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# NATURAL RESOURCE DAMAGES UNDER CERCLA: FAILURES, LESSONS LEARNED, AND ALTERNATIVES

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## I. INTRODUCTION

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) was passed in the aftermath of the Love Canal tragedy.<sup>1</sup> CERCLA's Superfund enables emergency responders to clean up now and collect from responsible parties later.<sup>2</sup> CERCLA is renowned for imposing joint, strict, and several liability upon potentially responsible parties (PRPs) who are accountable for addressing environmental contamination due to the release or disposal of hazardous substances.<sup>3</sup> This liability without fault, coupled with the multi-million dollar costs of cleanup typically involved for major contamination sites,<sup>4</sup> quickly captured the attention of the regulated community.<sup>5</sup>

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1. Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended at 42 U.S.C. §§ 9601–9675 (2000)) [hereinafter CERCLA]. Love Canal was a landfill for tons of hazardous chemical wastes that came to national attention in 1978 when toxic waste literally began seeping out of the ground. See Eckardt C. Beck, *The Love Canal Tragedy*, EPA JOURNAL, Jan. 1979, available at <http://www.epa.gov/history/topics/lovecanal/01.htm> (last visited July 29, 2008). The emergency resulted in the evacuation of over 200 homes near the canal. *Id.*

2. 42 U.S.C. §§ 9604, 9611(a)(1) (2000).

3. The Senate dropped explicit reference to “strict, joint, and several” liability in a last minute substitute bill. See James R. MacAyeal, *The Comprehensive Environmental Response, Compensation, and Liability Act: The Correct Paradigm of Strict Liability and the Problem of Individual Causation*, 18 UCLA J. ENVTL. L. & POL’Y 217, 257, 272 (2000/2001). For an excellent discussion of the legislative history of CERCLA, see *id.* at 253–79. Although CERCLA does not expressly characterize the damages as “joint” “strict” or “several,” the courts have consistently done so. See, e.g., *United States v. Atl. Research Corp.*, 551 U.S. \_\_\_, 127 S. Ct. 2331, 2336 (2007) (“[E]ven parties not responsible for contamination may fall within the broad definition of PRPs.”). The *Atlantic Research Corp.* court cited with approval *United States v. Alcan Aluminum Corp.*, 315 F.3d 179, 184 (2d Cir. 2003) (“CERCLA § 9607 is a strict liability statute.”). See also *United States v. Burlington N. & Santa Fe Ry. Co.*, 479 F.3d 1113, 1124, 1136 (9th Cir. 2007) (“CERCLA is a ‘super-strict’ liability statute.... Joint and several liability, even for PRPs with a minor connection to the contaminated facility, is the norm, designed to assure, as far as possible, that *some* entity with connection to the contamination picks up the tab.”), *rev’d on other grounds*, 2008 WL 763257 (9th Cir. Mar. 25, 2008); *Centerior Serv. Co. v. Acme Scrap Iron & Metal Co.*, 153 F.3d 344 (6th Cir. 1998), *abrogated in part*, *United States v. Atl. Research Corp.*, 127 S. Ct. 2331; *Metro. Water Reclamation Dist. of Greater Chi. v. N. Am. Galvanizing & Coatings, Inc.*, 473 F.3d 824, 827 (7th Cir. 2007) (“liability under § 107(a) is strict, joint and several—except rare cases where harm is divisible”); *United States v. Monsanto, Co.*, 858 F.2d 160, 168–170, (4th Cir. 1988) (liability attaches “regardless of [the] degree of participation”); *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1043–45, (2d Cir. 1985) (discussing the four classes of people CERCLA holds liable under § 9607(a) and that “Congress specifically rejected including a causation requirement in [that section]”).

4. While costs vary considerably based on the scope of contamination and characteristics of the sites, EPA spends, on average, \$220 million from the Superfund annually on removal actions (typically responses lasting less than one year and costing less than two million dollars) and considerably more on remedial actions. See U.S. GEN. ACCOUNTING OFFICE, SUPERFUND PROGRAM: CURRENT STATUS AND FUTURE FISCAL CHALLENGES, GAO-03-850 at 6 (2003) [hereinafter GAO, 2003 STATUS & CHALLENGES], available at <http://www.gao.gov/new.items/d03850.pdf>.

5. See, e.g., Irvin Molotsky, *Senate Panel Nears Approval of Waste Cleanup Bill*, N.Y. TIMES, Sept. 14, 1980, at 54 (discussing chemical manufacturer testimony alleging that the bill is “seriously defective in its overly broad scope, its punitive approach to liability and in its excessive funding levels”).

In addition to cleanup liability, Congress also included important damages provisions in CERCLA to restore natural resources that had been injured or destroyed due to a release of hazardous substances. Although less frequently litigated, these natural resource damages (NRD) provisions created great anxiety due to the inherently speculative nature of valuing lost resources and the benefits derived from those resources, coupled with the vast magnitude of potential liability (as demonstrated by the \$900 million NRD settlement of the *Exxon Valdez* case).<sup>6</sup> Some observers feared that NRDs had the potential to make CERCLA cleanup costs dim in comparison.<sup>7</sup> For instance, one commentator called NRDs the next “Black Hole” of environmental liability.<sup>8</sup> NRDs have long been called the “Sleeping Giant” because the potential for recoveries remains largely untapped.<sup>9</sup>

The virtually boundless magnitude of CERCLA NRDs caught this author’s attention when the State of New Mexico filed a two-billion dollar NRD claim against the Air Force in 1999.<sup>10</sup> The two billion dollar figure seemed to come from thin air. Then, it grew to four billion dollars before it materialized as 1.28 billion dollars when the case went to court in 2004.<sup>11</sup> New Mexico left that battle empty-handed, and lost again on appeal in 2006, in significant part due to its inability to properly quantify damages.<sup>12</sup> Others can learn important lessons from New Mexico’s failures in this case, so they are not condemned to repeat them.

In the summer of 2007, New Jersey’s Attorney General “filed approximately 120 lawsuits that could result in hundreds of millions of dollars in compensation from polluters who have harmed New Jersey’s natural resources....”<sup>13</sup> This wave of

6. See *Alaska Sport Fishing Ass’n v. Exxon Corp.*, 34 F.3d 769, 771 (9th Cir. 1994) (per curiam) (“Exxon agreed to pay the governments at least \$900 million (and possibly an additional \$100 million).”).

7. See John J. Fried, *After Cleanup, The Environment’s Bill Comes Due*, PHILA. INQUIRER, March 13, 1994, at E01.

8. Susanne Sclafane, *NRD Claims Muddy Insurance Waters*, NAT’L UNDERWRITER PROP. & CASUALTY-RISK & BENEFITS MGMT. Apr. 11, 2005 at 24, available at 2005 WLNR 6452083.

9. See Terry Fox, Comment, *Natural Resource Damages: The New Frontier of Environmental Litigation*, 34 S. TEX. L. REV. 521, 537 n.112 (citing *More Liabilities Coming Your Way: Tidal Waves and Natural Resources*, ENERGY ECONOMIST, July 1992, at 2 (calling natural resource damages “the sleeping giant or the next frontier of the CERCLA-Superfund” program) and *CMA Criticizes RCRA Corrective Action, Superfund Liability*, PESTICIDE & TOXIC CHEMICAL NEWS, Mar. 25, 1992, at 2 (referring to natural resource damages as the “‘sleeping giant’ of Superfund”)); see also Fried, *supra* note 7, at E01 (reporting that because many corporations “have never heard of” NRDs, “the assessments lurk like a ‘sleeping giant’”); *Smith Tries to Avert Explosion of Natural Resource Damages*, HAZ. WASTE NEWS, July 10, 1995, at 17 (when Department of Interior NRD rules are promulgated may be when the “sleeping giant wakes up” (internal quotations omitted)). Yet, many NRD claims were historically resolved as part of a comprehensive settlement between PRPs and the EPA and almost half “make no separate payment for natural resource damages either because the negotiated cleanup will correct the injury to the natural resource or because no such injuries were found.” U.S. GEN. ACCOUNTING OFFICE, SUPERFUND: OUTLOOK FOR AND EXPERIENCE WITH NATURAL RESOURCE DAMAGE SETTLEMENTS, RCED-96-71 at 4-5 (1996) [hereinafter GAO, SETTLEMENTS OUTLOOK], available at <http://www.gao.gov/archive/1996/rc96071.pdf>.

10. The Author was the principal environmental attorney at Kirtland Air Force Base responsible for the local team evaluating (and ultimately recommending denial of) the claim. Although the matter arose in the context of the Author’s official duties at the time, the views expressed in this article are those of the author alone and do not necessarily reflect the views of the United States Air Force or the Department of Defense.

11. The Air Force had been dropped as a defendant at the time the case was decided. See *New Mexico v. Gen. Elec. Co. (Gen. Elec. I)*, 335 F. Supp. 2d 1157 (D.N.M. 2003); *New Mexico v. Gen. Elec. Co. (Gen. Elec. II)*, 335 F. Supp. 2d 1185, 1231 (D.N.M. 2004); *New Mexico v. Gen. Elec. Co. (Gen. Elec. III)*, 467 F.3d 1223 (10th Cir. 2006).

12. *Gen. Elec. III*, 467 F.3d at 1242.

13. Press Release, N.J. Office of the Att’y Gen., State Files Lawsuits Seeking Compensation for Damages

litigation reflects a continuation of New Jersey's aggressive NRD approach to investigate and pursue over 4,000 cases.<sup>14</sup> Some have asserted that these cases are "waking the sleeping giant,"<sup>15</sup> yet the ultimate outcome of the most recent cases is anything but certain, as the courts in New Jersey continue to struggle with NRD claims by the State based upon CERCLA and the New Jersey Spill Compensation and Control Act.<sup>16</sup>

This ongoing litigation is establishing the legal framework for the proper assessment and collection of natural resource damages under state law and how state enforcement efforts interface with and are limited by the parallel (perhaps complementary, but perhaps conflicting) remedies under CERCLA.<sup>17</sup> Although the past couple of years have seen a resurgence of interest in pursuing NRDs,<sup>18</sup> numerous challenges to litigating these claims continue to keep most trustees out of the courtroom. Experts predict that many state trustees are awaiting the outcome of the New Jersey cases before adopting similar measures.<sup>19</sup>

At the same time, behind the scenes, trustees have been attaining their greatest successes through settlement and cooperative arrangements with PRPs that foster restoration.<sup>20</sup> Corrective changes to the NRD laws are still necessary to foster a more effective route for litigation. A Federal Advisory Committee Report (FAC Report) issued in May 2007 lays the groundwork for regulatory changes to make

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Polluters Caused to Natural Resources (June 29, 2007), <http://www.nj.gov/oag/newsreleases07/pr20070629a.html> (last visited Jun. 24, 2008). Since June of 2007, a number of cases have settled generating over \$4 million and 700 acres of protected natural resources; [http://www.state.nj.us/dep/newsrel/2008/08\\_0038.htm](http://www.state.nj.us/dep/newsrel/2008/08_0038.htm) (last visited Dec. 21, 2008). Consent decrees and updates on settled cases may be found at <http://www.state.nj.us/dep/nrr/settlements/> (last visited Dec. 21, 2008).

14. See N.J. Dep't of Env'tl. Prot., Policy Directive 2003-07 (Sept. 24, 2003), available at <http://www.nj.gov/dep/commissioner/policy/pdir2003-07.htm> (last visited Aug. 15, 2008); Press Release, N.J. Dep't of Env'tl. Prot., DEP to Address More Than 4,000 Potential Claims for Natural Resource Damages Statewide, Commissioner Campbell Orders Passaic River Restoration: Parties Responsible for Pollution Must Assess and Restore Natural Resource Injuries (Sept. 24, 2003), [http://www.nj.gov/dep/newsrel/releases/03\\_0131.htm](http://www.nj.gov/dep/newsrel/releases/03_0131.htm) (last visited Aug. 15, 2008).

15. See John Tomlin, Comment, *Waking the Sleeping Giant: Analyzing New Jersey's Pursuit of Natural Resource Damages from Responsible Polluting Parties in the Lower Passaic River*, 23 PACE ENVTL. L. REV. 235, 236 (2005) ("the sleeping giant is waking, and industry had better beware"); Shawn Kelly et al., *New Jersey's Natural Resource Damages Initiative: Is the "Sleeping Giant" Waking Up?*, 56 FEDERATION OF DEFENSE & CORPORATE COUNSEL (FDCC) QUARTERLY 345 (2006), available at 2006 WLNR 11945069 (New Jersey's initiative "may well herald similar programs in other states").

16. N.J. Stat. Ann. § 58:10-23.11 (West 2006).

17. Investigating other state NRD recovery methods is an important area for continued research. Indeed, to the extent federal laws are inadequate, the only recourse short of congressional legislative change remains with the States.

18. See Brian D. Israel, *Natural Resource Damage Claims: Strategies for Responding to Increased Federal and State Enforcement*, ABA TRENDS, Sept.-Oct. 2006, at 4, available at <http://www.arnoldporter.com/resources/documents/Arnold%20&%20Porter%20LLP.Natural%20Resource%20Damage%20Claims.Brian%20Israel.Tr%20ends.Fall%202006.pdf> (showing increase from 12 Department of Justice cases in 2003 to 22 cases in 2005); Press Release, *supra* note 13 (NJ files 120 NRD lawsuits in summer of 2007).

19. See BRIAN D. ISRAEL, NATURAL RESOURCE DAMAGES, ENVIRONMENTAL LAW PRACTICE GUIDE § 32B.08[4] at 32B-80 (Michael B. Gerrard ed., Lexis Nexis 2006), available at [http://www.arnoldporter.com/resources/documents/Israel\\_NRD\\_Chapter2006.pdf](http://www.arnoldporter.com/resources/documents/Israel_NRD_Chapter2006.pdf); Kelly et al., *supra* note 15, at 397 (if successful, more litigation is likely and if unsuccessful, "the feared NRD 'trend' will die on the vine").

20. These measures seem to be successful in spite of the archaic adversarial NRDA scheme. See *infra* Part V.

restoration of natural resources “faster, more efficient, and more effective.”<sup>21</sup> The FAC Report recommendations portend a new era in NRD assessment.<sup>22</sup> These recommendations should be matched by congressional resolve to appropriate sufficient resources to trustees in order to allow trustees to fund assessment and restoration efforts where PRPs are not cooperative.

Although cooperative assessment is indeed the wave of the future, the promise of continued beneficial partnering between the government trustees and industry will only survive if a credible threat of litigation remains. Thus, enhancing laws to better posture the government to litigate and win helps ensure that PRPs are motivated to settle.<sup>23</sup> Therefore, all pieces of this complex puzzle must be analyzed in concert.

This Article examines lessons learned from NRD litigation to explain why a tool with so much potential to benefit the environment has remained underutilized. It also explores the bigger picture, examining and advocating promising alternatives to litigation in appropriate cases. Finally, it advocates corrective regulatory and statutory action to enable the NRD scheme to meet its full potential.

Following this Introduction, Part II of this Article establishes CERCLA fundamentals concerning natural resource damages. A major flaw with the NRD program is that trustees may not routinely access the Superfund for Natural Resource Damage Assessments.<sup>24</sup> Additional challenges in evaluating and assessing NRDs are also discussed in Part II. This part explains the evolution of regulations governing assessment of NRDs, as well as recent proposals from a federal advisory panel to improve our national approach to natural resource damage assessment.

Part III looks in detail at problems inherent in the New Mexico NRD approach. Specifically, six pitfalls that must be avoided by trustees are identified and discussed. It is crucial to understand the failures in NRD application if they are to be avoided or correctively addressed.

Part IV of this article studies alternatives with more promise. It evaluates the relative merits of the New Jersey approach, discussing both advantages and vulnerabilities. It also examines how other states are pursuing NRDs and considers empirical data that tend to highlight impediments to NRD recovery. The “valuation” question is the lynchpin to NRD awards, so the difficult tensions between precision and expediency are examined in detail.

Part V examines the trend toward cooperation versus litigation. It identifies the many advantages of a cooperative approach for PRPs and trustees alike. It also explores the trade-offs a PRP must make when embracing such an approach. Finally, Part VI explores regulatory and legislative changes to strengthen CERCLA NRD recoverability.

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21. NATURAL RES. DAMAGE ASSESSMENT & RESTORATION FED. ADVISORY COMM., FINAL REPORT 7 (2007) [hereinafter 2007 FAC REPORT], available at [http://restoration.doi.gov/pdf/facamtg5\\_finalreport.pdf](http://restoration.doi.gov/pdf/facamtg5_finalreport.pdf).

22. See *id.*; see also *infra* notes 62–85 and accompanying text.

23. Indeed, the uncertainty in valuation and the prospect of unlimited damages is a factor driving settlements now. If the courts impose awards on a lesser scale in the cases now pending, the desire to cooperate may in many circumstances evaporate.

24. 42 U.S.C. § 9611(b)(2) (2000) (restrictions on natural resource damages payable by the Superfund).

## II. BACKGROUND

### A. *Natural Resource Damages Under CERCLA*

CERCLA defines “natural resources” as:

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...any State or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.<sup>25</sup>

The term “damages” means 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.”<sup>26</sup>

Natural resource damages are above and beyond the cost of cleanup under CERCLA.<sup>27</sup> The legislation explicitly allows recovery of NRDs in addition to the costs of emergency removal actions or remediation.<sup>28</sup> The costs of assessing the lingering damages to natural resources are also expressly recoverable as NRDs.<sup>29</sup>

In 1986, CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA).<sup>30</sup> SARA required the President to designate in the National Contingency Plan federal officials “who shall act on behalf of the public as trustees for natural resources” under CERCLA and the Clean Water Act.<sup>31</sup> SARA simultaneously tasked the governors of each State to designate State Natural Resource Trustees.<sup>32</sup>

### B. *The Trustee’s Role and Responsibilities*

Trustees are charged to act on behalf of the public to recover for damages to natural resources and to use such funds “to restore, rehabilitate, or acquire the equivalent of such natural resources....”<sup>33</sup> SARA created a rebuttable presumption in favor of the trustees whenever they make a damage determination in accordance with duly promulgated regulations.<sup>34</sup> The presumption applies in both administrative and judicial proceedings.<sup>35</sup> However, the trustees are not required to follow the regulations when performing Natural Resource Damage Assessments (NRDAs).<sup>36</sup>

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25. *Id.* § 9601(16).

26. *Id.* § 9607(a)(4)(C).

27. *See* 43 C.F.R. § 11.10 (2007).

28. 42 U.S.C. § 9607(a)(4)(A) to (C).

29. *Id.* § 9607(a)(4)(C).

30. Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613-97 (1986) (codified as amended at 42 U.S.C. §§ 9601-9675, §§ 6926-6991 and §§ 11001-11050; 10 U.S.C. §§ 2701-2707; 26 U.S.C. § 59A, §§ 4671-4672 and §§ 9506-9508) [hereinafter SARA].

31. 42 U.S.C. § 9607(f)(2)(A).

32. *Id.* § 9607(f)(2)(B).

33. *Id.* § 9607(f)(1).

34. *Id.* § 9607(f)(2)(C). Although such regulations were commanded in 1980 to be developed within two years, as of the passage of SARA in 1986 they had not yet been promulgated. *See id.* § 9651(c)(1) (extending the period an additional six months).

35. *Id.* § 9607(f)(2)(C).

36. *See id.* § 9607(f) (discussing the obligation of the trustee to recover NRDs; no mention of NRDA); *id.* § 9651(c) (directing federal officials to study and promulgate regulations for assessing damages); *see also Gen.*

A rebuttable presumption should provide an advantage in litigation to the trustee, since the trustee must merely follow the NRDA rules, and the burden would then shift to the defendant to establish that the assessment of damages was inaccurate.<sup>37</sup> Given the complexity of valuing natural resources, such an advantage would appear to be very powerful.<sup>38</sup> As explained later, the regulations have not lived up to their potential, so the benefit of the rebuttable presumption has not been fully realized.<sup>39</sup>

### C. Challenges in Valuing and Assessing NRDA<sup>40</sup>

#### 1. Evolution of the Assessment Regulations

In 1986, Congress gave the President “six more months”<sup>41</sup> to develop NRDA regulations to specify:

- (A) *standard* procedures for *simplified assessments* requiring minimal field observation, including establishing measures of damages based on units of discharge or release or units of affected area, and
- (B) *alternative* protocols for conducting *assessments in individual cases* to determine the type and extent of short- and long-term injury, destruction, or loss. Such regulations shall identify the best available procedures to determine such damages, including both direct and indirect injury, destruction, or loss and shall

*Elec. III*, 467 F.3d 1223, 1235 (10th Cir. 2006) (finding no mandate to use federal regulations for assessment); 43 C.F.R. § 11.10 (2007) (assessment procedures not mandatory but must be used in order to obtain the rebuttable presumption).

37. See *Gen. Elec. Co. v. U.S. Dep’t of Commerce*, 128 F.3d 767, 770 (D.C. Cir. 1997) (addressing similar presumption under the Oil Pollution Act).

38. *But see id.* at 772 (“[I]t is not at all clear that the rebuttable presumption gives trustees a ‘powerful advantage.’”).

39. See *id.* (leaving the meaning and practical application of the rebuttable presumption unresolved). The presumption has not been tested successfully in litigation. See ISRAEL, *supra* note 19, § 32B.06[2] at 32B-58. Of course, it is impossible to determine how many PRPs may have been motivated to settle cases based on an unwillingness to litigate in the face of the presumption.

40. While this Article emphasizes other problems, a synopsis of the key valuation shortcomings is necessary to understand their intrinsic contribution to difficulties within the NRD scheme. For in-depth discussion concerning problems with valuing NRDA, particularly the challenges in evaluating lost use or non-use of resources, see Frank B. Cross, *Natural Resource Damage Valuation*, 42 VAND. L. REV. 269, 270 (1989) (“The path to...valuation is rife with pitfalls, both philosophical and practical.”); see also Jason J. Czarneski & Adrienne K. Zahner, *The Utility of Non-use Values in Natural Resource Damage Assessments*, 32 B.C. ENVTL. AFF. L. REV. 509 (2005) (“Non-use values are frequently underestimated or ignored in natural resource damage assessments.”); Allan Kanner & Tibor Nagy, *Measuring Loss of Use Damages in Natural Resource Damage Actions*, 30 COLUM. J. ENVTL. L. 417, 418 (2005) (arguing that despite the “increasingly frequent suggestion [that] the public be deprived of [non-use] damages” it is possible to value these damages and offering several suggestions including comparisons to the valuation of other “non-market” damages such as pain and suffering in tort cases); Dale B. Thompson, *Valuing the Environment: Courts’ Struggles with Natural Resource Damages*, 32 ENVTL. L. 57, 60 (2002) (valuation of natural resource damages is difficult because it utilizes “non-market” valuation methods that do not have the “level of certainty and concreteness” required by evidentiary standards).

41. See 42 U.S.C. § 9651(c)(1) (2000):

The President...shall study and, not later than two years after December 11, 1980, shall promulgate regulations for the assessment of damages for injury to, destruction of, or loss of natural resources resulting from a release of oil or a hazardous substance...Notwithstanding the failure of the President to promulgate the regulations required under this subsection on the required date, the President shall promulgate such regulations not later than 6 months after October 17, 1986 [the date SARA passed].

take into consideration factors including, but not limited to, replacement value, use value, and ability of the ecosystem or resource to recover.<sup>42</sup>

Based upon the statute, regulations of simplified assessments, authorized in paragraph (A) above, have come to be known as “Type A” regulations, whereas detailed assessments authorized in paragraph (B) are governed by “Type B” regulations.<sup>43</sup>

Under the National Contingency Plan, the Department of the Interior (DOI) was charged to develop the Type A and Type B NRD regulations.<sup>44</sup> The DOI recognized that “damage assessments provide the basis for determining the restoration needs that address the public’s loss and use of these resources.”<sup>45</sup> Nevertheless, regulations were difficult to craft because of the complexity of placing dollar values on resources for which markets often do not exist, lack of experience in conducting such valuations, and little precedent to guide trustee actions.<sup>46</sup>

Once finally promulgated, the regulations were attacked both by environmental groups as well as industry, and these early cases sent DOI back to the drawing board.<sup>47</sup> For example, *Ohio v. United States Department of the Interior* considered the validity of the Type B regulations.<sup>48</sup> The D.C. Circuit remanded these rules to DOI, indicating that allowing valuation based on the lesser of restoration, replacement, or diminution in use values (the “lesser of” rule) was contrary to congressional intent to establish a “preference for restoration cost” as the best measure of NRDs.<sup>49</sup> The court indicated that alternatives to restoration cost would be acceptable where restoration costs were impossible to calculate or “grossly disproportionate” to the value of the use of the resource (use value).<sup>50</sup>

Though the court struck down DOI’s approach to this first component of natural resource damages (to compensate for lingering damages to the natural resource), it affirmed DOI’s policy toward calculating value for the second component, to compensate for the temporary loss of services of these resources (also known as loss of use damages). DOI’s approach evaluates loss of services only if the resource was *committed to be used* either through current use or planned public use, “for which there is a documented, legal, administrative, budgetary, or financial commitment,” before the hazardous release was detected.<sup>51</sup> This “committed use” requirement provides a bright line rule for the trustees and the courts in ascertaining the scope

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42. *Id.* § 9651(c)(2) (emphasis added).

43. 43 C.F.R. § 11.13(d)–(e) (2006); see also Carl W. Breeding & Lloyd R. Cress, Jr., *Natural Resource Damages Under CERCLA: A New Beginning?*, 20 N. KY. L. REV. 23, 36 (1992).

44. Exec. Order No. 12,316, 46 Fed. Reg. 42,237, (Aug. 14, 1981); Exec. Order No. 12,580, 52 Fed. Reg. 2,923, (Jan. 23, 1987); see also 40 C.F.R. § 300.600 (2006).

45. U.S. Dep’t of the Interior, Natural Resource Damage Assessment and Restoration Program, <http://restoration.doi.gov/> (last visited Aug. 10, 2008).

46. Breeding & Cress, *supra* note 43, at 28; see also GAO, SETTLEMENTS OUTLOOK, *supra* note 9, at 9–10, 27 (illustrating application of Type A and Type B procedures).

47. See *Ohio v. U.S. Dep’t of the Interior*, 880 F.2d 432 (D.C. Cir. 1989) (challenging Type B regulations); *Colorado v. U.S. Dep’t of the Interior*, 880 F.2d 481 (D.C. Cir. 1989) (challenging Type A regulations).

48. 880 F.2d 432.

49. *Id.* at 458–59.

50. *Id.* at 459.

51. 43 C.F.R. § 11.14(h) (2006).



of lost services. The court noted that such a method “avoids the need for unreliable, and likely self-serving, speculation regarding future possible uses.”<sup>52</sup>

Finally, the D.C. Circuit considered whether contingent valuation (CV) was an appropriate method when market-based valuation was either not available or was not reflective of the true value of injured resources.<sup>53</sup> CV employs surveys of public opinion regarding the value of a lost resource, particularly lost nonuse of a resource.<sup>54</sup> The value of nonuse—simply knowing a resource exists—is sometimes called existence value, option value (the option to use it), or bequest value (saving it for posterity).<sup>55</sup> In order to capture all aspects of harm, the court upheld the CV method to measure nonuse.

In summary, in *Ohio* the court affirmed DOI’s “committed use” policy and the controversial CV approach, but sent DOI back to the drawing board with important direction concerning the Type B regulations. However, the court’s work in clarifying the NRD regulations was not over, as challenges to the Type A regulations were simultaneously pending.

In *Colorado v. United States Department of the Interior*,<sup>56</sup> decided by the court the same day, the D.C. Circuit evaluated the Type A regulations.<sup>57</sup> Ironically, the “simplified” Type A regulations were promulgated after and mirrored the complex, four-step, Type B regulations.<sup>58</sup> In addition to the shortcomings in valuation methodology (discussed in *Ohio*, and resulting in remand), the regulations were challenged as not conforming to Congress’s intent for “standard procedures for simplified assessments of natural resource damages.”<sup>59</sup> Specifically, the regulations would afford procedures for Type A assessment in coastal and marine environments only. Further, the damages were to be calculated using computer modeling.<sup>60</sup> Despite these limitations, these aspects of the Type A regulations were upheld.<sup>61</sup>

## 2. Toward Habitat Equivalency Analysis

After the Exxon Valdez oil spill, Congress enacted the Oil Pollution Act of 1990 (OPA) and directed the National Oceanographic and Atmospheric Administration (NOAA) to promulgate regulations to assess natural resource damages due to oil spills in coastal and marine environments.<sup>62</sup> Although not directly applicable to

52. *Ohio*, 880 F.2d at 462. Because of this, the “‘committed use’ standard is an eminently reasonable construction of the statute.” *Id.*

53. *Id.* at 475–78.

54. See Miriam Montesinos, Comment, *It May Be Silly, But It’s an Answer: The Need to Accept Contingent Valuation Methodology In Natural Resource Damage Assessments*, 26 *ECOLOGY L.Q.* 48, 78 (1999) (“Federal courts, DOI and experts have agreed that nonuse values must be included and have provided for nonuse values to be part of NRD assessments.”). However, state laws may expressly prohibit non-use.

55. *Id.* at 50.

56. 880 F.2d 481 (D.C. Cir. 1989).

57. The D.C. Circuit is the exclusive venue for review of CERCLA regulations. 42 U.S.C. § 9613(a) (2000).

58. See 52 Fed. Reg. 9042 (1987) (codified as amended at 43 C.F.R. §§ 11.30–11.84 (2006)).

59. *Colorado*, 880 F.2d at 485, 491.

60. See 52 Fed. Reg. 9042, 9048 (Mar. 20, 1987); 43 C.F.R. § 11.41 (2006) (discussion of NRDA Model for Coastal and Marine Environment). A model for great lakes contaminations was developed in 1996. See 61 Fed. Reg. 20,560, 20,611 (May 7, 1996) (codified at 43 C.F.R. § 11.40 (2006)).

61. *Colorado*, 880 F.2d at 491.

62. Pub. L. No. 101-380, § 1006(e)(1) (codified at 33 U.S.C. § 2706(e)(1) (2000)). “For natural resource damages resulting from a discharge or release of a mixture of oil and hazardous substances, trustees must use 43

CERCLA NRDA's, the NOAA methodology of habitat equivalency analysis is worth considering here, because it is restoration-focused (as Congress intended CERCLA to be),<sup>63</sup> because it has led to the successful resolution of NRD cases,<sup>64</sup> because the approach has withstood judicial scrutiny,<sup>65</sup> and because it contains features that the Federal Advisory Committee is recommending to DOI for further study and implementation.<sup>66</sup> In addition, because trustees are not required to follow the DOI regulations, the NOAA approach presents a reasoned alternative for trustees to use in evaluating CERCLA damages.<sup>67</sup>

NOAA explains that habitat equivalency analysis (HEA) is:

a methodology used to determine compensation for...resource injuries. The principal concept underlying the method is that the public can be compensated for past losses of habitat resources through habitat replacement projects providing additional resources of the same type.<sup>68</sup>

NOAA uses HEA to calculate both primary restoration (the cost to restore any injured resources to their baseline condition) and compensatory restoration (the cost to compensate for interim lost use of the injured resources).<sup>69</sup> Where a responsible party agrees with the analysis, it may conduct the restoration activities itself, subject to monitoring by the trustees to ensure the project meets performance requirements.<sup>70</sup> In such a scenario, the need never arises to place a dollar figure on natural resource damages.

Even when the responsible party refuses to conduct the restoration, the calculation of damages using HEA is less cumbersome. HEA focuses on restoration-based assessments, thereby bypassing the valuation of injured resources themselves and focusing instead on the costs to actually restore or replace the resources.<sup>71</sup> Notably, the HEA approach avoids the controversial CV methodology,<sup>72</sup> jumpstarts

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C.F.R. part 11 in order to obtain a rebuttable presumption." 15 C.F.R. § 990.20(c) (2006).

63. See *Ohio v. U.S. Dep't of the Interior*, 880 F.2d 432, 462 (D.C. Cir. 1989).

64. See Nat. Oceanic & Atmospheric Admin., Assessment & Restoration Division website, [http://www.response.restoration.noaa.gov/orr\\_about\\_owner.php?RECORD\\_KEY%28owner\\_chosen%29=owner\\_id&owner\\_id\(owner\\_chosen\)=7](http://www.response.restoration.noaa.gov/orr_about_owner.php?RECORD_KEY%28owner_chosen%29=owner_id&owner_id(owner_chosen)=7) (last visited July 28, 2008) (over 95-percent settlement rate).

65. See *Gen. Elec. Co. v. U.S. Dep't of Commerce*, 128 F.3d 767, 769 (D.C. Cir. 1997); see also *United States v. Great Lakes Dredge & Dock Co.*, 259 F.3d 1300, 1305-06 (11th Cir. 2001) (withstanding *Daubert* analysis); *United States v. Fisher*, 977 F. Supp. 1193, 1201 (S.D. Fla. 1997) *aff'd*, 174 F.3d 201 (11th Cir. 1999) (unpublished table decision).

66. 2007 FAC REPORT, *supra* note 21, at 19.

67. 43 C.F.R. § 11.10 (2006); see also *Gen. Elec. Co. v. U.S. Dep't of Commerce*, 128 F.3d 767 (validating NOAA restoration-based approach).

68. NAT. OCEANIC & ATMOSPHERIC ADMIN., HABITAT EQUIVALENCY ANALYSIS: AN OVERVIEW 1 (2006), <http://www.darrp.noaa.gov/library/pdf/heaoverv.pdf>.

69. *Id.* at 2. Natural resource trustees have employed HEA for groundings, spills, and hazardous waste sites. *Id.*

70. *Id.* at 14 n.15.

71. ISRAEL, *supra* note 19, at 32B-33. Some have argued that restrictions on contingent valuation under NOAA's scheme "fail[s] to hold polluters fully accountable." John H. Cushman Jr., *U.S. Would Temper Oil-Spill Damage Calculation*, N.Y. TIMES, Jan. 8, 1994, at A9 (quoting Sarah Chasis, an attorney with the Natural Resources Defense Council).

72. See Thompson, *supra* note 40, at 78 (courts have not ruled on the validity of CV studies because parties have settled).

the restoration (since restoration planning is a necessary component of the evaluation methodology), and tends to be more palatable to industry.<sup>73</sup>

### 3. Current NRDA Regulations

At the same time NOAA was promulgating and defending its regulations under the Oil Pollution Act, DOI was revamping its assessment rules in the wake of the *Ohio* ruling. DOI dropped the “lesser of” rule and its earlier hierarchy of assessment rules, while retaining the “committed use” requirement for loss of use damages.<sup>74</sup> In 1996, DOI also added a “Great Lakes” model for the Type A Regulations.<sup>75</sup> These revisions withstood judicial scrutiny in the mid- to late-1990s.<sup>76</sup>

At present, the Type A rules provide for trustees to enter specific factual data into either the Natural Resource Damage Assessment Model for Coastal and Marine Environments (NRDAM/CME) or the Great Lakes Environment (NRDAM/GLE). To use either model, trustees must know the identity of the released substance, time and duration of release, mass or volume released, location of spill, tidal and wind conditions, extent of response actions including any beach closures or closures of fishing or hunting areas, and a price deflator for the Gross National Product (base year 1992).<sup>77</sup>

The limited utility of these Type A models should be apparent because they are suitable only for single spills of single substances when the parameters of the spill are known or easily ascertainable. If multiple substances are released, the models are to be run only once for one substance. If the damages exceed \$100,000, the trustee is to limit the calculation to that amount or else use the more cumbersome Type B rules.<sup>78</sup> Thus, the Type A models are of no utility for Superfund sites with commingled wastes released at different times from different responsible parties. Type A regulations dictate a single precise methodology for their limited scope of releases, calling for trustees only to input designated variables into a black box model.

At the opposite end of the spectrum, the Type B regulations fail to dictate any particular methodology for the remaining universe of releases, instead demanding case-specific approaches.<sup>79</sup> The realm of acceptable methods within Type B regulations to calculate damages includes several different estimating measures to compute restoration (or replacement or equivalent) costs.<sup>80</sup> Trustees add to this amount another estimate to calculate use and non-use values of lost public services while awaiting restoration.<sup>81</sup> For this second component, the trustee may draw from

73. See, e.g., Joseph P. Nicollette et al., *Quantifying Ecological Changes Helps Determine Best Mitigation*, PIPE LINE & GAS INDUSTRY, Sept. 2001, at 52 (HEA method avoids overcompensating for environmental impact).

74. Natural Resource Damage Assessments, 59 Fed. Reg. 14,262, 14,263–64, 14,268 (Mar. 25, 1994).

75. Natural Resource Damage Assessments—Type A Procedures, 61 Fed. Reg. 20,560 (May 7, 1996).

76. Nat'l Ass'n of Mfrs. v. U.S. Dep't of Interior, 134 F.3d 1095 (D.C. Cir. 1998) (upholding Type A regulations); *Kennecott Utah Copper Corp. v. U.S. Dep't of the Interior*, 88 F.3d 1191 (D.C. Cir. 1996) (upholding the relevant portion of Type B regulations).

77. 43 C.F.R. Pt. 11, app. II–III (2006).

78. *Id.* § 11.42.

79. *Id.* § 11.83(a).

80. *Id.* § 11.83(b).

81. *Id.* § 11.83(c).

a litany of acceptable methods, including market price, appraisal, factor income, travel cost, hedonic pricing, unit value, contingent valuation, and, as a catch-all, “other” valuation methodologies. These are acceptable so long as they are cost-effective and in accordance with the public’s “willingness to pay.”<sup>82</sup> Thus, whereas the trustee has no autonomy in Type A assessments, the same trustee enjoys virtually unbridled flexibility in conducting Type B assessments.

Inasmuch as the D.C. Circuit has upheld Type B regulations,<sup>83</sup> the only constraints on trustees wishing to enjoy the “rebuttable presumption” would appear to be conformance to the processes mandated in the statute and the regulations themselves. Of course, measures must comply with the regulatory restrictions imposed by 43 C.F.R. § 11.83 for all damage determinations: they must be feasible and reliable for a particular incident and type of damage to be measured; they must be capable of being performed at reasonable cost; they must avoid or eliminate double counting; and, they must be cost-effective.<sup>84</sup> Because these regulatory restrictions are so nebulous, however, the trustee may nevertheless remain susceptible to challenges that the methodology selected is *not* cost-effective, feasible, reliable, or suitable for the particular incident or type of damages to be measured. This opens the door to a battle of experts in both the scientific and economic domains, arguably eviscerating the value of the presumption.

Thus, the present scheme is deficient in a number of respects. Obviously, the limitation on approved Type A regulations (coastal and marine only) deprives trustees of the benefit of the simplified approach for other habitats. As a result, for other habitats, trustees will have an uphill battle in establishing both entitlement and amount of natural resource damages. On an even more basic level, however, the regulatory scheme is fundamentally flawed, because the “simplified” rules are not simple. In fact, according to a study of state natural resource trustees, even though most cases were brought under federal authority, state trustees had devised their own simplified assessment methods rather than using the Type A regulations.<sup>85</sup>

#### 4. 2007 Federal Advisory Committee Recommendations

CERCLA requires that the NRD regulations be reviewed and revised as appropriate every two years.<sup>86</sup> Throughout the past twenty years, the collective experience of those in the NRDA business has confirmed problems with the rules, particularly valuation methodologies and measuring damages in dollars instead of focusing on the restoration of both lost resources and lost service equivalents to those resources.<sup>87</sup> Thus, it is clearly time to revise these regulations.

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82. *Id.* §§ 11.83(c)(2), (3).

83. *Kennecott Utah Copper Corp. v. U.S. Dep’t of Interior*, 88 F.3d 1191 (D.C. Cir. 1996).

84. 43 C.F.R. § 11.83(a)(3).

85. AMY W. ANDO ET AL., ILL. DEP’T OF NAT. RES., NATURAL RESOURCE DAMAGE ASSESSMENT: METHODS AND CASES, 7, 10–11 (2004) [hereinafter NRDA METHODS AND CASES], available at [http://www.wmrc.uiuc.edu/main\\_sections/info\\_services/library\\_docs/RR/RR-108.pdf](http://www.wmrc.uiuc.edu/main_sections/info_services/library_docs/RR/RR-108.pdf).

86. 42 U.S.C. § 9651(c)(3) (2000).

87. 2007 FAC REPORT, *supra* note 21, at 8 (“[M]ore than twenty years of practice has shown—with few exceptions—that restoration of injured resources can be achieved more quickly, more efficiently, and more effectively by focusing on restoration in lieu of monetary damages, and on cooperative approaches to assessing and addressing injury.”).

To address perceived inadequacies, a Federal Advisory Committee spent two years collectively reviewing DOI regulations, policies, and practices regarding Natural Resource Damage Assessment and Restoration (NRDAR) activities.<sup>88</sup> The fruits of this labor were released in a May 2007 report containing a series of recommendations. The committee ultimately recommended incremental correction ranging from immediate activities (Tier 1 actions) through long-term improvements, including revisions of the CERCLA NRDAR Regulations (Tier 3 actions).<sup>89</sup> These tiered recommendations are addressed in turn below.

#### a. Tier 1 (Immediate) Actions

The committee recommended that DOI conduct meetings, technical workshops, and symposiums and sponsor research efforts to develop guidance on injury determination and quantification.<sup>90</sup> In addition, DOI was encouraged to promote cooperative assessments through initiatives such as model agreements with PRP groups and creating inventories of pre-existing plans for restoration actions. The advantages of cooperative NRD assessments are addressed in Part IV.C of this Article.

#### b. Tier 2 (Almost Immediate) Actions

Tier 2 actions are theoretically possible now, but are not as immediate as Tier 1 actions due to expectations that they will take longer to implement.<sup>91</sup> The Tier 2 recommendations seem, in many respects, to reflect the already existing NOAA NRDA regulation processes. For example, they call for integrating National Environmental Policy Act (NEPA)<sup>92</sup> compliance into the assessment process and developing categorical exclusions that DOI could implement simultaneously with restoration planning.<sup>93</sup> Most importantly, the Tier 2 recommendations would clarify the acceptability of restoration to address compensation for lost services in addition to basic restoration of the injured resources.<sup>94</sup> To accomplish this result, the recommendations suggest a minor regulatory change “to clarify the appropriateness of a restoration-based approach for all natural resource damages.”<sup>95</sup>

Such a regulatory change could be quickly pursued, because it would be unlikely to be judicially challenged. NOAA regulations to the same effect have already passed muster.<sup>96</sup> The committee believed these changes, like the OPA rules, (1) comport more with an overall objective of restoration, (2) would foster an earlier focus on restoration, and (3) would provide “flexibility to use simpler, more cost effective, and more transparent methods to relate natural resource damage claims to restoration, rather than monetary damages.”<sup>97</sup>

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88. *Id.* at 4.

89. *Id.* at 18–19.

90. *Id.* at 18.

91. *Id.*

92. 42 U.S.C. §§ 4321–4370(f) (2000).

93. Compare 2007 FAC REPORT, *supra* note 21, at 18, with 15 C.F.R. § 990.23 (2006).

94. Compare 2007 FAC REPORT, *supra* note 21, at 19, with 15 C.F.R. § 990.53(b), (c) (“compensatory restoration” in addition to “primary restoration”).

95. 2007 FAC REPORT, *supra* note 21, at 18.

96. See *Gen. Elec. Co. v. U.S. Dep’t of Commerce*, 128 F.3d 767 (D.C. Cir. 1997).

97. 2007 FAC REPORT, *supra* note 21, at 16.

The present Type A and Type B regulations require damages to be converted from injury to dollars (valuation of damages) and back from dollars to restoration efforts to redress the injury. One way to deal with valuation problems is to avoid them. The NOAA approach under OPA, and the recommended change to the DOI process, avoid the “valuation” difficulties altogether when responsible parties are cooperatively involved and conduct the restoration activities. Even when costs of replacement resources must be calculated, the most serious imperfections of the present scheme are avoided.

### c. Tier 3 (Longer-Term) Actions

The committee recognized that it may be necessary to rewrite some of the regulations and that corrective actions may not be achieved overnight. “Quantifying natural resource injury in a manner that supports reliable restoration planning can be a highly complex, technical issue...[W]orkshops recommended by the Committee can help resolve some of these issues by focusing on reliable injury assessment and quantification that is clearly and transparently tied to appropriate restoration objectives.”<sup>98</sup> The principal concerns were attempting to attain consensus-based approaches to scientific uncertainty, clarifying threshold factors and balancing factors to consider in evaluating proposed restoration actions, and introducing appropriate scaling concerns to address impact on the population, habitat, or ecosystem level.<sup>99</sup>

Where valuation questions cannot be avoided, a transparent system based upon credible scientific approaches could nevertheless defuse litigation. It appears the committee values these objectives while appreciating that they may not materialize without the time and effort of all stakeholders in the NRDA process. For example, the committee touts President Bush’s call for cooperative conservation in this regard and its “great potential to leverage success and result in more effective, efficient, and sustainable natural resource restoration and protection.”<sup>100</sup> Only the future will reveal whether these initiatives will be successful, but the regulators are not operating in a vacuum.

Although habitat equivalency analysis “is certainly the most common single assessment method in the current era of NRD activity, methods that place a dollar value on [damaged natural resources] are still successfully in use.”<sup>101</sup> For example, state trustees “employ a wide range of assessment methods, seemingly matching the sophistication (and expense) of the method to the expected magnitude of the damages.”<sup>102</sup> Federal cooperation with these knowledgeable stakeholders may promote systemic changes to add appropriate tools for assessing NRDs.<sup>103</sup> Section IV.B. examines current state programs.

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98. *Id.* at 12–13.

99. *Id.* at 8, 11, 13.

100. *Id.* at 10.

101. NRDA METHODS AND CASES, *supra* note 85, at 15.

102. *Id.*

103. For example, NOAA teamed with the State of Florida to streamline damage assessments to restore seagrass habitat injured as a result of boat groundings in the Florida Keys. See Kevin D. Kirsch et al., *The Mini-312 Program—An Expedited Damage Assessment and Restoration Process for Seagrasses in the Florida Keys National Marine Sanctuary*, J. COASTAL RESEARCH, Winter 2005, at 109.

#### *D. Litigation Issues Confronting Trustees*

There are several distinct tensions underlying natural resource injury issues. The first, precision versus simplicity, is encompassed within the valuation choice itself. It was addressed above in terms of the trustees' choice to follow an approved NRDA regulation in calculating damages, or to choose simpler, but less "litigation-worthy" assessment strategies. Because simplified assessment strategies are more promising as options for promoting settlement than as stepping stones toward litigation, these possibilities are explained more fully in Section IV.C.

One notable exception to the tension between precision and simplicity is the restoration method of assessment. This methodology values the cost of performing restoration in kind, both to restore injuries to baseline and as a surrogate for monetizing lost service costs. These methodologies, as embraced by the NOAA regulations and under consideration for DOI regulation revisions, actually simplify the NRD process while also requiring precision. The tension between simplicity and precision is eased because charges for "in-kind" activities are more clearly linked to market-based restoration cost versus monetary damages for each resource injury.

Restoration methodology utilizes estimates that are derived from habitat equivalency analysis, which is grounded on real world corrective measures. For instance, only the restoration equivalence for lost resources, including lost service values, needs to be translated into equivalent corrective action costs. Furthermore, assessing the substitute restoration costs avoids the double conversion problem of first forcing an initial dollar-value determination of injuries and then later translating the costs recovered for these injuries into a concrete restoration plan. Therefore, there are two simplification gains—one in the substance of the calculation, and the second in the procedure to complete the actual restoration activity, because the assessment itself already selects the solution.

The trustee need not monetize restoration costs at all—only impose restoration obligations and ensure that they are executed. If forced to put a dollar figure on the assessment, trustees will not monetize the costs until they have already defined all of the corrective actions. Therefore, planning is "built-in" and all that remains is the execution of the restoration plan. This benefits the environment by (1) fostering more rapid restoration, (2) enhancing opportunities for settlement by avoiding the obstacle of putting a dollar value on damages, and (3) affording trustees a more defensible litigation position, as Congress and the courts prefer restoration to damages.<sup>104</sup>

In addition to valuation, trustees are confronted with two more critical choices: deciding to pursue the claim sooner or later and deciding whether to pursue the claim using state law,<sup>105</sup> CERCLA, or some combination of both federal and state causes of action. "Nothing in [CERCLA] shall affect or modify in any way the obligations or liabilities of any person under other Federal or State law, including

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104. See *Ohio v. U.S. Dep't of the Interior*, 880 F.2d 432, 441 (D.C. Cir. 1989); *Gen. Elec. III*, 467 F.3d 1223, 1249–52 (10th Cir. 2006).

105. See generally ISRAEL, *supra* note 19 § 32B.12, at 32B-118 (state by state review of NRD programs); Lloyd W. Landreth & Kevin M. Ward, *Natural Resource Damages: Recovery Under State Law Compared with Federal Law*, 20 ENVTL. L. REP. 10,134 (1990).

common law, with respect to releases of hazardous substances or other pollutants or contaminants."<sup>106</sup> Furthermore, nothing in CERCLA preempts any State "from imposing any additional liability or requirements with respect to the release of hazardous substances within such State."<sup>107</sup>

Where state resources are affected, the state trustee "may avoid federal jurisdiction by exclusive reliance on state law."<sup>108</sup> As master of the claim, the trustee wishing to rely on state law must ensure pleadings are artfully drafted so as not to raise a CERCLA issue on their face.<sup>109</sup> The question of jurisdiction is slightly different from the question concerning conflict preemption (which itself may be decided within the state courts).<sup>110</sup> Recently, federal judges considering this precise issue, in the context of state law actions for natural resource damages, have allowed properly pleaded complaints to go forward in the state courts, even where the issue of compatibility of the state remedy with CERCLA was being litigated.<sup>111</sup>

Although the main thrust of the CERCLA NRD scheme entails trustees assessing and imposing NRDs, a number of ancillary concerns may also be important to the litigation posture of the case, the magnitude of recoverable NRDs, or both. Thus, they have become the focus of some concern to both trustees and the PRPs.

One litigation concern is the limitation on liability "for each release" found in CERCLA Section 107(c).<sup>112</sup> This section caps liability for most polluters to "the total of all costs of response plus \$50,000,000 for any damages under this subchapter."<sup>113</sup> This language appears to limit the exposure for natural resource damages for ordinary polluters to a maximum of fifty million dollars. Case law, however, indicates that this cap is largely illusory.<sup>114</sup> The courts have construed the wording "for each release" broadly to avoid the \$50,000,000 liability limit in situations involving multiple or continuing releases.<sup>115</sup>

Another point of contention is the timing of the pollution giving rise to NRD liability. The statute provides no recovery "where such damages and the release of a hazardous substance from which such damages resulted have occurred wholly before December 11, 1980."<sup>116</sup> Like the example above, a close reading of the language (here, the words "damages" and "wholly before") has kept the door open for trustees to treat continuing releases as outside the scope of the limitation.<sup>117</sup> For example, due to leaching or other methods of delayed exposure to natural resources,

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106. 42 U.S.C. § 9652(d) (2000).

107. *Id.* § 9614(a).

108. N.J. Dep't of Env'tl. Prot. v. Minn. Mining & Mfg. Co., No. 06-2612, 2007 WL 2027916, at \*2 (D.N.J. July 5, 2007) (quoting *Caterpillar Inc. v. Williams*, 482 U.S. 386, 392 (1987)).

109. *See id.*

110. *See id.* at \*2-3.

111. *See id.* at \*6; *see also* N.J. Dep't of Env'tl. Protection v. Occidental Chem. Corp., No. 06-401, 2006 WL 2806231, at \*8 (D.N.J. Sept. 28, 2006).

112. 42 U.S.C. § 9607(c)(1) (2000).

113. *Id.* § 9607(d). The most significant exception is that the cap does not apply for circumstances of willful misconduct or willful negligence leading to the release, nor for polluters who fail to cooperate with authorities in the cleanup. *Id.* § 9607(c)(2).

114. *United States v. Montrose Chem. Corp.*, 835 F. Supp. 534, 542 (1993).

115. *Id.*

116. 42 U.S.C. § 9607(f)(1).

117. *Montrose*, 835 F. Supp. at 542.



either the pollution is continuing until the resources are damaged or the damages are continuing after the statutory trigger.<sup>118</sup>

The three-year statute of limitations for NRD recovery<sup>119</sup> has been similarly construed to the disadvantage of polluters. For example, the “clock starts ticking” on the later of “(A) The date of the *discovery of the loss and its connection with the release* in question. [Or] (B) The *date on which final regulations are promulgated under section 9651(c)* of this title.”<sup>120</sup>

The courts have allowed a continuing release to extend to the discovery of new damages to the environment not earlier detected.<sup>121</sup> In that event, the later discovery starts the clock ticking.<sup>122</sup> Also, it is routine practice when contamination is first discovered and the parties are in the remedial investigation stage to enter into a tolling agreement concerning the NRDs.<sup>123</sup> The tolling agreement helps a proactive PRP, since aggressive cleanup will reduce the lingering NRDs that need to be restored. Calculating the damages at a point before cleanup has begun would be premature and not based upon the better evidence of actual harm likely to be available later.

Another complicating factor that will at least delay imposition of NRDs, but may also give some leverage to polluters trying to settle, is the interplay required between state and federal trustees.<sup>124</sup> State trustees desiring to maintain a more favorable business environment may be more conservative in their estimates of NRDs than their federal counterparts, while state trustees more interested in complete restoration of the injured environment may be more zealous than federal trustees.

These tensions between trustees may arise in cases moving toward litigation as well as cases working their way toward settlement. PRPs must be prudent and secure a release from the relevant state and federal NRD trustees so that the covenant not to sue clearly extends to all NRD claims.<sup>125</sup>

118. See, e.g., *In re Alleged PCB Pollution of Acushnet River & New Bedford Harbor*, 716 F. Supp. 676, 685–86 (D. Mass. 1989) (holding that where pollution is divisible no recovery may be had for release before December 11, 1980, but where indivisible entire amount of damages, both earlier and later, may be imposed).

119. 42 U.S.C. § 9613(g).

120. *Id.* (emphasis added).

121. *California v. Montrose Chem. Corp.*, 104 F.3d 1507, 1512 (9th Cir. 1997).

122. *Id.*

123. Such a tolling agreement with the trustee is discussed explicitly in *General Electric III*: “Consistent with his duties under CERCLA... New Mexico’s NRT entered into tolling agreements with several PRPs, including GE, the USAF, and US DOE, to delay a CERCLA-based NRD lawsuit while he attempted to negotiate a settlement of the State’s NRD claims.” 467 F.3d 1223, 1235 (10th Cir. 2006).

124. CERCLA Section 111(i) requires:

Except in a situation requiring action to avoid an irreversible loss of natural resources or to prevent or reduce any continuing danger to natural resources or similar need for emergency action, *funds may not be used* under this chapter for the restoration, rehabilitation, or replacement or acquisition of the equivalent of any natural resources *until a plan for the use of such funds for such purposes has been developed and adopted by affected Federal agencies and the Governor or Governors of any State having sustained damage* to natural resources within its borders, belonging to, managed by or appertaining to such State, *and by the governing body of any Indian tribe having sustained damage* to natural resources belonging to, managed by, controlled by, or appertaining to such tribe....

42 U.S.C. § 9611(i) (emphasis added).

125. CERCLA requires that a consent decree be entered in the appropriate U.S. District Court, and the Court

SARA crafted a new settlement section to allow CERCLA closure to encompass NRDs, so long as the trustees have been consulted and concur.<sup>126</sup> An agreement may contain a covenant not to sue for natural resource damages to the United States “only if the Federal natural resource trustee has agreed in writing to such covenant.”<sup>127</sup> This agreement must be predicated upon restoration by the potentially responsible party, in addition to “appropriate actions necessary to protect and restore the natural resources damaged by such release or threatened release of hazardous substances.”<sup>128</sup>

A final concern for PRPs entering natural resource damage settlements is that many such settlements may allow future additional claims for damages.<sup>129</sup> In the *Exxon Valdez* case, for example, the civil settlement included a reopener provision that allowed the trustees to come back, within fifteen years, for up to 100 million additional dollars.<sup>130</sup> In 2006, the United States and Alaska trustees announced that they would seek another ninety-two million dollars from Exxon (now Exxon Mobil) to address additional injuries not apparent at the time of settlement.<sup>131</sup>

The Clean Water Act<sup>132</sup> and Oil Pollution Act (OPA)<sup>133</sup> also afford opportunities for NRDs.<sup>134</sup> These regimes are considered here only to the extent that they suggest problems or solutions for CERCLA NRDs. They differ from CERCLA most notably in that they cover petroleum related spills, whereas CERCLA does not. One distinct advantage when dealing with oil spills and petroleum pollution is that the effects of these pollutants have already been heavily investigated.<sup>135</sup> In contrast, there are “close to or over 100,000 industrial chemicals that are on the market today,”<sup>136</sup>

must evaluate whether the decree is fair and reasonable. *United States v. Brook Village Assocs.*, No. Civ A 05-195, 2006 WL 3227769 at \*1 (D.R.I. Nov. 6, 2006). Likewise, the involvement of state trustees is necessary to foreclose their interest in later pursuing CERCLA NRDs or other analogous state law remedies. *See id.* at \*3 (The Rhode Island housing authority consented to a decree given defendants’ tenuous financial condition, while EPA agreed because defendants purchased already contaminated property, did not contribute further to pollution, and operated much needed public housing projects.)

126. 42 U.S.C. § 9622(j)(1) states:

Where a release or threatened release of any hazardous substance that is the subject of negotiations under this section may have resulted in damages to natural resources under the trusteeship of the United States, the President shall notify the Federal natural resource trustee of the negotiations and shall encourage the participation of such trustee in the negotiations.

127. *Id.* § 9622 (j)(2).

128. *Id.*

129. *See, e.g.*, U.S. Fish & Wildlife Service, *Exxon Valdez Oil Spill—Civil Settlement “Reopener,”* available at [http://www.evostc.state.ak.us/StoreAuth.cfm?doc=/Store/Event\\_Documents/reopener.interior.fact%20sheet.pdf](http://www.evostc.state.ak.us/StoreAuth.cfm?doc=/Store/Event_Documents/reopener.interior.fact%20sheet.pdf).

130. *Id.* The settlement provided that additional liability only attached where the original damages were insufficient to redress the injury, natural resources continued to suffer, and loss or decline could not have been anticipated at the time of settlement. *Id.*

131. Joint Press Release, Department of Justice & State of Alaska Department of Law, *United States and the State of Alaska Seeking Additional Funds from ExxonMobil for Continuing Natural Resource Damages Caused by 1989 Oil Spill* (June 1, 2006), available at [http://www.evostc.state.ak.us/StoreAuth.cfm?doc=/Store/Event\\_Documents/SAK-DOJ\\_PressRelease.pdf](http://www.evostc.state.ak.us/StoreAuth.cfm?doc=/Store/Event_Documents/SAK-DOJ_PressRelease.pdf).

132. 33 U.S.C. §§ 1251–1387 (2000).

133. *Id.* §§ 2701–2761.

134. *See id.* § 1321 (CWA NRD provision); *Id.* § 2706 (OPA NRD provision).

135. For example, after the Exxon Valdez disaster 51 damage assessment studies were conducted, including a controversial study involving the killing of 219 seabirds, immersing them in oil, and then tracking their drift patterns. U.S. GEN. ACCOUNTING OFFICE, RCED-92-22, *NATURAL RESOURCES DAMAGE ASSESSMENT: INFORMATION ON STUDY OF SEABIRDS KILLED BY EXXON VALDEZ OIL SPILL 2* (1991).

136. Milo Mason, *Interview: Stephen L. Johnson*, NAT. RESOURCES & ENVT., Fall 2006, at 61.

presenting scientists with unprecedented challenges in defining aggregate and cumulative impacts on the environment and her creatures.<sup>137</sup>

Unlike oils spills under OPA and point source discharges under the Clean Water Act, other types of discharges are more challenging to assess. Under CERCLA there is usually no “smoking gun” readily identifying the perpetrator, nor is there as well defined a consequence on the natural environment when contaminants ooze and seep into soil and groundwater over time, as when there is an immediate consequence emerging from the release. These complicating factors under CERCLA may in part explain why the giant has been sleeping.

### III. HOW NOT TO PURSUE NATURAL RESOURCE DAMAGES

#### A. *New Mexico Case Study*

##### 1. Site History and Scope of CERCLA Clean-up Efforts

The “South Valley” site is located about two and one-half miles south of downtown Albuquerque, New Mexico.<sup>138</sup> It is an industrial area, as well as host to petroleum processing and distribution networks, and “has been the site of manufacturing operations since at least 1948.”<sup>139</sup>

In 1951, the Atomic Energy Commission (AEC) acquired property in the South Valley and constructed a facility to manufacture nuclear weapons components.<sup>140</sup> AEC’s contractor, American Car and Foundry (ACF), operated this government-owned facility and “engaged in machining of metal parts, plating, welding and other activities” until the Air Force took over the property in 1967.<sup>141</sup>

The Air Force converted the factory into a production facility for aircraft engine parts. This manufacturing plant (Plant 83) was operated by General Electric (GE) for over fifteen years under a series of contracts and leases with the Air Force before GE’s subsidiary (General Electric Aircraft Engines) acquired it outright in 1984. The facility continues to manufacture aircraft engine components.<sup>142</sup>

A number of other industrial facilities also operated in the South Valley. Most notable of these were “petroleum product pipeline and bulk distribution facilities operated by Chevron, Texaco, and others.”<sup>143</sup> The South Valley was also home to an industrial chemical distribution facility owned and operated by Univar.<sup>144</sup>

In 1979, chemical analysis of an Albuquerque water supply well in the South Valley detected the presence of hazardous substances in the groundwater.<sup>145</sup> Contamination emanating from the South Valley included a number of volatile organic compounds (VOCs) unquestionably within the CERCLA definition of

137. EPA Administrator Stephen L. Johnson explained in an interview published in the fall of 2006 that “a decade ago we did not have the scientific wherewithal to do aggregate assessment or cumulative assessment.” *Id.* According to Johnson, “We’ve cleaned up literally thousands of sites across the United States.” *Id.* at 60.

138. *Gen. Elec. II*, 335 F. Supp. 2d 1185, 1192 (D.N.M. 2004).

139. *Id.* at 1192–93.

140. *Id.* at 1192.

141. *Id.*

142. *Id.* at 1192–93.

143. *Id.* at 1193.

144. *Id.*

145. *Id.*

hazardous substances.<sup>146</sup> The water also contained significant pollution from petroleum-based products beyond the scope of CERCLA.<sup>147</sup>

As a result of the contamination, the State identified the South Valley as its top priority hazard and requested that EPA place it on the National Priority List for cleanup under CERCLA.<sup>148</sup> EPA's initial remedy included replacing the tainted drinking water well with a new well outside the zone of contamination.<sup>149</sup> This remedy complied with 40 C.F.R. Part 300, Appendix D, as an acceptable remedial response to groundwater contamination, and "the State of New Mexico requested this measure and...agree[d] with the approved remedy."<sup>150</sup>

Subsequent remediation included pumping and treating contaminated groundwater in both the upper and lower aquifers below the site to extract over 1400 pounds of VOCs. The remediation plan also created a hydraulic barrier to prevent further spreading of the contaminant plume.<sup>151</sup> To date, over 4.5 billion gallons of water have been treated and returned to the aquifers for beneficial use.<sup>152</sup>

## 2. Pre-trial Posturing/Forum Selection<sup>153</sup>

On October 1, 1999, Patricia Madrid, the New Mexico Attorney General (AG), filed a CERCLA NRD claim against federal and private party defendants in the federal district court of New Mexico.<sup>154</sup> She simultaneously filed a complaint in the Second Judicial District Court of Bernalillo County, New Mexico, for damages under state law against the same PRPs, excluding the federal agencies.<sup>155</sup> GE and ACF sought and obtained removal of the cases for consolidation with the pending federal CERCLA NRD cases.<sup>156</sup>

Madrid lacked the trustee's support when she initially filed suit, and the trustee was named as an involuntary plaintiff.<sup>157</sup> This put the trustee, Bill Turner, in the precarious position of opposing the State whose resources he was charged to protect. Turner risked possibly being called as a hostile witness.

The conflict also put the AG in a tenuous position. She conceded that she had no authority to file the federal lawsuit until she decided that "Turner was imperiling

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146. *Gen. Elec. III*, 467 F.3d 1223, 1232 n.15 (10th Cir. 2006). The six detected VOCs were "(1) 1,1-dichloroethane (1,1-DCA), (2) 1,1-dichloroethene (1,1-DCE), (3) 1,2-dichloroethane (1,2-DCA), (4) trichloroethylene (TCE), (5) tetrachloroethylene (perchloroethylene, PCE), and (6) vinyl chloride (VC)." *Id.*

147. *See id.* at 1233 n.18 (describing state-negotiated hydrocarbon remediation agreements with PRPs for petroleum-related discharges).

148. *Id.* at 1227 & n.4 (citing 42 U.S.C. § 9605 (2000)), which gives authority to States to identify priority sites for listing on the NPL).

149. *Gen. Elec. II*, 335 F. Supp. 2d at 1194.

150. *Gen. Elec. III*, 467 F.3d at 1228 (citation omitted).

151. *Id.* at 1232.

152. *Id.* at 1233. "The cost of the remedial activity has been shared among GE, the Air Force and the United States Department of Energy (for the AEC): nine percent of the cost was allocated to General Electric, 43.2 percent was allocated to the Department of Energy, and 47.8 percent was allocated to the Air Force, based on the relative duration of land ownership." *Gen. Elec. II*, 335 F. Supp. 2d at 1194 n.5.

153. For a more detailed description of the tortured procedural history of the case, see *Gen. Elec. I*, 335 F. Supp. 2d 1157, 1160-69 (D.N.M. 2003).

154. *Gen. Elec. I*, 335 F. Supp. 2d at 1160.

155. *Id.*

156. *Id.* at 1161.

157. Ian Hoffman, *Trustee, AG Go to Court: Justices to Decide Legal Standoff*, ALBUQUERQUE J., June 22, 2000, at A1.

the state's potential case against the polluters and [thereby] violating his role as trustee for the state and the environment."<sup>158</sup> In effect, because she felt Turner was not executing his NRD duties as required by law, Madrid was asserting the authority of the State to step in and advocate on behalf of its people.

The AG's actions raised, as a matter of first impression, an important standing question as to whether anyone other than the trustee, the official designated by law, could bring such actions. The standing question was first addressed by the New Mexico Supreme Court, which affirmed Madrid's authority to represent the State.<sup>159</sup> Later, in the federal court, Judge Jenkins noted, "[I]t appears to me all the necessary parties, including the trustee, are here."<sup>160</sup> The next day, the trustee agreed to cooperate with the AG's lawyers in the suit.<sup>161</sup>

After three years of pleadings, discovery, and motion practice, the case was scheduled for a final pretrial conference in the fall of 2002.<sup>162</sup> Some details of the evolution of the case during this phase are instructive for anyone seeking to keep state law issues from being consolidated with and removed to federal court:

Since commencing this action in October of 1999, the Plaintiffs have been creative in the number and kind of theories of liability they have pleaded and argued in this action. The Defendants in turn have proven resourceful in responding to the Plaintiffs' claims, propounding an array of legal theories and factual assertions.<sup>163</sup>

The AG had acquiesced to federal jurisdiction<sup>164</sup> and filed a consolidated complaint pleading both CERCLA and state law claims "in one action, based upon identical factual allegations."<sup>165</sup> By the end of the first week of the pretrial conference, however,

plaintiffs' expansive damages theories—initially seeking a recovery of over \$4 billion—had been significantly reduced by paring out remote and speculative claims for lost tax revenues and diminished property values, the 'replacement cost' of substituting a surface reservoir for an entire groundwater aquifer, along with legally deficient claims for punitive damages.<sup>166</sup>

After these rulings, New Mexico renewed its motion to remand the remaining issues to state court, simultaneously moving to dismiss their pending CERCLA claims, and the federal defendants, from the pending action.<sup>167</sup>

158. *Id.*

159. Guillermo Contreras & Wren Propp, *Trustee, AG Join Forces in Cleanup Suit*, ALBUQUERQUE J., July 28, 2000, at D1.

160. *Id.* (the day after the federal court decision, the trustee upon order of the Governor agreed to work with the AG).

161. *Id.*; see also Leslie Hoffman, *Trustee on Board with AG Lawsuit*, ALBUQUERQUE TRIB., July 28, 2000, at A3.

162. *Gen. Elec. II*, 335 F. Supp. 2d 1185, 1197 (D.N.M. 2004).

163. *Id.* at 1200. As of January 2004, "the pleadings, motions and other papers filed in this action exceeded thirty-seven shelf feet of files in the Clerk's Office, and more filings have since been received." *Id.*

164. See *Gen. Elec. I*, 335 F. Supp. 2d at 1161-66.

165. See *id.* at 1166.

166. *Id.* at 1169.

167. *Id.*

On November 20, 2002, after the pretrial conference resumed, the court dismissed plaintiffs' CERCLA claims.<sup>168</sup> At the same time, an onerous year and a half after the complaint had been filed, the State also dismissed the federal defendants with prejudice.<sup>169</sup> This left only state law claims that were not inconsistent with CERCLA to go forward against the remaining defendants.<sup>170</sup> CERCLA explicitly allows non-preclusion of such claims<sup>171</sup> while prohibiting "double recovery of damages under both CERCLA and other federal or state law theories."<sup>172</sup>

### 3. Decisions on the Merits

In *New Mexico v. General Electric Co.*, the district court struggled with three fundamental issues: "(1) What is the nature of the State's interest in the groundwater underlying the South Valley Site? (2) How has that interest been injured, and as measured by what standard? [and,] (3) What is the appropriate measure of damages to compensate that injury?"<sup>173</sup>

#### a. The State's Interest in Groundwater and the Aquifer

In addressing the first issue, the court agreed that New Mexico had an interest in protecting groundwater on behalf of its people as a matter of public trust. The court, however, found that there was no proof in the record that the State owned any water rights in the South Valley, nor that any water rights holder had lost the use of any volume of water.<sup>174</sup> In other words, while the State had standing to seek these loss of use damages on behalf of its people, there was no proof of any injury.

The court further concluded, "[a]bsent proof of some possessory ownership interest in land at the South Valley Site—title to the surface or subsurface estate, a reservation of minerals, or the like—the State has no legally cognizable interest in the aquifer beneath the South Valley Site."<sup>175</sup> The court also held "storage for the sake of storage alone is not a beneficial use under New Mexico law, particularly where future use is nothing more than speculative with respect to the beneficial

168. *Id.*

169. *Id.*

170. *Gen. Elec. II*, 335 F. Supp. 2d 1185, 1222 (D.N.M. 2004). The State alleged the following causes of action: "(1) common-law trespass; (2) common-law public nuisance; (3) statutory public nuisance... (pollution of drinking water); and (4) common-law negligence." *Id.*

171. The savings clause in 42 U.S.C. § 9614 (2000) provides, "[N]othing in this chapter shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances within such State." 42 U.S.C. § 9652(d) further provides that "[n]othing in this chapter shall affect or modify in any way the obligations or liabilities of any person under other Federal or State law, including common law, with respect to the releases of hazardous substances or other pollutants or contaminants." Of course, "CERCLA does preempt the application of state or local law to hazardous waste contamination where the state or local law is in actual conflict with CERCLA or with a remedial order issued by the EPA." *Gen. Elec. II*, 335 F. Supp. 2d at 1225.

172. *Gen. Elec. II*, 335 F. Supp. 2d at 1224. Notably, one of New Mexico's claims was for "those damages incurred in excess of the damage limitation as provided by 42 U.S.C. 9607(c)." *Id.* at 1223 (quoting Plaintiffs' Consolidated Complaint). The \$50,000,000 cap is discussed *infra* at notes 112–115 and accompanying text.

173. *Gen. Elec. II*, 335 F. Supp. 2d at 1200.

174. *See id.* at 1200–03, 1214–15.

175. *Id.* at 1205.

uses.”<sup>176</sup> Plaintiffs thus had no legal footing for their damages claim based upon injury to the aquifer itself.<sup>177</sup>

#### b. Harm to State’s Interest and Appropriate Standard to Define Harm

The State asserted that “ongoing remediation activities...[would not] restore the contaminated groundwater to its pristine, pre-contaminated, ‘baseline’ condition.”<sup>178</sup> New Mexico further alleged that the water would not be useable as drinking water and, therefore, the cost of drinking water—the highest and best use of the resource—was the appropriate measure of damages.<sup>179</sup> While the initial proposition was likely true (the pump and treat system would reduce, but not erase, contamination), the other assertions were unfounded.

New Mexico drinking water standards required only that public water systems supply drinking water that meets the EPA’s Maximum Contaminant Levels (MCLs).<sup>180</sup> These standards, expressly adopted by the State of New Mexico, complied with all state and federal requirements to ensure a safe water supply for consumption.<sup>181</sup> Thus, “[i]t follows that groundwater that meets those same standards has not been lost to use as drinking water.”<sup>182</sup>

While the State was certainly free to promulgate regulations to set more protective limits,<sup>183</sup> it could not complain that any use was lost under the facts of this case.<sup>184</sup> Had New Mexico adopted more stringent MCL standards, the court would conceivably have been able to compare the quality of the water after remediation with these drinking water standards.<sup>185</sup> However, the fact that a replacement well had been installed as part of the initial CERCLA response would have foreclosed such an argument in any event.<sup>186</sup>

Finally, even if the remediated water did not meet the State’s drinking water standards, the State would have had to prove that the water was essential for drinking—its highest and best use—or that there was no other beneficial use of the water for lesser purposes.<sup>187</sup> The Tenth Circuit’s hierarchy of uses approach

176. *Id.* at 1202–03 n.29 (internal quotation marks omitted).

177. *Id.* at 1205.

178. *Id.*

179. *Id.* The State alleged that it had been “prevented from allowing its citizens the benefit of this natural resource. Further, even after said remediation, the natural resource will remain in an impaired state, unusable and/or nonpotable, and unfit for human consumption.” *Id.* (quotations omitted).

180. *Id.* at 1210.

181. *Id.* (citing 20.7.10.1 *et seq.* NMCA).

182. *Id.*

183. A more protective measure would have been consistent with the overall goals of the Safe Drinking Water Act and could readily be harmonized with the federal scheme as well as the State’s interest in safeguarding its populace.

184. *Gen. Elec. II*, 335 F. Supp. 2d at 1211.

185. Such an argument would still be subject to proof of actual contaminant levels after remediation. In addition, such an argument is largely theoretical, because CERCLA already requires cleanup to a tighter standard as an “Applicable or Relevant and Appropriate Requirement” (ARAR). ARARs, integrating state law where it is more protective, are built in as requirements during remedial investigation/feasibility study (RI/FS) and remedy selection. To the extent the standards are technologically feasible, they will be required. 40 C.F.R. §§ 300.5, 300.400(g)(4) (2007).

186. *Gen. Elec. III*, 467 F.3d 1223, 1252 (10th Cir. 2006) (when the new well was placed in operation, New Mexico “acquired the equivalent” of the natural resources it lost when the contaminated well was decommissioned).

187. *Gen. Elec. II*, 335 F. Supp. 2d at 1212.

imposes a burden on the plaintiff to establish what use was actually lost in calculating the damages for such a loss. This method serves the same function of reducing speculation, but in a different formulation than the “committed use” standard of the DOI regulations.<sup>188</sup>

### *B. Flaws with the New Mexico Approach*

Looking at the big picture, the ideal way to litigate a natural resource damages case is with the support of the natural resource trustee(s), after conducting a proper NRDA in accordance with the duly promulgated regulations. This would create a rebuttable presumption on behalf of the trustee that assessed damages are correct. New Mexico chose a more challenging approach that introduced insurmountable burdens.

#### 1. No Coordination or Support of the Trustee

When the New Mexico Attorney General, Patricia Madrid, brought the NRD case, she disagreed with the State’s NRD trustee, Bill Turner, over the damages, and indeed whether they were even ripe to pursue.<sup>189</sup> Madrid “decided she had a better plan to benefit the public treasury, and, at least in the opinion of some, usurped the authority of the State’s [Natural Resources Trustee].”<sup>190</sup> According to trustee Bill Turner, “The lawsuit really puts the State in a much weaker position than if she had allowed me to do the work. If the defendants want to file for dismissal, I’ll support it, [t]hen I’ll do the damage assessment.”<sup>191</sup> Hindsight proves that Turner’s position was correct.

The trustee’s endorsement is essential even if given reluctantly or under duress. Although Turner ultimately capitulated and agreed to support the AG’s case, had Turner not agreed to support the lawsuit, Madrid had indicated she would petition the State Supreme Court for his removal.<sup>192</sup> It is difficult to imagine a court awarding a sum not endorsed by the trustee when the trustee is the authorized official to determine the damages under CERCLA. The Department of Justice would presumably insist upon no less when litigating an NRD case involving the federal government, rather than risk the respective trustee experts impeaching each other’s testimony.

While this case affords an extreme example of lack of cooperation, it is not hard to imagine other scenarios where there might be a lack of coordination among trustees. State and Federal Trustees may well disagree about the magnitude of damages. For example, after the lower Fox River had been contaminated by polychlorinated biphenyls (PCBs) from local paper companies, the Wisconsin Department of Natural Resources (DNR) settled the case for seven million dollars at a time when the U.S. Fish and Wildlife Service (FWS) estimated natural

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188. See *supra* text accompanying notes 51–52.

189. Ian Hoffman, *State AG Sues 15 Alleged Polluters*, ALBUQUERQUE J., Oct. 2, 1999, at A1.

190. *Gen. Elec. III*, 467 F.3d at 1242.

191. Hoffman, *supra* note 189.

192. Contreras & Propp, *supra* note 159.



resources damages to be between \$176 million and \$333 million.<sup>193</sup> Notably, there was no disagreement about the scope of the damage itself, yet the projected costs varied so widely that the estimates did not even overlap.

One difficulty with CERCLA NRDs is that there may be “too many cooks.”<sup>194</sup> Under OPA, NOAA has clear authority to regulate NRDs, and consensus is comparatively easy.<sup>195</sup> From their inception, NOAA regulations included a cooperative approach.<sup>196</sup> DOI has, through its 4Cs policy (Conservation through Consultation, Cooperation, and Communication), embraced a similar insistence upon trustee coordination.<sup>197</sup> “These partnerships have proven very beneficial for all involved, as cooperation and consultation among the trustees facilitates addressing overlapping areas of trustee concern, and consolidates those concerns into a single case.”<sup>198</sup>

## 2. No Assessment of Damages

In the South Valley case, even though the trustee was ultimately on-board for the litigation, he had never arrived at a figure for damages through the NRDA process.<sup>199</sup> Thus, the AG’s lawsuit was both *premature* and *speculative*. Both aspects merit some attention.

New Mexico put the cart before the horse, suing for \$260 million and later alleging multi-billion dollar damages without having first conducted an NRDA in accordance with CERCLA. The lack of detailed support (also known as proof or evidence) was painfully evident from the beginning, when plaintiffs had no calculations or methodology to support their damage figure.<sup>200</sup> The underdeveloped nature of the asserted liability could also easily be surmised from the vacillating nature of the demand. Finally, this approach contravened the CERCLA directive that “State officials shall assess damages to natural resources... under their trusteeship.”<sup>201</sup> The State of New Mexico ignored that principle when commencing litigation without an NRDA.

The speculative nature of New Mexico’s demand stems irrevocably from its premature assertion. Damages may not be assessed before they are ascertained, and the NRDA is the instrument for ascertaining the damages.<sup>202</sup> Although this flaw is

193. Peter Rebhaun, *Feds Plan to Press on with PCB Damage Plan*, GREEN BAY PRESS-GAZETTE, Nov. 21, 2000, at 1B.

194. *See, e.g.*, United States v. Asarco, Inc., No. CV 96-0122-N-EJL, CV 91-342-N-EJL, 1998 WL 1799392 at \*1, \*5 (D. Idaho Mar. 31, 1998) (some defendants had settled with state and tribal trustees but not the other federal trustees).

195. *See* 33 U.S.C. §§ 2706(d)–(e) (2000). “If a range of assessment procedures providing the same type and quality of information is available, the most cost-effective procedure must be used.” 15 C.F.R. § 990.27(c)(2) (2008).

196. 15 C.F.R. § 990.14 (2008).

197. U.S. DEP’T OF THE INTERIOR, NATURAL RESOURCE DAMAGE ASSESSMENT & RESTORATION PROGRAM FISCAL YEAR 2007 BUDGET JUSTIFICATIONS 2, 17, [http://restoration.doi.gov/pdf/greenbook\\_07.pdf](http://restoration.doi.gov/pdf/greenbook_07.pdf) [hereinafter DOI 2007 BUDGET JUSTIFICATIONS].

198. *Id.* at 17. The National Contingency Plan also contemplates such cooperation. *See* 40 C.F.R. § 300.615(a) (2007).

199. *Gen. Elec. III*, 467 F.3d 1223, 1242 (10th Cir. 2006).

200. *See id.*

201. 42 U.S.C. § 9607(f)(2)(B) (2000).

202. *See supra* Part II.C.

easy to identify and understand, the ability to cure this defect creates a conundrum for NRD trustees.

Unless the trustees expend considerable time and effort (not to mention the cost of expensive studies and expert analysis), they cannot hope to have a monetary valuation of damages that will withstand judicial scrutiny. The paucity of NRD litigation has simply made the evidentiary bar uncertain.<sup>203</sup> New Mexico's flawed litigation proves this point.<sup>204</sup> The AG's "too little too late" assessment efforts met with no success, and the hurdles she encountered, coupled with the ultimate holding, provide powerful circumstantial evidence of the value of the rebuttable presumption.

### 3. Difficult to Prove Damages Without a Presumption

A presumption in favor of NRD's is favorable. The Tenth Circuit noted it was

well aware that NRD assessment is a costly proposition.... Still, given the AG's original multi-billion dollar claim against GE and ACF, a few million dollars seems not so significant a cost to take advantage of CERCLA's rebuttable presumption of NRDs, especially where the reasonable costs of assessment are recoverable from PRPs.<sup>205</sup>

In fact, perhaps at least part of the reason NRDs have not taken off originates in the uphill battle of sustaining an NRD case without the benefit of this presumption.<sup>206</sup> The Tenth Circuit cast the challenge in the following manner:

Without any CERCLA-based NRD assessment to rely on...the State undertook the arduous task of proving as an initial matter natural resources injury outside the intended scope of a comprehensive, CERCLA-mandated remediation. The State also confronted the problem of restrictions which both CERCLA and the NRTA [New Mexico's "Natural Resources Trustee Act"<sup>207</sup>] impose upon the measure of damages even supposing some redressable injury remains.<sup>208</sup>

Following the NRD regulations may present significant hurdles of its own,<sup>209</sup> but if the other circuits follow the Tenth Circuit's reasoning, it may be virtually impossible to recover without the power of the presumption. In effect, whether or not the trustee enjoys the presumption may de facto become determinative in the face of otherwise speculative damages.

### 4. Valuation Pitfalls

The Tenth Circuit decision shows the modern-day vitality of the preference for restoration in lieu of money damages and is consistent with the D.C. Circuit's

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203. See Thompson, *supra* note 40, at 57.

204. See *supra* Part III.A.

205. *Gen. Elec. III*, 467 F.3d at 1242 n.28 (citing 42 U.S.C. §§ 9607(a)(4)(C), (f)(2)(C) (2000)).

206. See *id.* (citing Gina M. Lambert & Anthony R. Chase, *Remedying CERCLA's Natural Resource Damages Provision: Incorporation of the Public Trust Doctrine into Natural Resource Damage Actions*, 11 VA. ENVTL. L.J. 353, 371-72 (1992)).

207. NMSA 1978, §§ 75-7-1 to 75-7-5 (2007).

208. *Gen. Elec. III*, 467 F.3d at 1242.

209. See *supra* Part II.C.

holding in *Ohio v. United States Department of the Interior* that Congress preferred “restoration cost as the measure of recovery in natural resource damage cases.”<sup>210</sup> Trustees that favor restoration projects and substitute resources for those that were damaged also create pathways to settlement with the responsible parties. This may, in part, explain the success of the New Jersey approach discussed in Part IV. In addition, the Tenth Circuit’s opinion sheds light on several valuation pitfalls trustees would be advised to avoid.

#### a. Account for Remediation in Mitigating Damage Claims

New Mexico ignored the success of the groundwater remediation in restoring the aquifer in the South Valley to meet safe drinking water standards.<sup>211</sup> Since cleanup improves the environment, the extent of damages remaining is necessarily predicated on the effectiveness of the remediation itself. Therefore, the trustee must properly account for the success of remedial measures in any NRD claim. If unwilling or unable to wait until remediation is complete (when the scope of remaining injury becomes positively determinable), the trustee must estimate the effectiveness of the cleanup and remaining injuries to the satisfaction of the court.

Determining the lingering injury or loss of resources necessitates a case-by-case analysis. One must evaluate the underlying assumptions, their factual predicates, and the logical inference chain. These theoretical parameters should then be fit to the natural habitats contaminated, the corresponding response of the affected environment to individual or multiple pollutants, and the means and costs of restoration.

Confounding this analysis is the notion that when cleanup is incomplete, the court must use its crystal ball to examine the assumptions and assertions contained in plaintiff’s predicted “future world.” Thus, the court is put in the position of comparing and contrasting these assumptions with defendant’s contentions of the probable efficacy of ongoing remediation. In other words, part of the daunting task is to answer CERCLA’s central mystery: How clean is clean? Speculation and best guessing by the parties and the court as to the effectiveness of the remediation provides some clue, albeit an imperfect answer.<sup>212</sup>

Such forecasting in the face of incomplete remediation analysis is no easy task in a situation such as the South Valley site. There, remediation was on a thirty-year track, but there was every indication that it would take longer if the remediation failed to meet standards to sufficiently protect human health and the environment.<sup>213</sup> In this regard, CERCLA has a requirement for five-year reviews following adoption of the Record of Decision, so that the government may insist upon additional protective measures if necessary.<sup>214</sup>

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210. 880 F.2d 432, 459 (D.C. Cir. 1989).

211. *Gen. Elec. III*, 467 F.3d at 1249.

212. The CERCLA Record of Decision (ROD) may aid in the analysis, as the cleanup remedy will be selected based upon its projected ability to eliminate the risks posed by the pollution, but the ROD is itself forward-looking based upon the projected effectiveness of the remedial action.

213. *Gen. Elec. III*, 467 F.3d at 1229.

214. *See* 42 U.S.C. § 9621(c) (2000).

In the groundwater domain, the combination of Applicable or Relevant and Appropriate Requirements (ARARs)<sup>215</sup> and these five-year reviews could foreclose any remaining injury to drinking water at the completion of the remedial effort. As in the New Mexico case, the Safe Drinking Water Act (SDWA)<sup>216</sup> and parallel state laws require cleaning the aquifer to the maximum contaminant levels (MCLs) authorized in the SDWA. Since this “risk-based” remediation already restores the water to its “highest and best use,” there can be no lingering loss of use injury. In other words, remediation equals restoration of drinking water.

Even though the water may be safe to drink, however, it will not likely be restored to baseline. This is regrettable for the environment (at least insofar as tainted resources will always be closer to the MCLs than the resources were before they were polluted). In this sense, what is lost is the absorptive capacity of the water body to assimilate later pollution. Nevertheless, this damage is non-compensable as there is no way to value this lost assimilative capacity. In any event, the SDWA standard is a useful barometer because a subsequent polluter would be forced to clean up to the same standard. In that case, the MCLs would be both the legal and factual baseline for damages. But again, if remediation is successful, there will be no need for restoration.

When remediation cures any drinking water deficiency, the only potential damages remaining are for loss of use of the drinking water as a resource while the remediation is ongoing. The New Mexico District Court and the Tenth Circuit read lost use damages extremely narrowly. For example, even when a resource was actually being used at the time contamination was detected, the courts held that the public had suffered no deprivation because the CERCLA response effort itself afforded a substitute for the lost or injured resources.<sup>217</sup> This is exactly what happened in New Mexico when the tainted water supply well was closed and replaced with a new clean drinking water well.<sup>218</sup>

CERCLA requirements for removal actions, however, will always necessitate a substitute drinking water source. This is because drinking water toxins above the maximum contaminant level pose a per se risk to human health.<sup>219</sup> The entire National Contingency Plan (through the national response center and the network of state and local emergency response agencies) is designed to afford this safe contingency, so that the public is not exposed to environmental risk.<sup>220</sup>

CERCLA already affords remedies for substitute emergency resources because the polluter pays for the removal action, so this aspect of natural resource damages is properly carved out of NRDs. To the extent the polluting party has already paid, it should not have to pay double. Once viewed from this perspective, the *New Mexico v. General Electric* approach is not draconian because the PRPs had already paid for the cost of installing the replacement well as part of the cleanup. However,

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215. *See id.*; 40 C.F.R. §§ 300.5, 300.400(g)(4) (2007).

216. 42 U.S.C. §§ 300f to 300j-26 (2000).

217. *See Gen. Elec. III*, 467 F.3d at 1252.

218. *Id.*

219. 42 U.S.C. § 300g-1 (2000) (establishing MCLs); *id.* § 300i (emergency power to order alternative water supply); *id.* § 9601(23) (alternative water supplies as part of CERCLA removal); *see also id.* § 9618 (highest priority for drinking water supplies).

220. 40 C.F.R. § 300.415 (2007).

in future scenarios, trustees should seek to recover similar costs where the state or federal government has provided substitute drinking water.

#### b. Account for Alternative Uses of Tainted Resources

Where a resource is of diminished value, on the other hand, damages should be calculated to account for lost use based upon the residual services the tainted resource may afford. For example, if a drinking water supply is polluted such that it can no longer be used for potable water, it may nevertheless be suitable for fire protection or irrigation. Although the court in *New Mexico v. General Electric* concluded that there was no lost use at all, it remarked on the opportunity to use polluted water for non-drinking purposes in evaluating the measure of damages for loss of use.<sup>221</sup> In other words, at least for groundwater, there is a hierarchy of uses which should be evaluated when measuring loss of service damages.<sup>222</sup> For example, reclaimed water, while not suitable for consumption, could be used for irrigation. If the value for irrigation is one-tenth the value for consumption, the actual damages should then be ninety percent of the value of drinking water.

#### 5. Remedy Was Not Dedicated to Restoration

CERCLA specifically restricts the permissible uses of sums recovered for natural resource damages. Trustees retain the funds “for use only to restore, replace, or acquire the equivalent of such natural resources.”<sup>223</sup> The necessity of using such funds for primary restoration (to restore injured resources to baseline or replace them) is simple and easily understood. But natural resource damages “shall not be limited by the sums which can be used to restore or replace such resources.”<sup>224</sup> This creates a more nebulous status for damage recoveries above and beyond primary restoration.

Where a resource is not currently or actually being used, “lost use” would be a windfall to the trustee. The windfall aspect is easily understood concerning lost present use. For example, if an aquifer were tainted but it was so far from any well that the pollution never reached a well, there would be no present lost use. Thus, even a penny of natural resource damages would be a windfall, because cleanup costs are already recovered through routine CERCLA liability.

Lost prospective use or future use, on the other hand, is more of a speculative continuum. For example, what if a permitted drinking water well was sunk in an area thought to be free from contamination but the initial sample from the well proved the water to be contaminated by a hazardous substance? In this situation, the use lost would be future use, as the well was never productive. The DOI regulations, which require that recovery for future uses be restricted to uses the State has already tangibly recognized (permitted or committed to granting), would recognize loss of a brand new well as a lost use since the State had committed to using the well for that purpose. The D.C. Circuit has validated this approach in DOI’s “committed

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221. *Gen. Elec. III*, 467 F.3d at 1252.

222. *See supra* note 187 and accompanying text.

223. 42 U.S.C. § 9607(f)(1).

224. *Id.*

use” requirement because it prevents damages that are purely speculative, but allows recovery for reasonably certain, “impending” uses.<sup>225</sup>

Adopting this approach necessarily involves drawing a bright line rule with projects that are sufficiently concrete to bring the damages out of the world of mere speculation. Yet, at the same time, such damages are under-inclusive, because this approach necessarily eliminates some speculative recoveries that are likely or even probable. For example, if a city is expected to double in population over the next decade, city planners might justifiably rely on untapped aquifer capacity to meet this emerging need. The city might anticipate that additional wells would be needed over the next decade to meet exploding demand, but no commitments, permits or authorizations for expansion may have been granted yet.

But suppose in the above hypothetical that a contaminated plume were discovered next week. In this situation, the contaminated water would be lost to both present use and use over the foreseeable corrective period (say thirty years). Because present supplies ensure sufficient water for current consumption, there would be no immediate lost use. Here, the projected need would not have ripened into a commitment; thus, the lost prospective use would be uncompensated. In this example, if the groundwater being restored were projected to be needed to sustain the increased population in 2010, the cost of an alternate supply would go uncompensated for over twenty-five years.

New Mexico’s theories of recovery were based upon more conjecture than the above example, envisioning a new reservoir to meet the drinking water needs of future users. This remedy, however, was entirely out of scope with the demonstrated environmental harm, in view of the response actions already taken.<sup>226</sup> Allegations of damages were grossly overstated and, perhaps due to the indication that funds collected would be deposited in the State general fund, could be viewed as thinly-veiled attempts by the AG to line the State’s coffers.<sup>227</sup>

Contrary to CERCLA’s overarching goal of cleaning up hazardous waste, an “unrestricted award of money damages does not restore or replace contaminated natural resources.”<sup>228</sup> The deposit of damages in the State’s general treasury fund would impermissibly allow unrestricted use of the funds by the State. But notably, the circuit court did not suggest that state laws are completely preempted whenever there is ongoing remediation. In addition, the court did not categorically disapprove of State formulas for valuation.<sup>229</sup> Indeed, because preemption was found based upon misdirection of the recovered funds, the court had no duty to consider these issues.

It is clear that reform is needed with respect to the NRD program. Richard Stewart, a law professor at New York University, has long been calling for such reform to the NRD program to “[e]liminate all forms of the unfair surplus claims which have been created by the trustees...so that the NRD program can focus on

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225. *Ohio v. U.S. Dep’t of the Interior*, 880 F.2d 432, 462 (D.C. Cir. 1989).

226. *Gen. Elec. III*, 467 F.3d at 1242, 1245–48.

227. *See id.* at 1248 (funds used, for example, for attorney fees would undermine legitimate funding to restore damaged resources).

228. *Id.* at 1247.

229. *Id.*

actual restoration.”<sup>230</sup> Surplus claims, such as claims for damages based upon lost use of resources when there was, in fact, no “loss of use,” generate revenues above those needed to restore the environment.<sup>231</sup> Thus, whether called a windfall or an unfair surplus, the message remains the same: they have no appropriate function in an NRD assessment.

#### 6. Schizophrenic Pre-trial Posturing

Although a trustee can consolidate state and federal claims in federal court, the opposite is not the case. State trustees must be especially careful if they intend to exclusively seek state remedies for damaged natural resources in state court.<sup>232</sup> As shown in the *New Mexico* case, a “kitchen sink approach” (suing in both state and federal courts simultaneously) could lead to unforeseen pitfalls like having the case decided in federal court when the State might ultimately prefer state court. A tandem question in the selection of forum is the preemptive effect of CERCLA on comparable state laws.

While CERCLA clearly embraces lost use as a component of damages, state efforts to work alongside CERCLA must ensure that their local remedies are equally far reaching. Otherwise, a case brought in the state court system will lose access to recovery for lost use during the period when the public was deprived of a useful and beneficial resource. For example, an argument was made in New Jersey alleging that restoration of the natural resource was authorized under the state NRD scheme, but the New Jersey Spill Compensation and Control Act (Spill Act)<sup>233</sup> was not broad enough to encompass loss of use.<sup>234</sup> Efforts under New Jersey law and in other jurisdictions are discussed next.

### IV. ALTERNATIVES WITH MORE PROMISE

#### A. *The New Jersey Approach*

New Jersey has the most Superfund sites in the nation.<sup>235</sup> It already had an active NRD program in place in 2002–03, when its trustee, the director of New Jersey’s Department of Environmental Protection (NJDEP), decided to accelerate its efforts.<sup>236</sup> Despite progress in earlier years, NJDEP had “resolved only a small percentage” of the “more than 4,000 potential claims for natural resource damages

230. *Superfund Reauthorization and Reform Legis.: Hearing on H.R. 2727 Before the House Subcomm. on Water Resources and the Environment*, 105th Cong. (1997) (statement of Richard Stewart, Professor of Environmental Law); see also Richard B. Stewart et al., *Evaluating the Present Natural Resource Damages Regime: The Lawyer’s Perspective*, in NATURAL RESOURCE DAMAGES: A LEGAL, ECONOMIC, AND POLICY ANALYSIS 163 (Richard B. Stewart ed., 1995) (valuation is the most vexing issue for trustees).

231. See *Hearing on H.R. 2727, supra* note 230.

232. Federal trustees initiate NRD actions in the federal district where the pollution occurred or where defendants’ principal offices are located. 42 U.S.C. § 9613(b) (2000).

233. N.J. STAT. ANN. § 58:10-23.11 (West 2006).

234. N.J. Dep’t of Env’tl. Prot. v. Exxon Mobil Corp., 923 A.2d 345, 347 (N.J. Super. Ct. App. Div. 2007) (holding that trial court erred in finding Spill Act did not allow such claims).

235. NRDA METHODS AND CASES, *supra* note 85, at 41. New Jersey oversees about 23,000 contaminated sites. NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, Site Remediation and Waste Management Brownfields FAQ, [http://www.state.nj.us/dep/srp/brownfields/faq/brownfields\\_faq.pdf](http://www.state.nj.us/dep/srp/brownfields/faq/brownfields_faq.pdf) (last visited Jul. 24, 2008).

236. Policy Directive 2003-07, *supra* note 14.

(NRD).<sup>237</sup> New Jersey issued a policy directive in September 2003 to encourage voluntary restoration efforts and NRD settlements. In a separate directive, issued the same month and expected to generate up to \$950 million in damages and restoration,<sup>238</sup> NJDEP ordered sixty-six PRPs in the Lower Passaic River to perform their own damages assessments of injured resources.<sup>239</sup>

These policy directives do not specifically link their authority to either state or federal law.<sup>240</sup> In ensuing years, however, over seventy-five lawsuits have been initiated with complaints alleging violations of the New Jersey Spill Act, common law public nuisance, and trespass.<sup>241</sup> The suits under these New Jersey remedies concern petroleum based spills<sup>242</sup> as well as CERCLA-covered releases.<sup>243</sup> The New Jersey approach has proven to be successful in both settling and restoring Superfund sites.

### 1. Successful Techniques

New Jersey has overcome the assessment funding barrier by allowing its Spill Fund to be used to assess NRDs.<sup>244</sup> A number of other States have also created similar environmental funds that can only be used for response to hazardous substance or oil releases, including costs to assess such damages. Not surprisingly, these States, including New Jersey, have the most active NRD programs. Commitment of a State to its environment starts with dedicating resources to enable the trustees to do their jobs. Such resources allow a State to aggressively enforce its laws.

Adopting aggressive collection measures has proven successful to the State from a settlement perspective. NJDEP's Natural Resource Damage Program "has recovered more than \$51 million and preserved approximately 6,000 acres of open space as wildlife habitat and ground water recharge areas as compensation for pollution resulting from 1,500 contaminated sites and oil spills."<sup>245</sup>

Damage recoveries serve an important function in reimbursing the State for costs of assessment and stimulating ongoing claims development and recovery.<sup>246</sup> The increased emphasis on NRDs (coupled with the resources to pursue them) has generated important headway for the State in improving its environment. At a minimum, the measures have been successful in bringing closure to a large number

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237. *Id.* "NJDEP prosecuted fewer than thirty NRD claims from 1999 through 2002." Kelly et al., *supra* note 15, at 356 n.58.

238. Kelly et al., *supra* note 15, at 356.

239. N.J. Dep't of Env'tl. Protection, Policy Directive 2003-01 (Sept. 19, 2003), available at [http://www.nj.gov/dep/newsrel/releases/passaic\\_dir01.pdf](http://www.nj.gov/dep/newsrel/releases/passaic_dir01.pdf). The PRP's insurers were simultaneously notified.

240. See Policy Directive 2003-07, *supra* note 14.

241. Ira Gottlieb & Cynthia M. Stencel, *An Overview of New Jersey's Natural Resource Damage Initiative*. HARRISMARTIN'S NATURAL RESOURCE DAMAGES & ENVTL. CLAIMS RPT., Premier 2006, at 1, 4-7.

242. See, e.g., N.J. Dep't of Env'tl. Prot. v. Exxon Mobil Corp. 923 A.2d 345 (N.J. Super. Ct. App. Div. 2007).

243. See, e.g., N.J. Dep't of Env'tl. Prot. v. Minn. Mining & Mfg. Co., No. 06-2612(NLH) 2007 WL 2027916 (D.N.J. July 5, 2007).

244. N.J. STAT. ANN. § 58:10-23.11f (West 2006).

245. Press Release, *supra* note 14.

246. Policy Directive 2003-07, *supra* note 14. The New Jersey Spill Compensation Fund can also be used for this critical NRD assessment purpose, perhaps explaining in part why New Jersey has been successful in overcoming funding shortfalls confronting most other trustees. N.J. Stat. Ann. § 58:10-23.11f7 (West 2006).



of cases. In those that remain, the State has an aggressive litigation policy. While the cases decided to date have not always validated the State's approach, the following observations should be helpful to those watching on the sidelines.

New Jersey encourages settlement with a "preference for restoration."<sup>247</sup> In lieu of monetary damages, the State prefers performance of restorative work and resource protection, "provided that reasonable allowance is made for monitoring and oversight to ensure accountability."<sup>248</sup> NJDEP recognizes that substitute resources or resource services may often be more cost-effective and "encourages habitat equivalency analysis, consideration of both in-kind and out-of-kind substitute resources, and similar efforts to provide substantially equivalent resource services in designing compensatory restoration projects."<sup>249</sup> For example, for lost recreational uses, NJDEP agreed to consider "enhancements to public access, creation of or improvements to state or local parks, or the provision of other alternate recreational opportunities."<sup>250</sup> But, "[r]estoration projects, whether implemented by DEP or a responsible party, must bear a nexus to the injured resource and should be in the same watershed (or sub-watershed) to the extent practicable."<sup>251</sup>

Additional direction is focused on injured groundwater: "acquisition of aquifer recharge areas, water re-use or recycling projects, infrastructure improvements to control stormwater or improve recharge, reforestation efforts to improve infiltration and water retention, or any other measure that enhances the water resource base in the affected area will be considered."<sup>252</sup> The more controversial aspect of groundwater is the use of the State's groundwater valuation formula as a "settlement tool" when appropriate restorative measures can not be set.

New Jersey has convinced its own courts of both its authority and stewardship to effectively manage public resources under state law for the public good.<sup>253</sup> The Federal District Court for the District of New Jersey agreed, holding, "Based on their statutory duties, the Court finds that both NJDEP and the Spill Administrator perform essential government functions carried out on behalf of the State for the ultimate benefit of New Jersey's citizens."<sup>254</sup> Indeed, the New Jersey state law

247. Policy Directive 2003-07, *supra* note 14.

248. *Id.*

249. *Id.*

250. *Id.*

251. *Id.*

252. *Id.*

253. *See, e.g.*, N.J. Dep't of Envtl. Prot. v. Exxon Mobil Corp., 923 A.2d 345 (N.J. Super. Ct. App. Div. 2007); *see also* N.J. Dep't of Envtl. Prot. v. Nestle USA, Inc., No. 06-4025, 2007 WL 703539 (D.N.J. Mar. 2, 2007) (remanding to state court). The State is vested with authority "to conserve and protect natural resources, prevent pollution and protect the public health and safety." *Id.* (citing N.J. STAT. ANN. § 13:1D-9 (West 2006)).

254. *Nestle*, 2007 WL 703539, at \*2 (citation omitted).

Moreover, New Jersey has a significant interest in this matter; here, the State's interest is nothing less than the protection of New Jersey's groundwater from hazardous spills. Indeed, the Plaintiffs in this matter seek damages to pay for the rehabilitation and restoration of the State's natural resources that were injured as a result of a discharge at Defendant's plant. Moreover, the Plaintiffs have vigorously pursued the state's interest by initiating and pursuing this litigation. Finally, the Court notes that the state's interest in this matter is not a general desire to secure compliance with state laws, but, as discussed above, a specific interest to protect and rehabilitate the State's groundwater and natural resources. Based on the essential functions of the NJDEP

remedies (statutory and common law) precede enactment of CERCLA.<sup>255</sup>

Nevertheless, New Jersey finds itself in both the federal and state courts litigating different NRD cases.<sup>256</sup> While defendants have sought removal to the federal courts, New Jersey has successfully returned some cases to state court.<sup>257</sup> For example, in *New Jersey Department of Environmental Protection v. Nestle USA*<sup>258</sup> the federal court found that New Jersey was the real party in interest in an NRD matter, “[b]ased on the essential functions of the NJDEP and the [New Jersey] Spill Administrator and because of the significant state interest implicated in the underlying dispute.”<sup>259</sup> Since the State was a party to the litigation, there was no federal diversity jurisdiction and removal was improper.<sup>260</sup>

Scrutiny is required to evaluate whether New Jersey laws create more leeway for state trustees than their CERCLA counterparts create for federal trustees. Interestingly enough, a New Jersey court has cited with approval an NJDEP regulation defining damages under the Spill Act<sup>261</sup> by reference to the CERCLA definition.<sup>262</sup>

## 2. Lingering Issues/Inadequacies

Although the appellate court upheld New Jersey’s entitlement to seek “loss of use” damages in *Exxon-Mobil*, the New Jersey courts have not yet addressed what the State must prove to establish loss of use. In addition to the burden of proving loss of use values, the confluence of state NRD laws and CERCLA comes immediately to the fore: where does CERCLA end and state law begin? Of course, the answer will differ on a state by state basis. Nevertheless, in each case alleging state remedies, the notion of conflict preemption may arise.<sup>263</sup>

Conflict preemption occurs “when it is impossible to comply with both state and federal law, or where the state law stands as an obstacle to the accomplishment of the full purposes and objectives of Congress.”<sup>264</sup> For example, the courts must decide whether CERCLA preempts the New Jersey groundwater valuations. Even though CERCLA explicitly allows non-conflicting state strategies, the court must

and the NJ Spill Administrator and because of the significant state interest implicated in the underlying dispute, the Court finds that New Jersey is the real party in interest in this matter. Since the State is a party to this litigation, there is no diversity between the parties for purposes of federal jurisdiction. Thus, removal was improper....

*Id.* (citation omitted).

255. *See, e.g., Howell Twp. v. Waste Disposal, Inc.* 504 A.2d 19, 25–27 (N.J. Super. Ct. App. Div. 1986) (discussing continued vitality of state interest in protecting environment even after citizen suit provisions were adopted in environmental laws).

256. *Compare Exxon Mobil*, 923 A.2d 345 (state court) with *N.J. Dep’t of Env’tl. Prot. v. Minn. Mining & Mfg. Co.*, No. 06-2612(NLH), 2007 WL 2027916 (D.N.J. July 5, 2007) (federal court decision to remand to state court), and *Nestle*, 2007 WL 703539 (same).

257. *See, e.g., Minn. Mining & Mfg. Co.*, 2007 WL 2027916, at \*6 (motion to remand to state court granted), *Nestle*, 2007 WL 703539, at \*1–2.

258. 2007 WL 703539.

259. *Id.* at \*2.

260. *Id.*

261. N.J. STAT. ANN. §§ 58:10-23.11 to 23.24 (West 2006). New Jersey also enjoys statutory NRD authority under the New Jersey Water Pollution Control Act, N.J. Stat. Ann. § 58:10A-10 (West 2006).

262. *N.J. Dep’t of Env’tl. Prot. v. Exxon Mobil Corp.*, 923 A.2d 345, 348–49 (N.J. Super. Ct. App. Div. 2007).

263. *See Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 248 (1984).

264. *Id.* (citations omitted).

still analyze whether the New Jersey groundwater evaluation formula conflicts with CERCLA.

In *New Mexico v. General Electric*, for example, the court held:

CERCLA's comprehensive NRD scheme preempts any state remedy designed to achieve something other than the restoration, replacement, or acquisition of the equivalent of a contaminated natural resource....

[T]he remedy the State seeks to obtain through [state public nuisance and negligence] causes of action—an unrestricted award of money damages—cannot withstand CERCLA's comprehensive NRD scheme.<sup>265</sup>

New Jersey has a much better chance of surviving the above scrutiny, because it requires that any damages recovered be deposited in the New Jersey Spill Fund, and it restricts the use of this fund to costs of assessment and restoration.<sup>266</sup>

Therefore, it is likely that New Jersey groundwater valuations will not be preempted. But it remains unclear whether other courts will require actual proof of lost uses like the Tenth Circuit.<sup>267</sup> In the alternative, other courts may conclude that a showing of commitment to use the resource will suffice, or these courts might allow more speculation about the future value of the groundwater.

One thing that is certain about the outcome in one New Jersey case, however, is that Exxon Mobil will be liable for costs of restoration because they have not disputed liability for physical restoration of the natural resources.<sup>268</sup> Given the language of CERCLA and the D.C. Circuit's interpretation of Congress's preference for restoration, such an approach seems eminently sound and worthy of replication. However, the preference for restoration begs the question of what is adequate restoration? As discussed next, the New Jersey Policy Directive helps to answer this question.

The New Jersey Policy Directive authorizes "restoration work and resource protection" in the affected area as well as substituting resources or resource services "both in-kind and out-of-kind."<sup>269</sup> The idea is sound. For example, if tainted groundwater cannot be used as drinking water, securing necessary rights and installing a new replacement well would be an in-kind substitute. Agreeing to provide bottled water to the affected community until the groundwater is remediated would be an example of an out-of-kind substitution. In either scenario, the responsible party will remain liable for the cleanup while paying for the damage caused to the natural resources.

Although such an approach is desirable if the parties agree, such a preference might pose problems if the parties cannot agree and instead proceed to court. Would the courts be in a position to dictate the nature and scope of these in-kind and out-of-kind substitutes? And how would such measures be ordered and enforced? In the alternative, would the courts be able to place a monetary value on these costs as damages? Assume for a moment that New Jersey collects dollars in exchange for

265. *Gen. Elec. III*, 467 F.3d 1223, 1247–48 (10th Cir. 2006).

266. N.J. Stat. Ann. § 58:10-23.11f (West 2006).

267. *See supra* Part III.B.4.a.

268. N.J. Dep't of Envtl. Prot. v. Exxon Mobil Corp., 923 A.2d 345, 398 (N.J. Super. Ct. App. Div. 2007).

269. Policy Directive 2003-07, *supra* note 14.

loss of use of natural resources. This is a hollow victory without systematic restoration of the State's natural resources. In fact, translating dollars collected back into benefits for the environment might be every bit as hard as calculating the dollar value that equates to such damages in the first place. The U.S. General Accounting Office (GAO), in a study conducted a decade ago, noted this practical disconnect between damages and restoration.<sup>270</sup>

A number of factors complicate the efforts of trustees who have done everything right and have collected NRDs. Commencing on-site restoration must often await completion of cleanup<sup>271</sup> (a seemingly never-ending task with a pump and treat remedy). Furthermore, NRD monies collected may be insufficient to actually pay for necessary restoration or replacement. A financial gap may form an insurmountable hurdle that leaves funds idle or allows them to collect dust as they await additional collections or matching appropriations from the State.<sup>272</sup>

### 3. The Need for Continued Reform

Congress intended that natural resource damage trustees should have a quick and easy NRD option.<sup>273</sup> That has not happened at the federal level.<sup>274</sup> While some States have sought their own alternatives<sup>275</sup> (some more effectively than others), to date NRD recoveries have failed to meet their full potential, to the detriment of society.

Because there is no well-defined standard, the tendency is to overdevelop a case so as not to risk failure if the assessment effort is challenged in court. This promotes costly and time-consuming assessment processes by all potential litigants. Since the polluter should ultimately pay for these costs (where costs are reasonable and the trustee prevails), one would expect that this would only be a minor deterrent for trustees. However, such a costly and process-intense methodology is of little utility in many cases and may be beyond the scope of the resources available to the trustee in the first place. Therefore, even though the NRDA is the key to the vault of NRDs, many trustees cannot afford the costs of this key.

With no consistent NRDA method, there can be no consistent NRD valuation. Even when following an approved NRDA process, there may be inconsistent evaluations based upon assumptions used in modeling that may or may not conform

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270. U.S. GEN. ACCOUNTING OFFICE, SUPERFUND: STATUS OF SELECTED FEDERAL NATURAL RESOURCE DAMAGE SETTLEMENTS RCED-97-10 at 3-4 (1996) [hereinafter GAO, 1996 SETTLEMENTS STATUS], available at <http://www.gao.gov/archive/1997/rc97010.pdf>.

271. *Id.* at 4. Pump-and-treat remedies—pumping the groundwater to the surface, treating it to remove contamination, and then re-injecting the treated water at the site—have been notoriously slow and inefficient. See generally U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF INSPECTOR GENERAL, IMPROVING NATIONWIDE EFFECTIVENESS OF PUMP-AND-TREAT REMEDIES REQUIRES SUSTAINED AND FOCUSED ACTION TO REALIZE BENEFITS, REP. NO. 2003-P-000006 (2003), available at <http://www.epa.gov/superfund/cleanup/postconstruction/oigptreport.pdf>.

272. See GAO, 1996 SETTLEMENTS STATUS, *supra* note 270, at 4-5. Settlements may allow a stream of payments versus a lump sum, forcing trustees to delay restorative efforts until a critical mass is accumulated. *Id.* at 30 (Commerce Department comments to GAO).

273. 42 U.S.C. § 9651 (2000).

274. See 2007 FAC REPORT, *supra* note 21, at 4-5 (proposing actions for “faster, more efficient, and more effective restoration of injured natural resources”).

275. Amy W. Ando & Madhu Khanna, *Natural Resource Damage Assessment Methods: Lessons in Simplicity from State Trustees*, 22 CONTEMP. ECON. POL'Y 504, 505-06 (2004).

to reality. A tension in the system exists between the need for transparency in the assessment (a formula that is simple to understand and follow) and the quest for the most precise evaluation, which relies upon the “best available science.” When the best available science relies, in turn, on models or surveys of public behavior or values, the “science” loses transparency and interjects variables that substitute possibilities or probabilities for what actually occurred. Thus, the best way around valuation difficulties may be to require restoration of lost resources in lieu of monetary damages equating to the value of the damages.

It is precisely because NRDs are so hard to pin down that these costs to restore the environment are often either impractical or impossible to prove. In fact, the proper measure of natural resource damages lies somewhere between a “blank check” and an “IOU.” At the “blank check” end of the spectrum, States could seek damages entirely out of line with the actual damage to the environment.<sup>276</sup> At the “IOU” end of the spectrum, States whose trustees are underfunded or who are not provided sufficient tools to obtain appropriate NRDs are left with an “IOU” from the regulated community that creates undesirable situations for all involved. Those being regulated have uncertain future liability that may depress the marketability or reuse of their property. Furthermore, NRD liability may need to be carried in some manner on their books. Specific NRD insurance requirements might be one solution to prevent businesses from unknown and unknowable damages.<sup>277</sup> However, the public loses any time there is contamination without the prospect of appropriate liability. The correct amount of NRDs forces industry to internalize the costs of pollution and pass those costs on to their consumers. Once internalized, consumers can make more environmentally sound choices.

### *B. Simplified Strategies Used by Other States*

In 2004, the *Journal of Contemporary Economic Policy* published an article discussing simplified NRD methodologies implemented by state trustees.<sup>278</sup> The article was based upon a nationwide study of trustees that was published earlier that year.<sup>279</sup> Based on the results, it appears that trustees are struggling for ways to credibly determine natural resource damages using data that is already available about the injury, without having to resort to complex, sophisticated, time-consuming, and costly assessments.<sup>280</sup>

276. Arguably, the litigation posture of the State of New Mexico fell into this “blank check” approach.

277. See Benjamin J. Richardson, *Mandating Environmental Liability Insurance*, 12 DUKE ENVTL. L. & POL’Y F. 293, 309–22 (2002) (advocating insurance to insulate against environmental liabilities including natural resource damages). One problem with conventional environmental insurance might be the “time-on-the-risk” allocation, which would allow insurance awards for a continuing environmental harm (for example leaching) to be reduced by the annual share of liability the purchaser agreed to absorb as a deductible. For example, if an insured had a \$50,000 annual deductible and the process of contamination endured over twenty years, the insurance recovery would be reduced by one million dollars. See *Mich. Court Affirms “Time On the Risk” Allocation in Environmental Case*, HARRISMARTIN’S GLOBAL WARMING & NATURAL RES. DAMAGES REPORT, Apr. 2007, at 8 (citing *Wolverine World Wide Inc. v. Liberty Mut. Ins. Co.*, No. 260330 (Mich. Ct. App. 2007)).

278. Ando & Khanna, *supra* note 275.

279. NRDA METHODS AND CASES, *supra* note 85. A survey of trustees in 2006 confirms the continued vitality of the conclusions drawn from the survey. See ISRAEL, *supra* note 19, § 32B.12 at 32B-118 (“A State-by-State Guide to NRD Programs in All 50 States”).

280. See NRDA METHODS AND CASES, *supra* note 85, at 2.

This trend mirrors the goal of Congress in directing the President to develop Type A Regulations in the first place. For States using their own simplified methods, "the estimate that emerges is, however, likely to be somewhat inaccurate and more vulnerable to challenge by a potentially responsible party (PRP) if the case cannot be settled out of court."<sup>281</sup> There are, therefore, two sides to the simplified methodology coin: (1) the ability to assess quickly and cheaply in cases that reach settlement and, for cases that do not settle, (2) the necessity to start over with more costly assessment measures or risk losing a litigated case.

Notwithstanding these risks, some States have developed simplified assessment methodologies.<sup>282</sup> Since "a wide variety of assessment methods have been shown in practice to be successful tools...that will stand up in a settlement-negotiation process,"<sup>283</sup> other trustees should be receptive to implementing simplified procedures. In addition, DOI should be receptive to developing similar simplified methodologies to support settlements.

The most successful state methodologies share the following advantageous characteristics: (1) they are integrated into the state law, (2) they utilize information already required to be obtained under other state or federal laws, (3) the methodology is in some way linked to restoration, (4) a variable in the methodology is habitat dependent, and (5) the laws are reasonably transparent.<sup>284</sup> It would be ideal if any of the current methodologies satisfied all five attributes. However, since none of them do,<sup>285</sup> each attribute is instead explained in the context of one or more State's approaches.

Although many States have their own laws addressing NRDs,<sup>286</sup> only a few, such as Florida, New Jersey, and Washington, include simplified assessment methodologies within their state laws.<sup>287</sup> New Jersey's provisions are, in part, regulatory versus statutory, raising the specter of a legal challenge for incompatibility with the statutory scheme.<sup>288</sup> On a positive note, regulations are easier to update or change if better simplified methods emerge. But all of the state laws could be improved by introducing a presumption in favor of the trustee if the methodologies are followed. If less vulnerable to legal challenge, "transaction costs would be lower, and social welfare would be increased."<sup>289</sup>

California's simplified methodology is perhaps the most transparent and easiest

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281. *Id.*

282. These states include Florida, California, Washington, Minnesota, and New Jersey. Ando & Khanna, *supra* note 274, at 507.

283. NRDA METHODS AND CASES, *supra* note 85, at 15.

284. As an ideal, Ando and Khanna recommend the following characteristics: simple to use, legally recognized, transparent, damage estimates correlate to scope of injuries, net present value is calculated appropriately, and estimates reflect loss of both use and nonuse values and are reflective of socioeconomic characteristics of the affected population. Ando & Khanna, *supra* note 275, at 507.

285. *See id.* at 517 ("[T]hese methods are flawed in ways that are likely to induce chronic bias in the estimates they yield. Thus, there could be a large payoff to society if simplified methods less egregiously at odds with economic theory of valuation could be used instead.")

286. *See generally* ISRAEL, *supra* note 19, § 32B.12, at 32B-118 to 155 (twenty-four states identified with NRD statutes).

287. NRDA METHODS AND CASES, *supra* note 85, at 25.

288. *Id.* at 42-43. For the latest version of New Jersey groundwater regulations, see <http://www.nj.gov/dep/srp/regs/techrule/> (last visited July 26, 2008).

289. Ando & Khanna, *supra* note 275, at 506.

to implement. It also satisfies characteristics two through four above because it uses information already reported to the State, is restoration focused, and is based upon the types of habitat injured.<sup>290</sup> Using existing habitat-equivalency analysis derived from earlier case-specific studies, members of California's Department of Fish and Game divided their state habitats into eight types and then established a different table of damages for each habitat type.<sup>291</sup> The average costs established in previous studies to return each habitat type to baseline conditions was calculated per unit of habitat affected, and the results generated a matrix of values based on the duration of injury on one axis and the degree of injury on the other.<sup>292</sup> Using the tables, the cost information per unit of habitat from the chart is then simply multiplied by the total units of habitat affected.<sup>293</sup> Other States' simplified assessments are not as clear or straightforward to implement.

Washington and Florida primarily use simplified assessment methods for oil spills, although Florida's statute permits its use for other hazardous substances as well.<sup>294</sup> Both States ascribe different values based upon the harmfulness of the oil released and the spill volume.<sup>295</sup> Both also consider the location of the spill and type and quantity of habitat affected.<sup>296</sup>

Florida uses three categories for harmfulness and twelve habitat types to break down a cost per unit of habitat damaged.<sup>297</sup> This cost is then multiplied by the amount of impacted area (similar to the California approach).<sup>298</sup> In addition, Florida also considers factors based upon location of the spill (such as distance from shore or special management area), compensation for wildlife deaths of endangered species or threatened species, and an additive cost of the assessment itself.<sup>299</sup>

Washington's methodology is somewhat more complex. Harmfulness has three components, including acute toxicity, mechanical injury (based on the specific gravity of the oil spilled), and persistence scores rated from one to five.<sup>300</sup> Habitat vulnerability is based upon a statewide habitat inventory that ascribes different values for "sixteen marine and estuarine regions and one hundred and thirty-one sub regions...."<sup>301</sup> The marine and estuarine environments are further subdivided into thirty-seven habitat types.<sup>302</sup> Vulnerability scores are increased if a species of importance, a threatened species, or an endangered species has been exposed to the

290. *Id.* at 507–09.

291. *Id.* at 509.

292. *Id.*

293. *Id.* Ando and Khanna note that the model fails to estimate and include lost human use values, such as recreational activities, thereby understating this component of NRDs. *Id.* It would seem that this shortcoming could be overcome if a lost use component could be added to the per unit damages based upon average values for such services in each of the eight habitats. In addition, annual increases for inflation (or based upon more recent actual restoration cost experience) would safeguard such a method from obsolescence over time.

294. *Id.* at 509–10. Washington's simplified methodology is exclusively available for oil spills. *Id.* at 510.

295. NRDA METHODS AND CASES, *supra* note 85, at 29–36 (Washington), 36–40 (Florida).

296. Ando & Khanna, *supra* note 275, at 510.

297. *Id.*

298. *Id.*

299. *Id.*

300. NRDA METHODS AND CASES, *supra* note 85, at 29.

301. *Id.*

302. *Id.* at 30.

spill.<sup>303</sup> Some of the factors are additive while others are multipliers, including a normalization factor used to bring damages into a range of one to fifty dollars per gallon spilled.<sup>304</sup> Finally, a credit in the form of a reduction is applied to account for response measures by the polluter at the time of the spill. However, even the most responsible PRP cleanup results in damages of at least one dollar per gallon of oil spilled.<sup>305</sup>

As demonstrated in the various approaches, there is a trade-off between precision and transparency. Although all of these models are easy to use (they all involve plugging existing data into a table, matrix, or formula), when more variables are added, the methodology becomes harder to follow. The Type A federal rules suffer from this same fault.<sup>306</sup>

In ongoing efforts to review and improve federal NRD rules, DOI-sponsored study groups should thoughtfully consider these various simplified state approaches. The federal government should benefit from the efforts—successes and mistakes—of the simplified state programs. Because these programs serve as a laboratory for different methodologies, it is only logical that the federal government would want to capture and share the best aspects of each program.

## V. COOPERATION VERSUS LITIGATION

### A. Advantages of Cooperation

“As NRD enforcement has evolved, government trustees and potentially responsible parties (PRPs) have increasingly sought to work cooperatively to assess natural resource damages.”<sup>307</sup> Cooperation potentially benefits both parties and the environment. By avoiding lengthy litigation, the restoration work can begin much sooner, which is a clear win for the environment.<sup>308</sup> In addition, cooperation usually entails the PRP funding the costs of assessment.<sup>309</sup>

Natural resource trustees are generally understaffed and under-funded.<sup>310</sup> Because the cost of NRD assessment can be expensive,<sup>311</sup> this under-funding presents a

303. *Id.*

304. *Id.* at 32.

305. *See id.*

306. *See supra* Part II.C.3.

307. Israel, *supra* note 18, at 4.

308. A goal of NOAA’s Cooperative Assessment Project (CAP) is to “expedite the restoration of injured natural resources.” OFFICE OF RESPONSE & RESTORATION, NAT. OCEANIC & ATMOSPHERIC ADMIN., COOPERATIVE ASSESSMENT PROCESS (2005), [http://www.darrp.noaa.gov/partner/cap/pdf/orr\\_capv2\\_508.pdf](http://www.darrp.noaa.gov/partner/cap/pdf/orr_capv2_508.pdf).

309. ISRAEL, *supra* note 19, at 32B-58 (citing OFFICE OF RESPONSE & RESTORATION, NAT. OCEANIC & ATMOSPHERIC ADMIN., COOPERATIVE ASSESSMENT PROCESS (CAP) FRAMEWORK (2003), <http://www.darrp.noaa.gov/partner/cap/pdf/capframe.pdf> [hereinafter NOAA CAP FRAMEWORK]); DOI 2007 BUDGET JUSTIFICATIONS, *supra* note 197, at 1.

310. *See* ISRAEL, *supra* note 19, § 32B.09[1][e] at 32B-85 (“[A]bsent a willing PRP to conduct the assessment, the trustees will simply have to delay or postpone its NRD assessment, and in some cases may never conduct the assessment.”); NRDA METHODS AND CASES, *supra* note 85, at 3, 5 (fourteen states with no NRD program, others generally have few staff members and do not employ an economist); *see also* GAO, 2003 STATUS & CHALLENGES, *supra* note 4, at 25 (the crisis may be most severe for state trustees as “[o]fficials in 6 of the 10 EPA regions agreed that states in their region faced fiscal problems and anticipated that shortfalls could cause problems with state’s future cleanup capabilities”).

311. “Trustee assessment costs for the *Exxon Valdez* exceeded \$100 million for studies.” Bill Conner & Ron Gouguet, *Getting to Restoration*, ENVTL. FORUM May–June 2004, at 20, available at <http://www.darrp.noaa.gov/>



hurdle that trustees must overcome in pursuit of NRDs. Even though responsible parties are ultimately on the hook for the costs of assessment, if the trustee lacks the seed money to perform a defensible assessment in the first place, the process of recovery is never triggered and the environment is never restored. NOAA recognizes this sad reality in its Cooperative Assessment Project (CAP) framework.<sup>312</sup> DOI implicitly acknowledges the same phenomena in its budgeting process, whereby it prioritizes approval of cooperative assessments with PRPs in order to free its sparse appropriated assessment dollars for other promising proposals from the field.<sup>313</sup>

Cooperation provides a means around the funding problem by allowing the responsible parties to fund the assessment in the first place. As mentioned, the PRP is liable for the assessment costs anyway, so there is no legal disadvantage (if the responsible party is in fact liable) from performing the assessment and absorbing those costs now versus later. In practice, there is actually a financial advantage to the PRP from partnering in the assessment because participation affords better insight with respect to the assessment and better control over its associated costs. NOAA even allows cooperative, cautious assumptions that are protective of the environment to substitute for expensive studies where there is no need for litigation-quality assessments.<sup>314</sup>

Cooperation also ensures that the responsible party understands the methodology and the data derived from the restoration assessment itself, so there should be less suspicion as to the amount of restoration necessary. Much like PRPs would rather take charge of the cleanups under CERCLA (for the same beneficial control concerns),<sup>315</sup> PRPs can also serve their own practical interests by conducting the NRD assessments. Proactive restoration measures can be adopted that take advantage of opportunities for restoration in tandem with ongoing remediation. “Sensible early restoration” can restore the injured resource more quickly.<sup>316</sup> This should result in reduced financial exposure to loss of use damages.<sup>317</sup> In addition, the PRP can help transform its public image from “bad guy” to “good guy” through positive recognition from the trustee that the PRP is part of the solution, not a recalcitrant polluter unwilling to own up to its liabilities.<sup>318</sup>

partner/cap/pdf/gtrel04.pdf. The table at 28 shows representative costs of assessment ranging from \$460,000 to \$2,000,000. *Id.* at 28.

312. See NOAA CAP FRAMEWORK, *supra* note 309, at 2 (“Trustees may further benefit by: restoring contaminated sites that might not otherwise be addressed or [that might] be addressed more slowly....”).

313. DOI 2007 BUDGET JUSTIFICATIONS, *supra* note 197, at 1, 21–22 (more proposals than available funding; highest priority based on likelihood of achieving restoration, and continued focus on cooperative assessments). In 2006, the Department of the Interior received only about four million dollars per year in appropriated funds for damages assessment; this amount was supplemented with about \$1.5 million annually in recovered funds from settlements. *See id.* at 21.

314. See Conner & Gouguet, *supra* note 311, at 27–28.

315. PRPs may lead cleanup efforts. See 42 U.S.C. § 9622(a) (2000).

316. Israel, *supra* note 18, at 4.

317. *See id.*

318. See NOAA CAP FRAMEWORK, *supra* note 309, at 2 (benefit to PRPs includes positive recognition from trustees and public).

The final advantage to both parties from cooperation is that it fosters a more beneficial long-term relationship.<sup>319</sup> By depolarizing the parties or defusing tensions that are inevitable during litigation, a more beneficial long-term partnership is fostered that is better suited to collectively addressing the traditionally long-lasting restoration activities characteristic of CERCLA sites. NOAA captures this sentiment nicely: “The greatest need and opportunity for cooperation...are for sites affected by chronic hazardous substance or oil contamination.”<sup>320</sup>

The cooperative approach is clearly gaining traction with many PRPs, as well as the principal federal trustees. “The vast majority—over 95 percent—of NOAA’s trustee concerns at hazardous waste sites and oil spills are resolved using cooperative, integrated approaches.”<sup>321</sup> DOI “has been involved in over thirty-five cooperative assessments across the country” (compare this number with its active caseload of 68 cases, including 46 assessments).<sup>322</sup> In addition, after two years of study, in May 2007, the NRDAR Federal Advisory Committee recommended efforts to push toward simplified methodology for assessment. The NRDAR placed emphasis on restoration versus damages “by promoting cooperation—in lieu of costly and time consuming adversarial processes—among natural resource trustees and potentially responsible parties.”<sup>323</sup>

One way to deal with valuation problems is to avoid them. If valuation issues cannot be avoided, another way to deal with them is to approach them cooperatively, especially since PRPs are liable for the assessment costs anyway. Both sides can mutually ensure a defensible valuation that protects the interests of the public, the environment, and industry while avoiding the expense and inconvenience of litigation. Of course, if the PRPs will not agree to cooperate, the government has no choice but to litigate. Otherwise, it seems that cooperation costs the government nothing, since the results of successful cooperation are an agreed settlement. For some PRPs, however, litigation will remain desirable when, for example, trustees are unreasonable in their NRD demands.

### *B. Trade-offs*

There are a number of trade-offs or sacrifices a PRP must make if it decides to cooperate. Most notably, unless the PRPs are certain that they are liable for damaged natural resources, they give up the ability to force the government to prove its case. One advantage of litigation is that, “[u]nlike other environmental claims, the government bears a significant burden of proof to show that the injury resulted from a release or discharge by the defendant.”<sup>324</sup>

In court, the PRP also has the ability to challenge the NRDA itself. Even in those remote cases when the rebuttable presumption arises, the defendant has an

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319. This is analogous to the gain expected from alternative dispute resolution compared to litigation.

320. NOAA CAP FRAMEWORK, *supra* note 309, at 3.

321. Nat. Oceanic & Atmospheric Admin., Assessment & Restoration Division website, [http://www.response.restoration.noaa.gov/orr\\_about\\_owner.php?RECORD\\_KEY%28owner\\_chosen%29=owner\\_id&owner\\_id\(owner\\_chosen\)=7](http://www.response.restoration.noaa.gov/orr_about_owner.php?RECORD_KEY%28owner_chosen%29=owner_id&owner_id(owner_chosen)=7) (last visited July 27, 2008).

322. DOI 2007 BUDGET JUSTIFICATIONS, *supra* note 197, at 17–19.

323. 2007 FAC REPORT, *supra* note 21, at 7.

324. Israel, *supra* note 18, at 4.

opportunity, at a minimum, to attempt to rebut the assessment.<sup>325</sup> For example, "losses may be extrapolated to larger areas or populations [than warranted]," and underlying assumptions may be unfounded.<sup>326</sup>

Other advantages of litigation include (1) opportunities for large corporations to seek to develop desirable precedent, (2) the ability for culpable corporations to delay paying what is owed, and (3) the prospect that the trustee will not file on time or at all.<sup>327</sup> In addition, the ecosystem that had been damaged may begin to rebound on its own after the cleanup, and the potential exists that NRDs could diminish or die off if sufficient time passes.<sup>328</sup> For example, loss of a predator species (because of factors unrelated to the pollution) could allow accelerated waterfowl recovery due to lower than expected natural mortality rates. Or, unprecedented flooding could dilute residual waterborne chemicals with a commensurate restorative effect. Although these developments would be good news for the environment, they would also reward foot-dragging by PRPs.

## VI. RECOMMENDATIONS

Where a statute is clear and constitutional, the courts should have no problem enforcing it. The NRDA provisions of CERCLA appear clear. However, there is no articulation in the statute concerning how to value compromised resources. Such a shortcoming could be cured with additional legislation (specifying, for instance, a methodology to be used to evaluate NRDs associated with contaminated groundwater). In addition, the agencies charged with carrying out the congressional NRD mandate are entitled to considerable deference in promulgating rules to establish NRD valuations.<sup>329</sup> Thus, either legislation or improved NRD regulations are needed.

Although cooperative approaches should be commended, a more predictable enforcement regime would better motivate responsible parties to cooperate rather than litigate. All of the advantages of a cooperative approach discussed above can be fostered through a "better/stronger/faster" litigation contingency for those who do not settle or work with their respective trustees. As might be expected from the discourse above, enabling the trustees to proceed in a simplified fashion and allowing trustees the benefit of a presumption in favor of their assessment would foster a more credible NRDA system.

As seen in the states of Florida and Washington, trustees can benefit from a simplified system based upon a matrix of damages. Such simplified approaches are still predicated on the most critical aspects of any discharge of hazardous substances: namely, the characteristics of the substance(s) released, the volume discharged, and the sensitivity of the receiving environment. The sensitivity can be further divided into sensitive flora, sensitive fauna, sensitive habitat, and otherwise precious resources.

An "inflation factor" for destruction of rare or endangered plant or animal

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325. The rebuttable presumption is "as yet untested in the courts." ISRAEL, *supra* note 19, at 32B-58.

326. Israel, *supra* note 18, at 4.

327. *See id.*

328. *See id.*

329. *See Chevron U.S.A., Inc., v. NRDC*, 467 U.S. 837, 842 (1984).

species would motivate more cautious behavior when facing the prospect of losing such biodiversity forever. While the cost of breeding and repopulating a species may be available for some plants or animals, it would nevertheless be desirable to at least include an educated guess at similar unknown expenses so that the value of the NRDA is not understated.

If DOI were to promulgate a true simplified NRDA methodology at the time of the next biennial review and revision, this would go a long way toward giving trustees the tools they need to cheaply, quickly, and transparently conduct NRDA's. Such methodologies would better motivate responsible parties to cooperate and restore the environment. If Congress's true intent is to prefer restoration and if the trustees could have the resources they need to motivate mutually beneficial restoration programs, the giant might not sleep much longer. All society would benefit from the acceleration of the corrective measures, and business and industry would particularly benefit from putting these costs behind them.

Absent action on the part of DOI, Congress should review the decision charts in use in Florida and Washington and adopt a similar measure as the simplified federal standard. Creating a truly simple method that is easy to use and that carries either a rebuttable presumption or strict liability for natural resource damages calculated in conformity therewith would enable trustees to quickly pursue and collect damages in the simplest cases.

Congress should also commit a few hundred million dollars to fund a "war chest" for trustees under CERCLA to investigate and assess more complex natural resource damages.<sup>330</sup> Under the OPA, and under successful state programs, trustees have access to their respective spill funds to perform such natural resource damage assessments.<sup>331</sup> However, under the present CERCLA scheme, recourse to the Superfund is unavailable unless "all administrative and judicial remedies to recover the amount...from persons who may be liable" have been exhausted.<sup>332</sup> Unfortunately, when underfunded, the trustees cannot afford to assess the damages to seek judicial remedies in the first place. Appropriating funds to conduct the initial assessment, without first exhausting judicial remedies, would cure the trustees' underfunding dilemma and should pay dividends later as the monies recouped for the assessments are actually restored to the trustees to be used for future assessments, restoration, or replacement of injured natural resources.

## VII. CONCLUSION

However inauspicious my initial encounter with the subject of natural resource damages, it served to alert me to the enormous potential benefit to the environment that lay in appropriate use of NRDs. Where natural resource damages have been

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330. For brownfield redevelopment, Congress put its money where its mouth is, authorizing "\$200 million in critically needed funds to assess and [remediate] brownfield sites as well as \$50 million to [enhance] [s]tate cleanup programs...double the [amount] of funding currently expended on the EPA brownfield program." *See* 147 Cong. Rec. S3886 (daily ed. Apr. 25, 2001) (statement of Sen. Smith); *see also* Small Business Liability Relief and Brownfields Revitalization Act, 42 U.S.C.A. § 9604(k)(12)(A) (2005) (authorizing such funding for years 2002–2006).

331. *See* 33 U.S.C. § 2712 (a)(2) (2000) (access to Oil Spill Liability Trust Fund under OPA); N.J. Stat. Ann. § 58:10-23.1117 (West 2006) (access to New Jersey Spill Fund under state law).

332. 42 U.S.C. § 9611(b)(2)(A) (2000).

ignored, both the environment and the public affected by that environment continue to suffer. Tragically, when trustees and PRPs entrench for litigation, opportunities to promptly remedy past harms are lost for years or even decades.<sup>333</sup> Therefore, reinvigorating NRD recoveries benefits both nature and society.

While the cooperative restoration philosophy embraced by NOAA and increasingly being embraced by DOI shows tremendous promise, regulatory or statutory changes are nevertheless still necessary to enable trustees to enjoy a valuable presumption in litigation. This Article suggests appropriate regulatory and legislative changes to better allow trustees to carry out the functions Congress originally intended.

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333. See Conner & Gouguet, *supra* note 311, at 20 (“For a complex waste site, it takes at least five years to conduct a damage assessment, and an additional five to 10 years if litigation is required”).