policy issues bound up in valuing vistas, songbirds, endangered species habitat, and ecosystem stability. Many would be quite interested to hear what economists have to say in their courtrooms.