

THE REVISED NATURAL RESOURCE DAMAGE ASSESSMENT RULE: COMPUTATION FOR COMPENSATION AND RESTORATION

Over a decade ago, Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act¹ (CERCLA) in response to public concern over health and environmental risks associated with hazardous waste sites.² CERCLA provides for the recovery of cleanup costs for hazardous waste removal and for the recovery of natural resource damages.³ Most CERCLA litigation to date has centered around the recovery of cleanup costs for contaminated sites; however, the focus may soon shift to the recovery of monetary damages for injury to natural resources caused by the release of hazardous substances.⁴ In April 1991, the Department of the Interior (DOI) proposed a revision to CERCLA's natural resource damage assessment rules⁵ for detailed assessments associated with large hazardous waste releases (Type B releases).⁶ The draft

1. 42 U.S.C. §§ 9601-9675 (1988), as amended by Superfund Amendments and Reauthorization Act (SARA), Pub. L. No. 99-499, 100 Stat. 1613 (1986).

2. H.R. REP. No. 1016, 96th Cong., 2d Sess., pt. 1, at 17 (1980), reprinted in 1980 U.S.C.A.N. 6119, 6120. The legislative history of CERCLA indicated congressional concern for the danger to both human health and the environment resulting from "improper[], negligent[], and reckless[] hazardous waste disposal practices . . .," as well as the inadequacy of existing law to regulate the "inactive hazardous waste site problem." *Id.* In 1979, the Environmental Protection Agency (EPA) estimated that 1200-2000 sites presented grave health risks to the public. *Id.*

3. 42 U.S.C. § 9607(a)(4) provides:

[A]ny person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person, from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance, shall be liable for-

(A) all costs of removal or remedial action incurred by the United States Government or a State or an Indian tribe not inconsistent with the national contingency plan;

(B) any other necessary costs of response incurred by any other person consistent with the national contingency plan;

(C) damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release; and

(D) the cost of any health assessment or health effects study carried out under section 9604(i) of this title.

4. See William Hamel, *Superfund's Stealth Weapon, the Coming Battle Over Natural Resources*, TEXAS LAWYER, Jan. 6, 1992, at 19.

5. Natural Resource Damage Assessments, 56 Fed. Reg. 19,752 (1991) (to be codified at 43 C.F.R. pt. 11) (proposed Apr. 29, 1991) [hereinafter Revision].

6. Revision, *supra* note 5, at 19,752. The proposed rule addresses only Type B assessment rules, which are "site-specific procedures for detailing assessments in individual cases." *Id.* The rule does not affect Type A assessments, which include assessments requiring minimal field observation.

rule significantly increases the amount of potential recovery, expands the acceptable methods for assessing natural resource damages and provides for recovery with respect to certain privately owned resources.⁷ The foreseeable consequences of the proposed rule certainly include a significant impact on industry.⁸

Part I of this Recent Development discusses the recovery permitted under CERCLA for natural resource damages and the regulations promulgated by DOI in 1986. Part II examines the rejection of many aspects of the DOI regulations in *Ohio v. United States Department of Interior*.⁹ Part III analyzes DOI's proposed revisions to the assessment rule. Finally, Part IV explores some of the possible effects of the proposed rule on the future of natural resource damages.

I. NATURAL RESOURCE DAMAGE RECOVERY UNDER CERCLA

CERCLA imposes liability on certain persons¹⁰ for damages for injury to, destruction of, or loss of natural resources¹¹ resulting from the release of hazardous substances.¹² Moreover, CERCLA authorizes federal and state natural resource trustees¹³ to recover for such damages.¹⁴ At first

Id. See also Frank L. Amorso & Linda R. Keenan, *Liability for Restoration is Looming*, NAT'L L.J., Feb. 4, 1991, at 19 (acknowledging that large oil spills and Superfund sites typically involve Type B assessments).

7. See Revision, *supra* note 5. For a general discussion of the proposed DOI Rule, see *infra* notes 68-80 and accompanying text.

8. See, e.g., Hamel, *supra* note 4, at 18. "[I]t is difficult to imagine a more expansive — or, from industry's point of view, more expensive — statutory program [than CERCLA]." *Id.* Hamel predicted that natural resource damage claims will ultimately equal or exceed traditional damage costs. *Id.*

9. 880 F.2d 432 (D.C. Cir. 1989).

10. 42 U.S.C. § 9607(a)(1)-(4) (1988).

11. The term "natural resources" includes "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States. . . [and] any state or local government. . . ." 42 U.S.C. § 9601 (16) (1988).

12. The term "release" includes "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant)." 42 U.S.C. § 9601 (22) (1988).

13. 42 U.S.C. § 9607(f)(1) provides that when an injury or destruction of natural resources occurs, "liability shall be to the United States Government and to any State for natural resources within the State . . ." 42 U.S.C. § 9607(f)(1). CERCLA requires the President to designate federal officials who will act as trustees for natural resources on behalf of the public. 42 U.S.C. § 9607(f)(2) (1988); 40 C.F.R. § 300.600(a) (1990). Generally, the designated federal trustee for a given resource is the federal agency authorized to manage or protect that resource. 40 C.F.R. § 300.600(b) (1990). See *United States v. Southeastern Pa. Trans. Auth.*, 24 Env't. Rep. Cas. (BNA) 1860, 1865 (E.D. Pa.

blush, it is surprising that natural resource damages have not been traditionally a source of recovery under CERCLA.¹⁵ However, natural resource damages have been largely unavailable for two reasons: (1) delay in the promulgation of the original assessment rules; and (2) heavy restrictions and the undervaluing of resources in such rules.¹⁶

A. *The History of Natural Resource Damages Under CERCLA*

Although Congress attempted to formulate a suitable hazardous waste bill for several years,¹⁷ CERCLA, as finally adopted, represented a last minute effort by the 96th Congress and President Carter to address the hazardous waste problem.¹⁸ Following CERCLA's enactment, President Reagan delegated the responsibility for promulgating natural resource damage rules to the DOI.¹⁹ After several years, DOI promulgated

1986) (holding that CERCLA does not provide for a private right of action for natural resource damages). *See also* Bedford, Mass. v. Raytheon Co., 755 F. Supp. 469, 475 (D. Mass. 1991) (town of Bedford as a municipality is not authorized to bring a CERCLA action to recover damages to natural resources). *But see* Boonton v. Drew Chem. Co., 621 F. Supp. 663 (D.N.J. 1985) (holding that municipalities have standing to sue for natural resource damages under § 9607(a)(4)(c) of CERCLA). *See also* Duane Woodward & Michael R. Hope, *Natural Resource Damage Litigation Under the Comprehensive Environmental Response, Compensation, and Liability Act*, 14 HARV. ENVTL. L. REV. 189, 212-15 (1990) (recommending that Congress amend CERCLA to allow private citizens to file suit for natural resource damages when a federal or state trustee has failed to act).

14. 42 U.S.C. § 9607(f)(1) (1988). Authorized uses of recovered amounts include restoring, replacing or acquiring the equivalent natural resources for purposes of returning each natural resource to its pre-release level.

15. Woodward & Hope, *supra* note 13, at 191 (noting that several advantages exist for bringing damage claims under CERCLA, including providing an incentive for more rigorous cleanup to offset potential damage recovery).

16. *See id.* at 192-93. Several reasons account for the under-utilization of the natural resource damage provision, including: (1) trustee inexperience with natural resource claims; (2) indeterminate methods of valuing natural resources under the federal statute; (3) delayed promulgation of natural resource assessment rules by DOI; (4) discouragement of trustee's use of the assessment regulations to determine injuries to natural resources; and (5) the lack of funds to assess natural resource damages. *Id.* *See also* Erik D. Olson, *Natural Resource Damages in the Wake of the Ohio and Colorado Decisions: Where Do We Go From Here?*, 19 *Envtl. L. Rep.* (Envtl. L. Inst.) 10,551, 10,552 (Dec. 1989) (attributing the relatively few natural resource damage claims to the lack of funds available for damage assessments, trustee apathy, and DOI's rule).

17. Congress initially addressed environmental problems in the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6992 (1976) (regulating hazardous waste from its creation to its disposal) and the Toxic Control Act, 15 U.S.C. §§ 2601-2671 (1978) (regulating chemical production). Congress worked on CERCLA bills for over three years. FRANK P. GRAD, *TREATISE ON ENVIRONMENTAL LAW* § 4A.02[2][a] (1990).

18. President Carter signed CERCLA on December 11, 1980. Pub. L. No. 96-510, 94 Stat. 2767 (1980).

19. 42 U.S.C. § 9651(c) requires that "[t]he President . . . shall promulgate regulations for the assessment of damages for injury to, destruction of, or loss of natural resources resulting from a

highly restrictive rules for assessing natural resource damages.²⁰ While conformity with DOI regulations is not mandatory, assessments performed in accordance with the rules enjoy a rebuttable presumption of accuracy.²¹

B. *The 1986 DOI Type B Regulation*

The 1986 Natural Resource Damage Assessment Rule required the natural resource trustee to perform an Injury Determination, a Quantification, and a Damage Determination in assessing natural resource damage.²² The Damage Determination requirement created the most problems for trustees.²³ The regulations required the trustee to value the resources injured, destroyed or lost based on restoration costs, replacement costs and the diminution of use value of the injured resources.²⁴ The regulations also provided methods for determining assessment costs.²⁵ Finally, the rule required the trustee to select the "lesser of" these costs as the measure of damages.²⁶ Because restoration generally represented the highest cost, trustees seldom selected it as the method of choice under the rule. Rather, in applying the "lesser of" rule, trustees were often compelled to select diminution of use value as the measure of damages,²⁷ and consequently awarded damages insufficient to restore the

release of oil or a hazardous substance . . ." President Reagan delegated the responsibility for promulgating damage assessment rules to the DOI. Executive Order No. 12,580, 52 Fed. Reg. 2923 (Jan. 23, 1987). During his campaign for the Office of President, Reagan repeatedly expressed his dislike for environmental regulations. Once elected, Reagan recommended large budget cuts for the EPA and DOI. See Woodward & Hope, *supra* note 13, at 205.

20. The Type B assessment regulations became effective on September 2, 1986. 43 C.F.R. pt. 11 (1986). These rules reflected recommendations from interested groups and resulted in restrictive assessments of natural resource damage. See Woodward & Hope, *supra* note 13, at 206.

21. 42 U.S.C. § 9607(f)(2)(c) provides that "[a]ny determination or assessment of damages to natural resources . . . made by a Federal or state trustee in accordance with the regulations promulgated under section 9651(c) of this title shall have the force and effect of a rebuttable presumption on behalf of the trustee . . ." 42 U.S.C. § 9607(f)(2)(c) (1988).

22. 43 C.F.R. §§ 11.60-.84 (Aug. 1, 1986).

23. See Craig S. J. Johns & John E. Dittoe, *CERCLA Liability for Natural Resource Damages: More Trouble Ahead for Real Property Owners*, 9 CAL. REAL PROP. J. 22 (1991). Under the rule, identification and quantification of the injury to natural resources was fairly clear; however, many trustees found the damage determination phase problematic.

24. 43 C.F.R. § 11.35 (1986) (adoption of the economic methodology determination).

25. 43 C.F.R. § 11.35(b)(2) (1986). See *infra* notes 30-35 and accompanying text.

26. 43 C.F.R. § 11.35(b)(2). See *infra* notes 30-35 and accompanying text.

27. See Frank B. Cross, *Natural Resource Damage Valuation*, 42 VAND. L. REV. 269, 325 (1989); see also Johns & Dittoe, *supra* note 23, at 29 (noting that the diminution in value method is almost always a lower figure than the restoration or replacement methods).

resources to their pre-contaminated state.²⁸

The regulations prescribed a hierarchy of methodologies to measure lost use values²⁹ of natural resources. Whenever reasonable, the regulations required the trustee to value the natural resources at prevailing market rates for the resource in its undamaged state.³⁰ However, if no market existed, the rule required the trustee to obtain an appraisal on the value of the resource.³¹ Only if these market resource methodologies proved impossible, could the trustee employ alternative methods³² to assess the use value of the resource. If the trustee was unable to determine the use value, the rule permitted him to estimate option³³ and existence³⁴ values.³⁵ This rigidity resulted in an inflexible framework for assessing the use value of natural resources.

For instance, the Exxon Valdez oil spill³⁶ illustrates the devastating effect that releases have on natural resources, as well as the difficulty

28. Cross, *supra* note 27, at 325 n.302. Cross argued that because many environmental resources, such as wetlands, have a relatively low valuation under the Economic Methodology Determination, the restoration and replacement costs will always exceed the diminution of value. *Id.* Thus, damage awards will rarely be sufficient to restore or replace injured resources. *Id.*

29. 43 C.F.R. § 11.83(4)(b) defines use values as "the value to the public of recreational or other public uses of the resource. . . ." 43 C.F.R. § 11.83(4)(b). See Cross, *supra* note 27, at 281 (noting that use values measure the monetary loss of the human uses of resources, such as fishing or hunting).

30. 43 C.F.R. § 11.83(c)(1) states:

A determination shall be made as to whether the market for the resource is reasonably competitive. Unless the authorized official determines that the market for the resource is not reasonably competitive, the diminution in the market price of the resource shall be used to estimate the damages to the injured resource.

31. 43 C.F.R. § 11.83(c)(2) (1986).

32. 43 C.F.R. § 11.83(d) (1986). Alternatives included the factor income methodology, the travel cost methodology, the hedonic price methodology, the contingent valuation methodology, the unit value methodology, and other nonmarket resource methodologies that measure values in accordance with willingness to pay.

33. See Cross, *supra* note 27, at 285. Option value is the value placed on the preservation of natural resources to retain the option of future use of natural resources. See also *infra* note 43 and accompanying text.

34. *Id.* at 285-86. Existence value is the value placed on the preservation of natural resources so that present and future generations can enjoy natural resources. See also *infra* note 44 and accompanying text.

35. 43 C.F.R. § 11.83(b)(2) (1986).

36. Philip Shabecoff, *Largest U.S. Tanker Spill Spews 270,000 Barrels of Oil Off Alaska*, N.Y. TIMES, Mar. 25, 1989, at 1. See also Christine Cartwright, Note, *Natural Resource Damage Assessment: The Exxon Valdez Oil Spill and Its Implications*, 17 RUTGERS COMPUTER & TECH. L.J. 451 (1991). On March 24, 1989, the Exxon Valdez oil tanker ruptured its tank, spilling hundreds of thousands of gallons of oil into Prince Edward Sound. The oil inundated the ecosystem causing severe damage to natural resources. The extent of the damage is still unknown.

involved in assessing the extent of damage.³⁷ Photographs of the tragic oil spill depict serious damage to the Prince Edward Sound ecosystem. Because no market exists to measure the value of the Prince Edward Sound area or its inhabitants for diminution in value, the monetary value of this damage is difficult, if not impossible, to ascertain.³⁸ The trustee may value the natural resources that have a market, such as crabs, according to the market price.³⁹ In contrast, the trustee is forced to value the resources without a market, such as the sea otter, as priceless, worthless or anywhere in between, depending on his personal assessment.

Whenever no market exists, the trustee may employ alternative methods to measure non-use values.⁴⁰ Both use and non-use values may be measured by the contingent valuation method which elicits public opinion regarding the value of the area before contamination.⁴¹ The trustee may utilize this method to determine both the option value and the existence value of a resource.⁴² Option value represents the amount an individual would be willing to pay for the option of enjoying the Prince Edward Sound area at some future date.⁴³ Existence value represents the amount an individual would pay to ensure that the Prince Edward Sound area remains in existence so that current and future generations may en-

37. See Cartwright, *supra* note 36, at 487-88.

38. See Michael Parrish, *Secret Studies Put Spill Damage at \$15 Billion*, L.A. TIMES, Oct. 8, 1991, at A1 (reporting that unpublished studies indicate that the damage from the Exxon Valdez spill may eventually total or exceed \$15 billion). See also Michael J. Mandel, *How Much is a Sea Otter Worth?*, BUS. WK., Aug. 21, 1989, at 59.

39. See Mandel, *supra* note 38. The direct loss to users is an easy measure for intangibles. For example, damage caused by a polluted river may be measured in terms of the loss of recreational activities, such as swimming and fishing.

40. Raymond J. Kopp et al., *Natural Resource Damages: The Economics Have Shifted After Ohio v. United States Department of the Interior*, 20 Env'tl. L. Rep. (Env'tl. L. Inst.) 10,127, 10,128 (Apr. 1990). Non-use values do not depend on a close physical connection between an individual and a source, whereas use values depend on such *in situ* activities. Non-use values include the knowledge that the Grand Canyon exists, and the preservation of certain species based on the belief that future generations will benefit from its existence. Use values, on the other hand, include fishing, swimming, boating, camping and birdwatching. *Id.*

41. 34 C.F.R. § 11.83(d)(5) (1986). Contingent valuation method measures the loss of non-use values based on polls of how much individuals would pay for a resource in a hypothetical market. For a detailed analysis of contingent valuation of natural resource damage, see Carl V. Phillips & Richard J. Zeckhauser, *Contingent Valuation of Damage to Natural Resources: How Accurate? How Appropriate?*, 4 Toxic L. Rep. (BNA) 520 (Oct. 4, 1989).

42. 34 C.F.R. § 11.83(d)(5) (1986). The rule permits the use of contingency valuation to estimate option and existence value only if the authorized official believes that no use value can be determined.

43. See Cross, *supra* note 27, at 285-86 (explaining that an individual may one day desire to see Yosemite National Park, and therefore would value its preservation).

joy its natural resources.⁴⁴ Consequently, measuring non-use with contingent value, a Missouri citizen, for example, who never intends to visit Prince Edward Sound, may still suffer a measurable loss as a result of the oil spill.⁴⁵ While the contingent value method may seem haphazard,⁴⁶ studies of public opinion have achieved consistent results.⁴⁷

Despite the use of contingent valuation to determine both option and existence non-use values, the diminution of use value approach, as the primary methodology of assessing natural resource damages, is widely criticized. While some economists hail diminution of value as the most efficient method of computation,⁴⁸ many criticize it as undervaluing natural resources.⁴⁹ These critics argue that because natural resources are not fungible goods that may be easily valued, market values are not the most appropriate measure of damages.⁵⁰ Consequently, as a method of assessing resource damages, the diminution in value approach provides

44. See Mandel, *supra* note 38, at 62 (giving as an illustration one survey which found that California residents would be willing to pay about \$250 million annually to preserve Mono Lake, even if they never visited it). See also Cross, *supra* note 27, at 291. Cross argued that existence values can be manipulated by keeping the public ignorant of natural resource damage. He explained this potential problem with reference to the endangered snail darter:

For example, anyone familiar with environmental law is aware of the great importance that was placed on the preservation of the endangered snail darter, primarily due to its existence value. Suppose that an endangered cousin of the snail darter lived in other streams, but we were wholly unaware of its existence. Our lack of awareness translates into a lack of existence value for this species. Existence value thus creates a perverse incentive to keep the public ignorant of the characteristics and attributes of the natural world.

Id.

45. See Kopp et al., *supra* note 40, at 10,130 (emphasizing the greatly expanded number of people capable of experiencing a measurable loss as a result of a release of hazardous substances or oil).

46. Some commentators question the accuracy of non-use values, such as existence values, because the public is not asked "to put their money where their mouths are." See Cross, *supra* note 27, at 282. Consequently, reliance on use values is not without justification. *Id.*

47. See Cross, *supra* note 27, at 317 (noting the "internal consistency and replicability of contingent valuation survey results").

48. See, e.g., Edward J. Yang, *Valuing Natural Resource Damages: Economics for CERCLA Lawyers*, 14 *Env'tl. L. Rep. (Env'tl. L. Inst.)* 10,311, 10,317 (Aug. 1984) (favoring the diminution in value approach as the economically correct approach).

49. Cross, *supra* note 27, at 331-32 (favoring restoration costs as consistent with the legislative intent and public policy of CERCLA).

50. In rejecting the DOI's argument that diminution of value method was more efficient than the restoration cost method, the Court of Appeals for the District of Columbia stated that "[t]he fatal flaw of Interior's approach . . . is that it assumes that natural resources are fungible goods, just like any other, and that the value to society generated by a particular resource can be accurately measured in every case. . . ." *Ohio v. United States Dept. of the Interior*, 880 F.2d 432, 456 (D.C. Cir. 1989). For a discussion of *Ohio v. United States Dept. of the Interior*, see *infra* notes 52-64 and accompanying text.

for insufficient recovery. Only restoration value assures full recovery from the contamination.⁵¹

II. THE OHIO V. DEPARTMENT OF INTERIOR DECISION

In *Ohio v. United States Department of Interior*, several states and environmental groups challenged DOI's natural resource damage rule.⁵² In *Ohio*, the Court of Appeals for the District of Columbia⁵³ invalidated two important aspects of DOI's natural resource damage assessment regulation.⁵⁴ First, the court rejected the "lesser of" rule, finding it directly contrary to the express intent of Congress.⁵⁵ The court recognized congressional intent to establish a preference for restoration cost as the basis for recovery.⁵⁶ Thus, the court held that the measure of natural resource

51. See Barry Breen, *CERCLA's Natural Resource Damage Provisions: What Do We Know So Far?*, 14 *Env'tl. L. Rep. (Env'tl. L. Inst.)* 10,304, 10,310 (Aug. 1984) (arguing that, at a minimum, CERCLA allows recovery of the cost of full restoration); see also Heidi Wendel, Note, *Restoration as the Economically Efficient Remedy for Damage to Publicly Owned Natural Resources*, 91 *COLUM. L. REV.* 430, 455 (1991) (concluding that restoration is the only remedy that compensates the public adequately for its loss from damage to natural resources).

52. 880 F.2d 432 (D.C. Cir. 1989). Ten states, three environmental organizations, a chemical industry trade association, a manufacturing company and a utility company sought review of the DOI natural resource regulations. *Id.* at 438.

53. 42 U.S.C. § 9613 grants the Court of Appeals for the District of Columbia jurisdiction to review any regulation promulgated under CERCLA. 42 U.S.C. § 9613 (1988).

54. In addition to invalidating the "lesser of" rule and the "hierarchy at assessment methodology" adopted by DOI, the court also narrowly construed and then upheld the "committed use" requirement. *Ohio*, 880 F.2d at 462. This rule only allowed a trustee to consider committed uses, defined in 43 C.F.R. § 11.84(b)(2), as either "a current public use; or a planned public use . . . for which there is a documented legal, administrative, budgetary, or financial commitment established before the discharge of oil or release of a hazardous substance is detected." *Id.* The court upheld the "committed use" requirement, concluding that a trustee may recover the costs of restoring or replacing the resource even when the resource has no "committed use." *Id.* at 462. The court's decision leaves intact the "committed use" requirement for assessing damages when the trustee seeks to recover diminution of use. *Id.* at 461-62.

Additionally, the court upheld DOI's adoption of "contingent valuation" techniques as "the best available procedure" for assessing damages under the diminution of use methodology. *Id.* at 474-81.

55. *Ohio*, 880 F.2d at 441-59. The court proclaimed that the "lesser of" rule was the "most significant issue in this case." *Id.* at 441. For a discussion of the "lesser of" rule, see *supra* notes 26-28 and accompanying text.

56. *Id.* at 444. The court premised the preference for restoration cost on 42 U.S.C. § 9607(f), which provides that damages recovered are "for use only to restore, replace, or acquire the equivalent of such natural resources." *Id.* The court also inferred this preference from CERCLA's settlement provision which requires that "the potentially responsible party agree to undertake appropriate actions necessary to protect and restore the natural resources damaged by [the] release or threatened release of hazardous substances." *Id.* (quoting 42 U.S.C. § 9622(j)(2)).

damages should be restoration costs,⁵⁷ except where they are completely disproportionate to the value of the resource.⁵⁸

Second, the court rejected the rigid hierarchy of permissible methodologies imposed by the regulations.⁵⁹ The court found that the hierarchical structure and exclusive reliance on market value⁶⁰ contradicted Congress' intent to assure full compensation for natural resource damage.⁶¹ Because DOI's exclusive use of market value constituted an unreasonable interpretation of CERCLA,⁶² the court directed DOI to develop new regulations permitting consideration of all reliable use and non-use values necessary for full recovery.⁶³

The court also ordered DOI to clarify the extent to which the regula-

57. The court rejected DOI's argument that the "lesser of" rule represented the most economically efficient method of measuring natural resource damage from the discharge of hazardous substances and oil. *Ohio*, 880 F.2d at 456. DOI argued that it would be economically inefficient to restore a resource if the costs exceeded its value. *Id.* In rejecting this argument, the court was skeptical of human ability to measure the true value, particularly non-use value, of natural resources. *Id.* at 456-57.

58. The court recognized that circumstances may arise where restoration is not the best standard. *Id.* at 459. For example, the court stated that in a situation where restoration is infeasible or its cost is grossly disproportionate to use value, the situation would warrant a different standard. *Id.* See also *Puerto Rico v. SS Zoe Colocotroni*, 628 F.2d 652 (1st Cir. 1980), *cert. denied*, 450 U.S. 912 (1981).

In *Colocotroni*, Puerto Rico and the local environmental quality board sued the owner of a tanker under a state statute to recover for environmental damage to the coastline resulting from an oil spill. 628 F.2d at 656. The court rejected the diminution in value rule. "A strict application of the diminution in value rule would deny the state any right to recover meaningful damages for harm to such areas, and would frustrate appropriate measures to restore or rehabilitate the environment." *Id.* at 673. Instead, the court adopted the restoration method for situations in which restoration would be physically possible and its costs would not be grossly disproportionate to the value of the resource. *Id.* at 675. However, on the facts of the *Colocotroni* case, the court concluded that restoration was inapplicable because it appeared infeasible, and the government did not intend to restore the site. *Id.* at 676.

59. *Ohio*, 880 F.2d at 464.

60. *Id.* at 462-63. The court stated that "[f]rom the bald eagle to the blue whale and snail darter, natural resources have values that are not fully captured by the market system." *Id.* Consequently, market price is not always a reasonable means of use value. *Id.* at 463.

61. *Id.* at 463. The court concluded that Congress intended to provide the trustee with the ability to select the most accurate method of assessment from a range of acceptable damage assessment methodologies detailed in the Senate's CERCLA report. *Id.* (citing S. REP. NO. 848, 96th Cong., 2d Sess. 85-86 (1980)). Therefore, the hierarchical structure "defeat[ed] this intent by arbitrarily limiting use values to market prices." *Ohio*, 880 F.2d at 463.

62. The court stated that "[w]hile it is not irrational to look to market price as one factor in determining the use value of a resource, it is unreasonable to view market price as the exclusive factor, or even the predominant one." *Id.* at 462 (emphasis added).

63. *Id.* at 481.

tions applied to privately owned resources.⁶⁴ While acknowledging that CERCLA excludes recovery for purely private resources, the court concluded that Congress did not specifically limit the application of CERCLA to resources actually owned by the government.⁶⁵ The court stated that CERCLA's definition of "natural resources"⁶⁶ indicated that Congress intended that the provision also apply to private property in which the government has an interest.⁶⁷

III. THE REVISED DEPARTMENT OF INTERIOR RULE

In response to the *Ohio* decision, DOI recently proposed several significant revisions to its damage assessment rules.⁶⁸ The new DOI rule does more than merely comply with the court's order;⁶⁹ it broadens the acceptable measures of damages and methods for measuring these values. The revised rule confers more freedom of action on the trustee in making the assessments. In addition, the revision provides necessary guidance to assist the trustee in making the proper determination.⁷⁰

First, DOI's revised rule conforms to the court's decision, which established a preference for restoration cost as the measure of damages. Although DOI did not disturb the actions trustees may consider and the corresponding costs trustees may use as the measure of damages, the proposed rule eliminates the "lesser of" rule. Thus, the revised rule grants trustees flexibility to adopt the best plan for the specific site.⁷¹ To allow the trustee to find the most suitable plan, the proposed rule provides for a

64. *Id.* at 461.

65. *Id.* at 460. Although DOI adopted CERCLA's definition of "natural resources" verbatim in its regulations, the definition contradicted the preamble to the regulations, which indicated that privately owned resources were not covered by the natural resource damage provisions of CERCLA. *Id.* at 460-61.

66. *See supra* note 11.

67. *Ohio*, 880 F.2d at 461. The court concluded that Congress must have intended the natural resource damage provision to apply to certain privately owned resources. Specifically, the court reasoned that such an interpretation is necessary to give meaning to the wide range of government interests included in the definition of natural resources, and implied by the words "managed by, held in trust by, appertaining to, or otherwise controlled by." *Id.* at 460 (quoting 42 U.S.C. § 9601(16)).

68. *See Revision, supra* note 5.

69. *Revision, supra* note 5, at 19,756. To comply with the court's decision, DOI only needed to: (1) remove the "lesser of" requirement; (2) eliminate the hierarchical structure of economic valuation; (3) delete the provision restricting recovery of non-use values to situations where the trustee can not determine use values; and (4) clarify the extent to which the rule applies to privately owned resources. *Id.*

70. *See infra* notes 71-82 and accompanying text.

71. *See Revision, supra* note 5, at 19,756.

wide range of actions geared toward returning the site to its pristine state.⁷² Not only must a trustee weigh several factors when deciding which value is most appropriate for the particular circumstances,⁷³ he must also explain the balancing process which led to his selection.⁷⁴ Additionally, the proposed rule allows for the recovery of value of the services lost to the public, including non-use values, until restoration is complete.⁷⁵ Adopting restoration as the preferred method of recovery and allowing for the recovery of use and non-use values lost during the restoration period, DOI formulated new damage assessment criteria. Simply, the new formula for assessing damages equals restoration plus the compensable value⁷⁶ of the natural resource for the restoration period.

Second, the revised regulations eliminate the previously rigid hierarchy of assessment methods. DOI still considers the market price methodology as the most reliable methodology, but now recognizes that circumstances may exist where the market price inadequately represents the value of the resource.⁷⁷ Accordingly, the rule grants trustees the

72. The trustee may choose from a wide range of actions to return the natural resource to baseline levels, including: (1) intensive restoration in a short period of time; (2) combination of restoration, rehabilitation, replacement, and/or acquisition in order to optimize recovery; (3) replacement or acquisition of equivalent resources; and (4) natural recovery of the resource. *Id.* at 19,757.

73. The listed factors include: (1) technical feasibility; (2) cost-benefit relationship for restoration, rehabilitation, replacement, and/or acquisition of equivalent resources; (3) cost-effectiveness; (4) results; (5) potential injury resulting from proposed action; (6) natural recovery period; (7) ability of the resource to recover naturally; (8) acquisition of equivalent land where restoration, rehabilitation, and/or other replacement of land is not possible; (9) potential effects of the action on human health and safety; and (10) consistency with federal and state laws. Revision, *supra* note 5, at 19,757.

74. *Id.*

75. *Id.* The rule defines the term "services" to include all of the functions of the resource for the benefit of the public or other resources.

76. The drafters of the revised rule defined compensable value as:

the amount of money required to compensate the public for the loss in services provided by the injured resources between the time of the discharge or release and the time the resources and the services those resources provided are fully restored to their baseline conditions. The compensable value includes the value of lost public use of the services provided by the injured resources, plus lost nonuse values such as option, existence, and bequest values.

Id. at 19,772.

77. *Id.* at 19,759. The revised rule states a preference for relying on market values where the market captures the full value of the resource. However, DOI acknowledges that the existence of a competitive market does not guarantee that the market price fully captures the value of the resource. The rule leaves such a determination to the trustee's discretion, but requires him to state the rationale supporting such a determination in the Assessment Plan.

freedom to select any listed valuation method or any combination of approaches provided that they are reliable, cost-effective and not duplicative.⁷⁸ To ensure compliance and clarity, the trustee must state in the assessment plan the rationale supporting the methodology selected.⁷⁹

Finally, DOI's proposed rule permits trustees to sue for damages on privately owned resources, provided that some legitimate government interest exists in the property. In addition, DOI reiterated CERCLA's definition of natural resources,⁸⁰ to connote the wide range of interests the government may have in natural resources.⁸¹ To safeguard compliance with CERCLA, the trustee must cite some specific authority for asserting a right to act as a trustee over the resource.

IV. THE FUTURE OF NATURAL RESOURCE DAMAGES

CERCLA provides federal and state trustees with a liability provision to recover damages for natural resources. Until recently, natural resource damage claims have been a relatively minor part of Superfund cases. In response to the *Ohio* decision, DOI proposed meaningful revisions to the natural resource damage rule. The revised DOI rule will significantly impact current and future natural resource claims.⁸² Under the revised rule, (1) recovery will more accurately reflect damages to natural resources; (2) the bargaining position of the respective parties will dramatically change; and (3) larger sums of money will be awarded both in settlements and litigation to compensate the public for natural resource damages.

Because the proposed rule allows the trustee to choose the methodol-

78. *Id.* at 19,771.

79. *Id.*

80. *See supra* note 11 and accompanying text.

81. *See Revision, supra* note 5, at 19,761. The broad language encompasses a wide range of legitimate government interests in privately owned natural resources.

82. The revised rule may also revive potential natural resource damage claims. CERCLA provides that an action for natural resource damages must be commenced within three years after the later of (1) the date of the discovery of the loss and its connection with the release; or (2) the date the natural resource regulations are promulgated. 42 U.S.C. § 9613(g)(1). When DOI promulgated the original Type B regulations in 1986, and amended them in 1988, some concern existed over the applicable starting date for the statute of limitations. *See Johns & Dittoe, supra* note 23, at 32-33. DOI alleviated concern over the impending tolling of the three year statute of limitations by resetting the clock on natural resource damage claims. The new rule states that suits must be brought within three years after the discovery of damages or promulgation of the final rule, whichever occurs later. *Revision, supra* note 5, at 19,761. The renewal of the statute of limitations provides trustees more flexibility to bring new claims for old disasters under the new regulations.

ogy for assessing natural resource damages, the sums will more accurately reflect the damage caused to the resource. The large sums of money at stake will induce the potentially liable parties to aid in the assessment process, perhaps by hiring their own economists to assess the damage,⁸³ and thereby increasing the accuracy.⁸⁴ Additionally, the restoration plus compensable costs formula will generally increase the damage assessments, because the rule allows for full compensation for the interim loss of natural resources.

The increase in damage assessments and the freedom to select the methodology to be used in assessing damages will catapult the trustees into a stronger bargaining position with respect to claims of natural resource damages.⁸⁵ In addition, the potential for substantial court awards provides incentive for the parties to avoid litigation and settle the claim.

The revised regulation has the potential to increase the frequency of natural resource damage claims, and, thus, force polluters to pay for the damage that pollution causes to natural resources. Recent CERCLA settlements have included specific funds earmarked for natural resource damages, illustrating the large sums of money involved.⁸⁶ In addition, the recent revisions create a greater power to force polluters to pay for the damages they cause.⁸⁷ Ideally, when polluters are required by law to pay the restoration costs and non-use costs associated with injury to nat-

83. See Michael Parrish, *The Industry Is Quickly Maturing As Major Companies Enter the Field and New Markets Open Up*, L.A. TIMES, Oct. 28, 1991, at D2 (noting the growth in environmental firms and proliferation of the number of economists hired to consult on assessments of natural resource damages).

84. See Amoroso & Keenan, *supra* note 6, at 23 (noting that government trustees have been receptive to potentially responsible parties' involvement in the assessment process).

85. See Kopp et al., *supra* note 40, at 10,131. The new regulation strengthens the trustee's bargaining position because restoration costs will generally exceed diminution in value. Diminution in value will probably serve as a floor for damage awards, forcing settlements to more accurately reflect restoration costs.

86. The EPA and AVX Corp. announced a settlement agreement in which AVX agreed to pay \$66 million for cleanup and natural resource damages. See Amoroso & Keenan, *supra* note 6 at 22. A Shell oil spill resulted in a \$19.75 million settlement of which \$11 million was specifically designated to restore natural resources. *Id.*

87. Standard form insurance policies may cover polluters. See *Minnesota Mining & Mfg. Co. v. Travelers Indem. Co.*, 457 N.W.2d 175 (Minn. 1990) (insurance policy covers CERCLA liability); *Boeing Co. v. Aetna Casualty & Sur. Co.*, 784 P.2d 507 (Wash. 1990); *C.D. Spangler Constr. Co. v. Indus. Crankshaft & Eng'g Co.*, 388 S.E.2d 557 (N.C. 1990).

ural resources, they will become more cautious and strive to avoid incurring liability.

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