Ohio v. United States Department of the Interior: A Contingent Step Forward for Environmentalists

Denis Swords
Ohio v. United States Department of the Interior: A Contingent Step Forward for Environmentalists

I. INTRODUCTION

What value do the people of the United States place upon the majesty of the nation's Grand Tetons, the beauty of its coastline vistas, or the serenity of its wilderness areas? Calculating the value of such natural resources is a complex task that is necessary when seeking recompense from those liable for hazardous materials spills that despoil the environment. In Ohio v United States Department of the Interior, several petitioners sought review of Department of the Interior ("Interior") regulations governing the recovery of money from those responsible for spills of oil or hazardous substances that cause damage to natural resources. Interior promulgated the regulations pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The regulations prescribed assessment methods for quantifying damages to natural resources that petitioners complained would result in flawed damage assessments. The court rejected the majority of the challenges to Interior's rules. However, it overturned significant components of the rules, which should result in substantial increases in liability for damages to natural resources.

State and environmental petitioners raised a number of issues concerning Interior's choices of economic values and policies in challenging the regulations. The petitioners complained that resource valuation pursuant to Interior's regulations undervalued the damages recoverable from parties responsible for harm to the environment. Conversely, industry petitioners complained that the regulations overstated damage cost estimates. The conflict evident in these arguments bespeaks the difficulties intrinsic to natural resource valuation.

The District of Columbia Circuit Court of Appeals rejected all but three of the challenges to the regulations. The court struck down two parts of the Interior rules and remanded a third for clarification. First,
the court struck down the "lesser of" rule that allowed recompense to be set at the lesser of the cost of restoration of damaged natural resources or the cost of compensation for the loss of their use. Second, the court overruled Interior's hierarchy of methods for assessing damages to natural resources because of its excessive reliance on market price to determine the value of injured natural resources.

All of the rules that the court invalidated tended to reduce the measure of damages. The court found one of those rules contrary to the "clearly expressed intent of Congress"5 and the other "not a reasonable interpretation"6 of CERCLA. The decision will impact future environmental litigation by increasing cost liability to those responsible for damaging natural resources. However, the degree of impact of the court's decision depends on Interior's interpretation of the court's use of imprecise valuation terminology.

The decision mandates that Interior expand the scope of damages for all natural resource damage assessments. Unfortunately, the mandate confuses the types of natural resource attributes that must be considered when assessing damages to natural resources. The court apparently mandates that Interior broaden the use of contingency valuation ("CV") to all natural resource assessments. CV is a controversial valuation technique that uses random polling to determine the value of natural resources. Using CV to monetize damages will greatly increase liability for injury to natural resources. The court's mandate expanding the use of CV appears to be an unintentional result of its incorrect classification of certain values attributable to natural resources. The court's mandate presents the legal issue of whether CERCLA requires that Interior include the incorrectly classified value attributes in all damage assessments.

Deciding how to value natural resources is critical, in that placing a value on natural resources allows courts to "assess damages for environmental harm, deters future pollution, and helps insure protection for natural ecosystems."7 Economics can form the foundation of environmental protection by forcing those who over-consume or damage publicly held resources to internalize all associated economic costs. The provisions of CERCLA8 and the Clean Water Act ("CWA")9 provide state and federal government officials with authority to recover damages from polluters who harm fish, wildlife, and other natural resources. CERCLA seems to embody ideals espoused by Justice William O.

5. 880 F.2d at 438.
6. Id.
Douglas\textsuperscript{10} in that state and federal government officials are designated as trustees of the natural resources and are thus entrusted with the task of protecting our environment.

New statutes such as the Oil Pollution Act ("OPA")\textsuperscript{11} expand the significance of natural resource valuation. The OPA increases liability for oil spills by expanding the types of damages for which polluters are liable. For example, under the OPA polluters are liable for damages to real or personal property and the loss of subsistence use of natural resources.\textsuperscript{12} Under the OPA, Congress mandates that oil spillers be liable for damages "for injury to, destruction of, loss of, or loss of use of, natural resources..."\textsuperscript{13} As Congressional mandates, such as the OPA, continue to expand the circumstances for which natural resource valuation is necessary, the methodology used for that valuation takes on added significance.

Valuing natural resources is a difficult task that involves "meshing different disciplines, including environmental science, resource economics, and environmental law in a four-stage assessment process: (1) establishing the discharge source; (2) identifying the direct resource damage; (3) estimating indirect and expected future injuries; and (4) valuing the damages resulting."\textsuperscript{14} The focus of this casenote will be step four, placing a monetary value on natural resource damages.

Valuation of damages to natural resources involves both practical and philosophical problems. One practical problem results from the lack of a market in which natural resources are traded and priced. Philo-

---

\textsuperscript{10} In Sierra Club v. Morton, Justice Douglass stated:
Contemporary public concern for protecting nature's ecological equilibrium should lead to the conferral of standing of environmental objects to sue for their own preservation. . . .

Inanimate objects are sometimes parties in litigation. A ship has a legal personality, a fiction found useful for maritime purposes. The corporation sole—a creature of ecclesiastical law—is an acceptable adversary and large fortunes ride on its cases. . . .

So should it be as respects valleys, alpine meadows, rivers, lakes, estuaries, beaches, ridges, groves of trees, swampland, or even air that feels the destructive pressures of modern technology and modern life. The river, for example, is the living symbol of all the life it sustains or nourishes—fish, aquatic insects, water ouzels, otter, fisher, deer, elk, bear, and all other animals, including man, who are dependent on it or who enjoy it for its sight, its sound, or its life. The river as plaintiff speaks for the ecological unit of life that is part of it.


\textsuperscript{12} Id. § 1002(b)(2)(C) (33 U.S.C. 2702(b)(2)(C)).

\textsuperscript{13} Id. § 1002(b)(2)(A) (33 U.S.C. 2702(b)(2)(A)).

sophical problems include determining whether monetary valuation of natural resources should focus on use value (i.e. consumption or other use for gain) alone, or should also consider nonuse values.

This casenote addresses the court's assessment of both the practical and the philosophical problems inherent in placing a monetary value on natural resources. The problems created by the court's imprecise language are addressed through a careful analysis of the decision. Analysis of CERCLA and the Interior regulations as well as the literature concerning natural resource damage valuation also assist in resolving the problems created by the opinion. This discussion begins with an analysis of natural resource valuation concepts followed by a brief outline of the CERCLA statute and the Interior regulations promulgated pursuant to CERCLA. Next follows a discussion of the Ohio v. Interior decision emphasizing two natural resource valuation issues that remain uncertain because of the court's imprecise language. This discussion will indicate that the value assigned to the natural resources of our nation, and thus the costs assessed to those who damage natural resources depends on the interpretation given the court's imprecise language. Finally, this casenote will end with a suggested regulatory interpretation of the court's imprecise language.

II. NATURAL RESOURCE VALUATION

Natural resource valuation is a two step process. First the person responsible for valuation must determine the values attributable to natural resources that the valuation process is to include (i.e., consumptive use value, non-consumptive use value, or non-use value). Second, the valuation process must develop a method for monetizing the accounted for values (i.e., restoration and replacement cost, market valuation, behavioral use valuation, and contingent valuation).

A. Determination of Values Attributable to Natural Resources

Values attributable to natural resources have both use and nonuse values. Calculating the full value of natural resources involves determining both the use and nonuse values.

1. Use Value

Use value is simply the price people are willing to pay to use natural resources. Use value includes both consumptive use and non-

15. Use value is defined as:
the value to the public of recreational or other public uses of the resource, as measured by changes in consumer surplus, any fees or other payments collectable
consumptive use values. An example of consumptive use value is the costs a duck hunter is willing to incur to go hunting. For example, duck hunters spend money on license fees, hunting leases, and travel costs to go hunting; such use values are quantified by summing the costs. Duck hunting is a consumptive use because ducks that are shot are a consumed resource. The use value of duck hunting includes the value of the ducks consumed. The value of consumed ducks is determined by pricing ducks in commercial markets. An example of non-consumptive use value is the costs incurred by a bird watcher on an outing. Bird watching is non-consumptive use because birds are observed, but not consumed. A bird watcher thus uses resources, but in a non-consumptive way. One can determine the value of such non-consumptive use by totaling the costs a bird watcher is willing to incur to enjoy an outing. The costs might include the expense of field guides, binoculars, and traveling costs. Like the duck hunter's use values described above, these values are quantifiable by summing the costs of the items mentioned. Hence both consumptive and non-consumptive use values are readily determined by summing the costs borne by those who use the natural resources.

2. Nonuse Value

Environmentalists argue that the value of natural resources extends beyond their use value to include attributes known as intrinsic, option, and existence values. Intrinsic value is the inherent value of natural resources. No method exists for monetizing the intrinsic value of natural resources. The option value of a natural resource is the price that one by the government or Indian tribe for a private party's use of the natural resource, and any economic rent accruing to a private party because the government or Indian tribe does not charge a fee or price for the use of the resource. 4 C.F.R. § 11.83(b)(1) (1990).

16. Cross, supra note 7, at 281. Cross notes that intrinsic value "recognizes that natural resources may have value independent of humans, based on their status as natural creatures or objects." Id.

17. Id. at 294. Cross states: "No persuasive methodologies, however, objectively and reliably ascertain the intrinsic worth of natural resources." Id. Certain ecologists (referred to as "deep ecologists") seek a biocentric approach that rejects the modern anthropocentric orientation of the western, democratic, capitalist culture. See generally Pollack, Reimagining NEPA: Choices for Environmentalists, 9 Harv. Envtl. L. Rev. 359, 401-13 (1985). These ecologists feel that reliance on economic valuation of natural resources is the root of all environmental degradation. They refuse to place a monetary value on nature, thus valuation by their terms must either be zero or infinity, neither of which is tenable. Cross notes that "[p]erhaps the true value of a given object is the additive total of its use, existence, and intrinsic values." Cross, supra note 7, at 297 (footnote omitted). Intrinsic value does have relevance as "evidenced by the policy of the Endangered Species Act [16 U.S.C. §§
is willing to pay to preserve the resource for his or her own future use. Existence value is the price one is willing to pay to preserve a natural resource regardless of intent to use it in the future. For example, one might be willing to pay money to preserve Glacier National Park because he or she plans to go there sometime in the future (option value). The same person might be willing to pay for preservation of Denali Park in Alaska without any personal plans to ever visit the park (existence value). Because no known methodologies can reliably ascertain intrinsic value, the only nonuse values typically determined when monetizing natural resource attributes are option and existence values.

3. Use Value v. Nonuse Value

Use value is more precise than nonuse value because it measures behavior rather than attitude. That is, use value measures how much a person actually spends while nonuse value estimates how much a person thinks he or she might be willing to spend. However, problems are inherent in limiting valuation to use value. One commentator suggests that “use value recognizes that natural resources only have value to humans when the resources are used for practical human ends, such as for fishing or hunting. Use value seeks to measure the monetary importance of the loss of these human uses.” The problem is that “use value ignores the reality that natural resources may have worth beyond their use by humans. Even unused resources may have some use to society. Surely a fish is worth something, even if a fisherman never catches it.”

Values attributable to uncaught fish include their role in maintaining the ecological balance of their environment, their contribution to reproduction of the species, and their contribution to the species gene pool. Uncaught fish also maintain an option value to anglers who plan on taking future fishing trips and an existence value for others who plan to recreate, but not fish. The inability of use value to account for such worth creates a need for determining nonuse values to attain a more complete value estimate of natural resources. Accounting for nonuse value necessitates development of methods to monetize nonuse as well as use value attributes.

1531-1544 (1989) which seeks to promote the continued existence of embattled forms of wildlife regardless of human consumptive concerns.” Comment, Natural Resource Damage Assessments for Oil Spills: Policy Considerations Underlying the Evolution of the Department of the Interior’s Regulations, 1 Vill. Envtl. L.J. 491, 509 (1990) (footnote omitted). However, Interior does not recognize intrinsic value in its regulations, and because no means are available for determining intrinsic value, the propriety of including such value attributes in resource damage assessments will not be addressed in this Casenote.

18. Cross, supra note 7, at 281.
19. Id. at 284 (footnote omitted).
B. Monetizing Natural Resource Attributes

Several methods exist for monetizing the value of natural resource attributes. Interior's regulations stipulate that "[i]n estimating use values, either a marketed or nonmarketed resource methodology, ... shall be used."20 However, the regulations favor the use of marketed methodologies. The regulations require the use of the diminution in market price of the resource "[u]nless ... the market for the resource is not reasonably competitive."21 Historically, courts use market value when assessing damages to public resources where there is a ready market value for those resources.22

When the natural resource that is damaged is neither traded in a market nor comparable to other resources that are traded in a market, a non-market based valuation method is used to determine a use value of the resource. Nonmarketed natural resource methodologies include behavioral use valuation techniques such as contingency valuation ("CV").23 CV is a method for determining use and/or nonuse values of natural resources. CV methodology "includes all techniques that set up hypothetical markets to elicit an individual's economic valuation of a natural resource."24 Individual values are determined through a series of sophisticated surveys of individuals establishing hypothetical markets to determine how much those interviewed think the resource is worth. CV quantifies the three distinct types of natural resource damages that the

23. 43 C.F.R. § 11.83(d)(5)(i) (1989). Contingent valuation methods can be used to determine how much people are willing to pay to use (use value) a natural resource by: "directly asking individuals about their willingness to pay (WTP) for changes in quantity of recreation at a particular site. Individual values may be aggregated by summing the WTPs for all users in the area." 44 Fed. Reg. 72912, 72958 (1979). Contingency valuation can also establish hypothetical markets:

to determine how much individuals would be willing to pay to have the option (the "option value") to enjoy viewing a natural resource they are not now using . . . [and] to determine how much people would be willing to pay to know that a [natural resource] exists (the "existence value") for the benefit of current and future generations, even though they themselves do not intend to see or enjoy the resource personally.

Interior regulations have recognized: use value, and two nonuse values, option and existence value.\textsuperscript{25}

CV surveys determine how much an interviewee is willing to pay for a resource by: 1) direct questioning, 2) bidding formats wherein the person is asked if he or she would pay a given amount, after which the price is adjusted until ascertainment of an agreed upon amount, or 3) a format naming a specific price and allowing the interviewee to take it or leave it. The CV method thereby determines individual prices or the use and/or nonuse value of particular resources.

The CV method is the only known means to measure nonuse values of natural resources,\textsuperscript{26} and therein lies the problem with assigning nonuse values to natural resources. One commentator states: "[C]ontingent valuation is controversial... because it is entirely hypothetical and because it assumes that people respond to the survey as they would to a marketplace transaction."\textsuperscript{27} Another criticism of the CV method is that people will respond to questions with answers tailored to produce public policies that they favor. For example, an environmentalist concerned about preserving snail darters might respond with a value higher than he is actually willing to pay for the fish to promote his preservationist ideas. While such concerns are reasonable, many economists believe well designed questionnaires appear to minimize the effect of this behavior.\textsuperscript{28}

Whether respondents possess sufficient information to value resources accurately is another concern. Because respondents have little experience placing monetary value on natural resources, results may be inaccurate. Natural resources have no set value; therefore, no method exists to test the accuracy of CV surveys. A particularly troubling aspect of CV studies exemplifying the lack of accuracy is that different questions obtain substantially different results in value for the same resource. When

\textsuperscript{25} Cross, supra note 7, at 280-81. Cross, notes that "[t]he literature in this field has yet to agree on a standardized set of terms for these value types." Id. at 281 n.53. Cross labels all nonuse values as existence value which he divides into three parts: option value, vicarious value, and intemporal value. Option value is the desire to preserve natural resources for your own future use. Vicarious value is the desire to preserve natural resources even though there is no intention of future use. Intemporal value is the desire to save natural resources for the use of future generations. Option value as used in this Casenote, is equivalent to option value as used by Cross. The Casenote use of existence value corresponds to vicarious and intemporal value as used by Cross. The terminology used in this Casenote is the same as that used by the court in Ohio v. Interior.

\textsuperscript{26} Kopp, Portney, and Smith, Natural Resource Damages: The Economics Have Shifted After Ohio v. United States Department of the Interior, 20 Envtl. L. Rept. 10127, 10130, (1990), state that "[c]ontingent valuation techniques are the only way known to measure... nonuse damages." See also Cross, supra note 7, at 320, wherein the author states that "only contingent valuation measures the existence value of natural resources." (footnote omitted).

\textsuperscript{27} Cross, supra note 7, at 315 (footnote omitted).

\textsuperscript{28} Id. at 316.
respondents are asked the price they are willing to pay for preservation of a natural resource rather than the price for which they would sell the same resource, results vary. Generally, a respondent’s willingness to pay is much less than the price for which the same respondents would sell a natural resource. Which response better quantifies the value of natural resources remains an enigma.

Other concerns about CV methodology include fears that the results of CV surveys are “unduly dependent upon the information provided to respondents and the phrasing of the questionnaire.” These uncertainties lead many to view CV methods with skepticism. Nonetheless, if the CV survey is carefully structured, “[e]conomists now generally agree that at least in some circumstances properly designed contingent valuation surveys will yield valid results.”

In sum, valuation methodology differs for distinct value attributes of natural resources. Both consumptive and non-consumptive use values can be determined by either market price diminution or by non-market based valuation methods. Nonuse values such as option and existence values can only be measured by non-market based CV methodology.

III. THE DUTY TO VALUE NATURAL RESOURCES

Congress enacted CERCLA in 1980. CERCLA conferred on the President the responsibility to promulgate regulations for assessing damages to natural resources resulting from releases of hazardous substances or oil as provided in CERCLA and in the Federal Water Pollution Prevention and Control Act (popularly known as the Clean Water Act (“CWA’’)). Although CERCLA is best known for its application to

29. Id. at 319.
31. In 1986, Congress amended CERCLA by the Superfund Amendments and Reauthorization Act (“SARA’’). All references to CERCLA in this Casenote are to the statute as amended.
32. 51 Fed. Reg. 27674, 27675 (1986). The President delegated his authority to the Department of the Interior. The regulations were due by December of 1982, however, Interior waited until January of 1983 to issue an advanced notice of proposed rulemaking soliciting public comment as to how it should proceed setting out regulations applicable to both the type A and type B assessments. Finally, in August of 1986, under a deadline imposed by the court in New Jersey v. Ruckelshaus, No. 84-1668 (D.N.J. Feb. 5, 1985), Interior promulgated the regulations challenged in Ohio v. Interior. The regulations are now codified at 43 C.F.R. §§ 11.10-11.93 (1990).
hazardous waste disposal site cleanup, it is also important because it permits governmental entities to recover damages for "injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss . . .".36

CERCLA broadly defines natural resources as "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, . . . appertaining to, or otherwise controlled by the United States . . . any State or local government, [or] any foreign government . . .".37 The Act designates state or federal authorities to "act on behalf of the public as trustees for natural resources"38 in bringing actions to recover for resource damages. If an action is brought against a party and the court finds the party liable for the damage, the court must assess damages commensurate with the degree of injury to the resources. CERCLA requires that all recovered monies are used "to restore, replace, or acquire the equivalent of such natural resources."39

IV. CERCLA REGULATIONS

Congress directed that CERCLA "regulations shall identify the best available procedures to determine . . . damages, including both direct and indirect injury, destruction, or loss and shall take into consideration factors including, but not limited to, replacement value, use value, and ability of the ecosystem or resource to recover."40 To this end, CERCLA directs the regulations to prescribe two types of damage assessment procedures: one procedure for assessing damages caused by minor spills and a second for assessing large or particularly damaging spills and releases.41

Following CERCLA's mandate, Interior promulgated two sets of rules. Type A regulations (subpart (D))42 specify "standard procedures

35. Breen, Citizen Suits For Natural Resource Damages: Closing A Gap In Federal Law, 24 Wake Forest L. Rev. 851, 859-60 (1989). "[T]he Environmental Protection Agency (EPA) has identified 30,844 potential waste sites where CERCLA could apply." (The author cites several sources concluding that even this figure is too low.) "The General Accounting Office estimates that the universe of potential CERCLA sites is 130,000 to 425,000 . . . [with estimates of] the total cost of cleaning up . . . [amounting to] $500 billion over the next fifty years." Id. (footnotes omitted).
37. Id. § 9601(16).
38. Id. § 9607(f)(2)(A) & (B).
39. Id. § 9607(f)(1).
40. Id. § 9651(c)(2) (emphasis added).
41. Id. § 9651(c)(2).

The purpose of the [Type A] procedures . . . is to provide a simplified assessment
NOTES

for simplified assessments requiring minimal field observation" \(^4\) intended
to govern most minor spills and releases. Type B regulations (subpart
(E)) \(^4\) specify "alternative protocols for conducting assessments in
individual cases to determine the type and extent of short and long-term
injury, destruction or loss." \(^4\) Type B regulations are for assessing dam-
ages caused by major spills.

CERCLA provides for designation of authorized federal \(^4\) and state \(^4\)
trustees to assess natural resource damages and press claims for the
recovery of such damages, under both CERCLA and the CWA. CER-
CLA does not require that the trustees utilize either the type A or type
B procedures. However, CERCLA provides that assessments performed
in accordance with the prescribed procedures are entitled to a rebuttable
presumption of accuracy in a proceeding to recover damages from a
responsible party. \(^4\)

The Interior regulations establish a four phase procedure for assessing
damages. In the initial or "preassessment phase" \(^4\) a trustee determines
whether natural resources may have been damaged by a release of oil
or hazardous materials. Upon discovering injuries to natural resources
the trustee enters the "assessment plan phase." \(^5\) During this second
phase, the trustee maps out an assessment strategy. The regulations
direct the trustee to "select between performing a natural resource
damage assessment using either type A assessment procedures . . . or
type B assessment procedures . . . ." \(^5\) If the trustee determines that type
B procedures are necessary, the third step, or the "assessment phase," \(^5\)
under type B, requires that the trustee: (1) establish whether in fact
natural resources have been damaged, (2) quantify the extent of the

---

\(^4\) Id. at § 11.41(a)(1).
\(^4\) Id. § 9607(f)(2)(A): "The President shall designate . . . the Federal officials who
shall act on behalf of the public as trustees for natural resources under this chapter and
section 1321 of Title 33 [CWA]."
\(^5\) Id. § 9607(f)(2)(B): "The Governor of each state shall designate State officials
who may act on behalf of the public as trustees for natural resources under this chapter
and section 1321 of Title 33 [CWA] and shall notify the President of such designations."
\(^4\) Id. § 9607(f)(2)(C).
\(^4\) Id. §§ 11.30-11.35.
\(^5\) Id. § 11.33(a).
\(^4\) Id. §§ 11.60-11.84.
injuries, and (3) ascertain the appropriate dollar amount of damages caused by the release. In the final or “post-assessment phase,” the trustee documents the assessment process and demands payment from the responsible party.

Step three, the assessment phase of the type B regulations, prescribed a hierarchy of permissible methods for determining the use value of natural resources. Interior’s regulations favored valuing resources at their market price. “Unless the authorized official determines that the market for the resource is not reasonably competitive, the diminution in the market price of the resource shall be used to estimate the damages to the injured resource.” In the absence of competitive markets, the regulations prescribed an appraisal method to estimate market value before and after damages. The rules allowed the use of other valuation techniques only when neither market nor appraisal methods were available.

The type B regulations also prescribed valuation techniques other than market or appraisal methods. One such technique, CV methodology, was to be used to “determine use values and [to] explicitly determine option and existence values.” But “[t]he use of the contingent valuation methodology to explicitly estimate option and existence values should be used only if the authorized official determines that no use values can be determined.” Regardless of the limited use of CV prescribed by the regulations, industry petitioners complained that its use would “permit or encourage overstated damages.”

V. REVIEW IN THE D.C. CIRCUIT

A. Petitioners’ Complaints

1. Industry

In Ohio v. Interior petitioners challenged the type B regulations promulgated by Interior pursuant to CERCLA. Specifically, industry petitioners focused their attack on the use of CV methodology in the regulations. They offered two principal complaints. First, the industry petitioners argued that CV methodology is not a “best available pro-

53. Id. §§ 11.90-11.93.
54. Id. § 11.83(c)(i).
55. Id. § 11.83(d)(5)(i).
56. Id. § 11.83(d)(5)(ii).
57. 880 F.2d 432, 438 (D.C. Cir. 1989).
58. The type A rules were challenged in State of Colorado v. U.S. Dept. of Interior, 880 F.2d 481 (D.C. Cir. 1989), a companion case to the Ohio v. Interior decision.
procedure” as required by CERCLA because of the method’s imprecision and because surveys taken after a natural resource damaging accident would be fraught with bias. Second, the industry petitioners argued that Interior’s extension of CERCLA’s rebuttable presumption to CV estimates is arbitrary and capricious and a violation of a responsible party’s due process rights.

2. State and Environmental

The court also considered numerous complaints filed by state and environmental petitioners. The complaints focused on procedures governing ascertainment of the appropriate dollar amount of damages during step three of the type B assessment. State and environmental petitioners “insist[ed] that CERCLA requires damages to be at least sufficient to pay the cost in every case of restoring, replacing or acquiring the equivalent of the damaged resource. . . .” The petitioners attacked Interior’s establishment of a hierarchy of methods for calculating use values complaining that the hierarchy caused the “regulations’ alleged undervaluation of the damages recoverable from parties responsible for hazardous materials spills that despoil natural resources.” The petitioners complained that the hierarchy’s “reliance on market value is an unreasonable interpretation of [CERCLA].”

The hierarchy of permissible methods for valuing natural resources established by Interior’s regulations favored market price values. In the absence of a market, an appraisal method was to be used. When neither market nor appraisal methods were available, the regulations allowed the use of alternate valuation techniques, including CV.

B. The Court’s Resolution

1. Industry Challenges

The court affirmed the use of CV as a method for assessing the value of natural resources. The court also instructed Interior to promulgate regulations that account for option and existence values. Because Interior has decided not to appeal the decision by the District of Columbia Circuit Court of Appeals, the focus of environmental damage assessment should shift from the traditional common law methods focusing on the monetary value to those who consume or use the envi-

59. 880 F.2d at 476.
60. Id. at 441.
61. Id. at 438.
62. Id. at 462.
63. Olson, supra note 23, at 10556 n.67.
environment for gain to an increased emphasis on the less traditional nonuse values. This change in philosophy could have tremendous economic consequences for those who damage the environment. Counsel for the National Wildlife Federation (one of the environmental petitioners), stated: "Now, natural resource damage liability can easily be of the same magnitude as the more widely appreciated liability for response costs."64 A second commentator states that "the acceptance of contingent valuation techniques has the effect of expanding damage awards."65 Industry petitioners argued that the use of CV methodology would amount to both a statutory violation of CERCLA and a violation of their Constitutional rights.

a. Is CV Methodology a "Best Available Procedure"?

i. Harmony With Common Law

Industry complained that "CV methodology, ... is rife with speculation, amounting to no more than ordinary public opinion polling ... [that] the CV process is imprecise, is untested, and has built-in bias and a propensity to produce overestimation."66 Industry petitioners felt that the imprecision caused the regulations to suffer "fatal departures from CERCLA on grounds that CV methodology is inharmonious with common law damage assessment principles, and is considerably less than a 'best available procedure.'"67

The court rejected the contention that common law damage standards apply to CERCLA. However, the court agreed that CERCLA "require[s] utilization of the 'best available procedures' for determination of damages flowing from destruction of or injury to natural resources."68 In answer to Industry petitioners' complaint, the court found that Interior's decision to adopt CV was carefully made after considerable study of papers and discussions addressing the use of CV. Interior realized that CV needs to be carefully structured and applied by professionals. The court concluded: "We find [Interior's] promulgation of CV methodology reasonable and consistent with congressional intent, and therefore worthy of deference."69

The court reasoned that Interior "surveyed a number of studies which analyzed the methodology, addressed the shortcomings of various questionnaires, and recommended steps needed to fashion reliable CV

64. Id. at 10551.
65. Kopp, supra note 26, at 10130.
66. 880 F.2d at 476.
67. Id. at 476.
68. Id. at 476 (quoting from 42 U.S.C. § 9651(c)(2) (1982)).
69. Id. at 476-77 (emphasis added).
assessments.'"\textsuperscript{70} The court noted studies offered by industry showing that survey respondents have a tendency to ""overstate their willingness-to-pay""\textsuperscript{71} for damaged natural resources because they do not actually have to spend money. But the court determined that ""[t]he simple and obvious safeguard against overstatement, however, is more sophisticated questioning.""\textsuperscript{72} The court found the regulations to provide sufficient guidance concerning the use of CV.

\textit{ii. Bias Due to Post-Accident Assessment of Damages}

Industry petitioners also complained that the application of CV methodology ""after an oil leak or a hazardous waste release has occurred . . . is fraught with a significant bias leading to overvaluation of the damaged resources.""\textsuperscript{73} The court concluded that it is impossible to solicit individual valuations of natural resources prior to an incident to ""avoid any upward bias in the event that the resource is later damaged.""\textsuperscript{74} The court also found that valuation prior to damage runs counter to CERCLA's predilection for restoration. The court determined that bias from post-accident assessment alone does not reduce CV methodology to something less than a ""best available procedure.""\textsuperscript{75} Thus the court ""sustain[ed] [Interior] in its conclusion that CV methodology is a 'best available procedure.' As such, its [inclusion] in the Natural Resource Damage Assessment regulations was entirely proper.""\textsuperscript{76}

\textit{b. Inclusion of the Rebuttable Presumption}

\textit{i. Arbitrary and Capricious}

Industry petitioners complained that Interior did not fully respond to their comments regarding the implementation of CV methodology and that Interior has insufficient justification for the use of CV to measure option and existence values. Industry thus argued that Interior's extension of CERCLA's rebuttable presumption to CV assessment is arbitrary and capricious, and violative of due process rights of a potentially responsible party.\textsuperscript{77} Industry voiced great concern over the absence of CV assessments used to determine damages for injury to natural resources. Because of the absence of use, industry argued that CV

\textsuperscript{70} Id. at 477 (footnote omitted).
\textsuperscript{71} Id.
\textsuperscript{72} Id. at 478.
\textsuperscript{73} Id.
\textsuperscript{74} Id.
\textsuperscript{75} Id.
\textsuperscript{76} Id. (emphasis added).
\textsuperscript{77} Id.
remains a hypothetical method of assessment. Industry also complained of a lack of guidance on when or how the CV method might be utilized.

In deciding whether the implementation of CV was arbitrary and capricious, the court relied on language from *Motor Vehicle Mfgs. Ass'n v. State Farm Mut. Ins. Co.*, wherein the Supreme Court held that agency action is arbitrary or capricious if the agency has:

- relied on factors which Congress has not intended to consider,
- entirely failed to consider an important aspect of a problem,
- offered an explanation for its decision that runs counter to the evidence before the agency, or is implausible that it could not be ascribed to a difference in view or the product of agency expertise. 79

The court further stated that "when an agency relies upon an economic model, it is incumbent upon it to 'provide a full and analytical defense' of the model." 80 Agencies must provide a defense because "[u]se of a predictive model acknowledges implicitly that there are instances in which factors will affect the outcome" 81 and those factors must be explained. However, an agency's choice of an economic model must be respected when that agency shows that it has "examine[d] the relevant data and articulate[d] a reasoned basis for its decision." 82

The court decided that Interior met this burden with a showing that "CV methodology was thoroughly investigated, comments were analyzed and dealt with, and changes were made to refine the use of CV. The record does not support the claim that [Interior's] treatment of industry petitioners' comments was arbitrary or capricious." 83 The court also found that the lack of guidance did not make the adoption of CV arbitrary or capricious because the propriety and form of CV methodology must be adapted to each individual spill, thus establishing a need for flexibility.

**ii. Violation of Due Process**

Industry petitioners also complained that the presumption that assessments using CV methodology are correct violates both substantive and procedural due process. However, the court found no merit to these complaints. The court found no violation of substantive due process by
inclusion of a rebuttable presumption. Instead, the court determined that the inclusion of a rebuttable presumption leads to a concomitant increase in judicial efficiency. Without the presumption the courts would face "the specter of prolonged battles of experts and other heavy burdens on [their] calendars."  

The procedural due process challenge concerned the damage assessment proceedings in which the authorized official is deemed "an interested party with discretionary power to exclude potentially responsible parties from the assessment process."  The court replied that procedural due process was not violated because: 1) potentially responsible parties would not be totally excluded from the proceedings to determine damage amounts and 2) the authorized official has no personal stake in the determination of recovery. The court thereby refuted Industry Petitioners' complaints.

2. State and Environmental Challenges

The court agreed with state and environmental petitioners' complaints that the hierarchy of assessment methods prescribed by Interior undervalues natural resources. The court found error in the regulations' dependence on market price determinations. On remand, the court ordered Interior to promulgate regulations that allow the inclusion of all use values that can be reliably calculated.

a. Standard of Review

In reviewing Interior's interpretation of CERCLA, the court applied the *Chevron* test. The *Chevron* test consists of two steps. In step one the court asks whether Congress has spoken to the precise question at issue. If the answer is yes, effect must be given to Congress' intent. Courts use step two of the *Chevron* test when Congress is ambiguous or silent on an issue. Congressional silence is taken as an implicit delegation of power to the agency to make policy choices. The court must defer to the agency's interpretation of the statute if the interpretation is reasonable and consistent with the statutory purpose.

The court applied the second prong of the *Chevron* test to determine the propriety of Interior's hierarchy of assessment methods. The regulations limited recovery for a damaged resource to the price commanded by the resource on the open market unless the trustee determined that "the market for the resource is not reasonably competitive." The *Ohio*

84. Id. at 480.
85. Id.
v. Interior court agreed with environmental petitioners' view that the rigid hierarchy is an unreasonable interpretation of CERCLA. The court found it "unreasonable to view market price as the exclusive factor, or even the predominant one. From the bald eagle to the blue whale and snail darter, natural resources have values that are not fully captured by the market system."88 Natural resources might have components that are traded in competitive markets but their "total use values are not fully reflected in the prices they command in those markets."89

b. Does the Hierarchy of Assessment Methods Undervalue Natural Resources?

The court cited two specific examples indicative of the undervaluation problem of Interior's established hierarchy. The first is the value that market price reasoning assigns to a fur seal. Interior's hierarchy specifies a use value of $15 per seal, the market price of a seal's pelt. The court reasoned that Interior's price is too low to replace destroyed seals. The second example is the method that Interior employs in assigning a value to national parks. The market price of a national park is determined by summing the fees charged to the public using the park. Such a valuation method undervalues national parks because the fees are purposely set low to encourage public use rather than to maximize profits.90

The court decided that Interior's decision to limit the role of use values other than market prices was an erroneous interpretation of CERCLA because "Congress intended the damage assessment regulations to capture fully all aspects of loss."91 The D.C. Circuit Court determined Interior's emphasis on market value was an unreasonable interpretation of CERCLA under the second prong of the Chevron test. CERCLA "requires Interior to 'take into consideration factors including, but not limited to ... use value.'"92

Also, the court determined that under Interior's own interpretation of CERCLA, option and existence values should not "be excluded from the category of recognized use values."93 According to the court "[o]ption and existence values may represent 'passive' use, but they nonetheless reflect utility derived by humans from a resource, and thus, prima facie, ought to be included in a damage assessment.'"94 In analyzing the intent

88. 880 F.2d at 462-63 (emphasis in original).
89. Id. at 463.
90. Interior explains this valuation by "point[ing] out that these fees are what the government has determined to represent the value of the natural resource and represent an offer by a willing seller." 51 Fed. Reg. 27674, 27719 (1986).
91. 880 F.2d at 463.
92. Id. at 464 (emphasis in original).
93. Id.
94. Id. (emphasis in original).
of CERCLA, the court read the phrase "but not limited to . . . use value" to express a clear intent to consider other factors "in addition to use value." The court decided that the rules promulgated by Interior "arbitrarily limit[ed] use values to market prices." On remand, the court ordered Interior to permit trustees to derive use values including "all reliably calculated use values, however measured, so long as the trustee does not double count." This mandate included an instruction that Interior's "decision to limit the role of non-consumptive values, such as option and existence values, in the calculation of use value rests on an erroneous construction of the statute." Thus, the court ordered the consideration of "all reliably calculated use values" which according to the court includes option and existence values.

VI. DISCUSSION

Three issues are raised by the D.C. Circuit Court's opinion. The first is the court's action in sustaining Interior's promulgation of regulations calling for the use of CV methodology. The court sustained CV methodology for use value determinations and the use of CV for measuring nonuse option and existence values in extraordinary circumstances only. The second issue is the D.C. Circuit Court's erroneous classification of option and existence values as use values to be calculated with all other use values. The court states: "Option and existence values may represent 'passive' use, but they nonetheless reflect utility derived by humans from a resource, and thus, prima facie, ought to be included in a damage assessment." This error in classification gives rise to the question of whether there is a duty to consider nonuse values in all natural resource damage assessments. The third issue also results from the court's inaccurate classification of option and existence values. By inappropriately classifying them as "passive" use values to be calculated with all other use values, the court expands the use of CV methodology for calculating nonuse values. The expanded use of CV for calculating nonuse values results from the fact that option and existence values can only be calculated using CV methodology. The expansion appears unintentional when considered with the court's ruling on Interior's regulations governing the use of CV methodology.

A. The Court's Acceptance of CV

In sustaining Interior's use of CV methodology against industry petitioner's complaints, the court neither expanded nor contracted In-
terior's proposed use of the methodology. Thus, absent further instruction, the court's affirmation of CV methodology limits its use to value determinations "when neither the market price nor the appraisal methodology is appropriate. . . ." In such situations CV methodology can be used to calculate both use values and nonuse values. For use value determinations, Interior states that "contingent valuation is just as valid a method to estimate use as the other methods listed." Under Interior's regulations, CV would also be used for determinations of nonuse option and existence values when no use values can be determined. However, such use of "contingent valuation to explicitly measure option and existence values is limited in this final rule . . . to take into account those extraordinary circumstances when the authorized official cannot determine a use value for the resource." Left unaltered, this limited use of CV methodology for nonuse option and existence value determinations would have minimal impact on natural resource damage assessments. However, the court's ruling broadens the application of CV methodology for determining option and existence values. The expansion is an incidental result of the court's invalidating the hierarchy of assessment methods and requiring the assessment of all use values. As explained later, the court incorrectly classified option and existence values as non-consumptive use values. Option and existence values (which are actually nonuse values) can be determined only by using CV. Thus, the court's incorrect classification of option and existence values will conceivably result in the use of CV methodology in all damage assessments.

B. Classification of Option and Existence Values

The court rejected the hierarchy of assessment methods finding that it arbitrarily limited use values to market prices and that it "limit[ed] the role of non-consumptive values, such as option and existence values, in the calculation of use values. . . ." The court reasoned that CERCLA requires Interior to take into consideration factors in addition to use values, stating: "[CERCLA] requires Interior to 'take into consideration factors including but not limited to . . . use values.'"

When it rejected the hierarchy of assessment methods, the court instructed Interior not to "arbitrarily limit use value to market prices." Following this order, Interior must expand its implementation of esti-
mates of use value to allow calculation by methods other than market price analysis. Interior must promulgate regulations allowing trustees to choose the best suited method of assessment when calculating use values. Because the Department has stated that "CV is just as valid a method to estimate use values as the other methods listed," the ruling allows trustees to use CV methodology when calculating use values. Indeed, the court instructed Interior to "permit trustees to derive use values for natural resources by summing up all reliably calculated use values, however measured." The court clearly states that all use values, whether consumptive or non-consumptive, be considered in all damage assessments, but the court's ruling creates confusion as to a duty to consider nonuse values. The confusion results from the court's erroneous classification of option and existence values.

1. Duty to Consider Nonuse Values

The court's opinion confuses distinctions between passive use values and nonuse values. At one point the court refers to industry petitioners' claim that option and existence values are nonuse values stating: "we have already rejected this conclusion... Option and existence values are non-consumptive values compensable under the terms of CERCLA." This conclusion is incorrect because non-consumptive use value is not equivalent to nonuse value. Nonuse values comprehend no actual use of the resource; non-consumptive use value requires passive use of the resource. Whereas passive or non-consumptive use contemplates use of natural resources, option and existence values do not even require actual contact with the resource by the person assigning a value to it. Because option and existence values exist independent of use of the actual resource, a resident of Baton Rouge may suffer a measurable loss because of the Exxon Valdez oil spill, whether or not that person plans to ever go to Valdez, Alaska.

The court's interpretation of option and existence values as non-consumptive or passive use values is unreasonable. The court states that "the CERCLA 301 Project Team draft referred to option and existence values as 'non-consumptive use values.'" The source of this comment is not clear. Contrary to any remarks in earlier drafts, it is abundantly clear that Interior considers option and existence values to be nonuse values. Interior's regulations state: "Estimation of option and existence values shall be used only if the authorized official determines that no

107. 880 F.2d at 464.
108. Id. at 476 n.77.
109. Id. at 464.
use values can be determined."\textsuperscript{10} In its final rule action, Interior states: "[m]any other comments stated that option and existence values, i.e., non-use values, should be given weight and consideration equal to that given to use values."\textsuperscript{11} Thus, Interior considers option and existence values as values other than use values, i.e. nonuse values. The court on the other hand refers to option and existence values as "'passive' use"\textsuperscript{12} values. Commentators, including those cited as authorities by the court, agree with Interior's classification of option and existence values.

The court relies on two commentators extensively in its opinion.\textsuperscript{13} Both unambiguously define option and existence values as nonuse value. One states that "[t]he worth of natural resources beyond their use value is labeled existence value."\textsuperscript{14} When he describes assessment of damages, the first commentator reasons that "[n]atural resource damages can capture these nonuse existence values."\textsuperscript{15} Yet the court cites this very authority when stating: "Option and existence values may represent 'passive' use. . ."\textsuperscript{16}

While discussing the Interior regulations, the second commentator states: "if a lost resource has a value to citizens who do not use it but value its existence, these 'non-use' values cannot be included in the damage assessment. Technically, the Department [Interior] permits lost non-use values to be counted, but only when lost use values cannot be computed. Economists, however, have never developed successful techniques for measuring non-use values alone. . ."\textsuperscript{17} Obviously, this com-

\textsuperscript{10} 43 C.F.R. § 11.83(b)(2) (1990) (emphasis added).
\textsuperscript{12} 880 F.2d at 464.
\textsuperscript{13} The court cites both Cross, supra note 7, and Anderson, Natural Resource Damages, Superfund, and the Courts, 16 B.C. Envtl. Aff. L. Rev. 405 (1989), for a number of propositions. Both are cited for the proposition that "[s]cholars agree that recovery of full restoration costs in every case, no matter how large the sum is, is not required by CERCLA." 880 F.2d at 443 n.7. The two commentators are also cited for sharing skepticism with Congress over the ability of humans to measure the true value of natural resources. Id. at 457 n.40. In addition, Anderson is cited as a general source for the proposition that "market prices are not acceptable as primary measures of the use values of natural resources." Id. at 463. Finally, Cross is incorrectly cited for the proposition that "[o]ption and existence values may represent 'passive' use. . ." Id. at 464.
\textsuperscript{14} Cross, supra note 7, at 285-86 (emphasis added). Cross describes three types of existence values: 1) option value- the desire to preserve because of plans for future use, 2) vicarious value-the desire to preserve without plans for future use, and 3) intertemporal value- preservation for the use of descendants. (Thus Cross' latter two values are equivalent to the court's existence value.)
\textsuperscript{15} Id. at 286 (emphasis added).
\textsuperscript{16} 880 F.2d at 464.
\textsuperscript{17} Anderson, supra note 113, at 442-43 (footnotes omitted) (emphasis added).
Other commentators agree that existence and option values represent nonuse values. For example, one commentator in describing the implications of the Ohio v. Interior ruling on the hierarchy of assessments methods states: "the implication of this ruling for damage assessments seems clear. Nonuse values would now appear to have equal standing with conventional use values and must be included in damage awards." These commentators consider existence and option values to be nonuse values rather than "passive" use values as suggested by the court. To accept the proposition that option and existence values are nonuse values gives rise to the question of whether CERCLA compels Interior to require the calculation of nonuse values for all damage assessments.

The court's claim that Interior misconstrued its own interpretation of CERCLA was misguided. Interior's interpretation of CERCLA is that it requires the inclusion of use values only, except where no use values can be determined. Interior authorizes nonuse value determinations only in those situations where no use values can be determined. Thus, it follows by Interior's interpretation of CERCLA that nonuse values, such as option and existence values, are not necessary components of the majority of damage assessments. Interior did not misconstrue its own interpretation of CERCLA. Rather, the court decided that CERCLA requires consideration of factors beyond use values for all damage assessments based on the "not limited to" language of the statute. In reviewing Interior's interpretation of CERCLA, the court used the Chevron test as its standard.

To mandate that Interior expand its regulations to include nonuse option and existence values in all damage assessments, the court had to find that Interior's regulations governing determination of nonuse values failed the Chevron test. The court determined that Congress had not spoken to the precise question at issue. Thus, Interior's regulations must be a reasonable interpretation of CERCLA under the second prong of the Chevron test. The court reasoned that CERCLA requires Interior to take into account factors in addition to use values, stating: "[CERCLA] requires Interior to 'take into consideration factors including but not limited to . . . use values.'" The section of the CERCLA sentence cited by the court reads: "take into consideration factors including, but not limited to, replacement value, use value, and ability of the ecosystem or resource to recover." The court is correct in its reasoning that the language requires more than consideration of use value. However, it can be denied that CER-

118. Kopp, supra note 26, at 10129 (emphasis added).
119. 880 F.2d at 464.
120. Id.
CLA's language requires consideration of nonuse values. CERCLA lists three natural resource attributes that Interior must consider at a minimum in its damage assessments. CERCLA does not list nonuse values as one factor. Thus, had the court correctly classified option and existence values as nonuse values, it should have realized that CERCLA does not require that Interior's regulations include calculations of those values. By not listing factors other than the three that Interior must take into account, Congress has left their enumeration to agency discretion.

Under Chevron the question becomes, is Interior's interpretation of CERCLA reasonable and consistent with the statutory purpose? If not, must Interior consider all values—consumptive use value, passive use value, and nonuse values—when calculating damage assessments? If all values must be considered, then Interior must expand the use of CV methodology to all damage assessments because it is the only means to calculate nonuse values. The answer is crucial to determining the cost of natural resource damages.

The language of CERCLA does not speak directly to the issue of nonuse values. CERCLA requires that the regulations "shall take into consideration factors including, but not limited to, replacement value, use value, and ability of the ecosystem or resource to recover." Interior did not limit consideration to the three factors listed in CERCLA. The regulations allowed the trustee to compute nonuse option and existence values when "the authorized official determines that no use values can be determined." Also, where the trustee is "the majority operator or controller of a for- or not-for-profit enterprise, and the injury to the natural resource results in a loss to such an enterprise," the trustee may include as a measure of damages "that portion of the lost net income due the agency . . . resulting directly or indirectly from the injury to the natural resource. . . ." By allowing the consideration of nonuse values and lost profits, the regulations allowed the trustee to take into consideration factors not limited to replacement value, use value, or the recoverability of the natural resource.

Congress' silence on nonuse values is a grant of agency discretion to enumerate the factors to consider in damage assessments. Thus, Interior's interpretation that nonuse values only be considered when "no use values can be determined" was a reasonable interpretation of CERCLA. The court's mandate is improper because it forces Interior to expand the consideration of nonuse values beyond the requirements of CERCLA. The court's mandate also expands the use of CV meth-

122. Id.
124. Id. § 11.83(b)(3).
125. Id. § 11.83(d)(5)(ii).
odology beyond the scope of Interior's regulations that the court approved.

C. Scope of CV

The court's ruling on Interior's regulations governing use of CV methodology by no means calls for an expanded use of CV for measuring nonuse values such as option and existence values. In fact, the court explicitly states that finding the hierarchy of use values inconsistent with CERCLA "does not affect the manner in which the CV methodology operates, or whether it produces sufficiently accurate results to be included in the regulations."126 This statement buttresses the argument that the court accepts Interior's limited use of CV methodology and that the court did not intend to expand the use of CV when validating that method to assess natural resource damages.

But when the court "instruct[ed] [Interior] that its decision to limit the role of non-consumptive values, such as option and existence values, rest[ed] on an erroneous construction of the statute[,]"127 the court may have unintentionally expanded the use of CV. The court found error in Interior's interpretation of CERCLA. The court also found error in Interior's understanding of Interior's own faulty interpretation of CERCLA. The latter finding actually rests on the court's incorrect conclusion that Interior considers option and existence values to be passive use values.

Option and existence values are not "passive" use values; they are nonuse value attributes of natural resources. To determine the value attributable to a resource's option and existence values, one must use CV methodology. By first incorrectly labeling option and existence values as "passive" use values and then requiring that all use values be included in every damage assessment, the court mandates that option and existence values be determined for every damage assessment. Because option and existence values can only be determined by CV methodology, the erroneous labeling forces expanded use of CV. The court's ruling is problematical because of the expanded use of CV methodology required to fulfill its mandate.

CERCLA's purpose is not to exact the greatest monetary awards possible; instead "CERCLA unambiguously mandates a distinct preference for using restoration costs as the measure of damages."128 The court states: "Congress established a distinct preference for restoration cost as the measure of recovery in natural resource damage

126. 880 F.2d 432, 476 n.76 (D.C. Cir. 1989).
127. Id. at 464.
128. Id. at 444.
cases.\textsuperscript{129} Interior has determined that proper assessments using consumptive and non-consumptive use values will accomplish this statutory goal.

CV methodology is controversial because it is an untested, hypothetical method for estimating value that may result in inflated damage estimates. While Interior incorporated use of the CV method in its regulations, it did so on a very limited basis. Expanded use of CV is not required by CERCLA. Expanded use of CV will expose those responsible for environmental harm to inflated damages. Exposure to inflated damages is an inefficient use of the resources available to society.

Interior is careful to separate the use of CV methodology for calculating use values and nonuse option and existence values. Unfortunately, the court’s opinion sends mixed signals. In upholding Interior’s regulations regarding the use of CV methodology, the court sanctioned use of CV for calculating nonuse values to take into account those extraordinary circumstances when “the authorized official determines that no use values can be determined.”\textsuperscript{130} But by requiring the inclusion of option and existence value calculations, the court is greatly expanding the use of CV methodology.

If the court intends that Interior order the trustee to consider both use and nonuse values in assessing damages, the result will be a significant increase in cost to those who damage natural resources. Commentators who have written on this decision to date agree that damage awards should increase as a result of using CV methodology.\textsuperscript{131} None of these commentators have analyzed the extent to which the court intended the use of CV.

If both use and nonuse values must be determined, a damage assessment would consist of assessing use values by any available means such as market value, appraisal value, or CV, and also assessing nonuse values by the only means available, CV methodology. For example, if a hazardous release were to damage a national park that received 100 visitors per year, the damage assessment would include the use value of those 100 visitors. If 50 of the visitors fished, the value would account for the consumptive use of those visitors (the number of fish caught) along with the value of license fees, bait costs, and travel costs. If the other 50 visitors were bird watchers, the assessment would account for their non-consumptive use value (the price that these people are willing to pay to bird watch; perhaps the cost of binoculars, field guides, [Vol. 51

\textsuperscript{129} Id. at 459.


\textsuperscript{131} E.g., Kopp, supra note 26, at 10130 states that “the acceptance of contingent valuation techniques has the effect of expanding damage awards . . . .” Olson, supra note 23, at 10551 claims that the decision will “substantially increase[] corporations’ liability for natural resource damages under CERCLA. . . .”
and travel costs). To these values would be added the nonuse option and existence values calculated with CV techniques. The nonuse values would be determined by polling a random sample of no less than 200 households drawn from the regional population of households. Thus, if the court intends use and nonuse values to be assessed, a much larger value would result because of the increased base of people whom assign values to the resource.

If the court intends that Interior only address all use values by the best means available according to the trustee’s determination, an increase in damage assessment is likely but it will probably be smaller than if the assessment considers nonuse values as well. Under this approach, the trustee might determine that the market value of fish (such as the price a restaurant is willing to pay) is less than the sport fishing value of the fish (the price an angler is willing to pay). To determine the sport fishing value, the trustee could design a CV survey to determine the value of fishing to those 50 people who fish. This should increase the damage assessment as compared to the amounts calculated using market value techniques. However, the degree of increase would not approach the amount calculated by combining use and nonuse values.

The court is less precise than Interior in its use of valuation terminology. The problem with the court’s confusion of nonuse option and existence values with passive use values is that any of the prescribed methodologies can calculate passive (or non-consumptive) use values but only CV methodology can calculate nonuse values. Requiring the calculation of all use values, including passive use values, can be accomplished without using CV methodology. However, the court requires that all use values be calculated, including “passive” use option and existence values. Because option and existence values can only be calculated using CV, the decision expands the use of CV methodology. The expansion is either an intentional mandate to determine nonuse values for all natural resource damage assessments, or an unintentional mandate caused by a failure to realize that option and existence values are nonuse values that can only be determined by using CV methodology.

The court confirmed Interior’s regulations governing the use of CV methodology. The regulations restrict the use of option and existence values in damage assessments to those extraordinary circumstances where “the authorized official determines that no use values can be determined.” The court is careful to restrict its ruling on the hierarchy of assessment methods from affecting the manner in which CV methodology operates, stating: “We have found [Interior’s] current hierarchy of use values inconsistent with CERCLA. This does not affect the manner in

which the CV methodology operates, or whether it produces sufficiently accurate results to be included in the regulations." The language of the court's opinion that expands the use of CV is found in the section dealing with the hierarchy of assessments methods rather than in the section dealing with the use of CV methodology. If the court desired expanded use of CV, reason dictates that the court would not have so carefully restricted its ruling on the hierarchy of assessment methods from affecting the use of CV methodology. While the court clearly intended to expand damage assessments to include both passive and consumptive use values, the language of the court's opinion suggests that use of CV methodology for estimating nonuse values should be limited. The care engendered by the court in using language to ensure that its ruling on the hierarchy of assessments does not affect the use of CV methodology is not suggestive of an intent to expand the use of CV for estimating nonuse values. Neither does the court's approval of CV methodology as promulgated by Interior's regulations suggest an intent to expand the use of CV beyond that envisioned by Interior. Estimating nonuse values remains an inexact, hypothetical exercise that should not be expanded to all damage assessments.

VII. CONCLUSION

The Ohio v. Interior decision expands the scope of damages by mistakenly including option and existence values as passive use values and ordering Interior to account for all use values in its damage assessment regulations. The court does not clearly stipulate that the calculation of nonuse values is necessary but it does clearly stipulate that option and existence values have to be computed. In this light, it appears that the court intended to broaden damage assessments by allowing natural resource trustees to calculate both consumptive and non-consumptive use values by the best method available any time pollutants damage the environment.

However, because contingent valuation is an untested, hypothetical valuation technique, the court conceivably intends that CV methodology be used only for those situations proposed by Interior. Under this interpretation, damage assessments would include only use values as calculated by any named methodology deemed appropriate by the natural resources' trustee. Thus, CV techniques could be used to calculate use values if deemed appropriate by the trustee. Exposure to arbitrary sums is somewhat mitigated when CV assessments are only used to calculate use values because the respondents actually use the resource and are therefore more familiar with the value of the resource than are nonusers.

134. 880 F.2d 432, 476 n.76 (D.C. Cir. 1989).
Under the current Interior regulations, nonuse values are only calculated when the trustee determines that no use values can be determined. Because of the uncertainties involved in calculating nonuse values using CV techniques, the Interior regulations that reserve use of CV methodology for those instances where no use value can be determined for the damaged resource are reasonable. Expanded use of CV may expose responsible parties to damages in excess of those required to restore the injured resource. Requiring the responsible party to pay excess damages is a result that is in conflict with both the economic and the ecological interpretations of congressional intent expressed in CERCLA. "The economic position is that a societal cost-benefit analysis indicates that imposing liability on responsible parties at a cost greater than the actual market value of the resources is overly burdensome."

At odds with the economic position is the ecological view maintaining "that restoration costs are favored by the strong policy of CERCLA and the Clean Water Act for preservation of natural resources." Exposure to excess damages results because nonuse value determinations require polling of people who may be unfamiliar with the damaged natural resource, resulting in: (1) questionable price determinations because of unfamiliarity with resource values and (2) exposure to great bias in damage assessments after publicized incidents. In typical litigation involving a publicized case, bias is controlled through screening of the jury. Use of CV methods requires large scale, random opinion polling, thus denying the protection of screening respondents.

VIII. RECOMMENDATIONS

Inclusion of nonuse values, as calculated by the CV method, when use value calculations are capable of determining the value of the natural resource, would unnecessarily expose those responsible to possibly arbitrary liability. Nonuse values, as calculated by the CV method, should be restricted in their use. The Interior regulations envision such a limited use.

On remand, Interior should retain the approved regulations limiting employment of CV methodology to calculate nonuse values to those instances where "no use values can be determined." Interior should expand damage assessments to include "passive" or non-consumptive use values as calculated by CV or other methods. Such changes allow a more comprehensive value assessment of natural resource damages as intended by the court.

135. See Comment, supra note 17, at 523.
136. Id. at 523-24.
The proposed changes allow comprehensive assessment without exposing those responsible for hazardous materials spills to hypothetical damage assessments with unlimited liability. Such a change is also consistent with the court's determination that all use values, both non-consumptive and consumptive, be included in a damage assessment. Unfortunately, such actions are not consistent with the court's improper interpretation of option and existence values as "passive" use values that must be included in damage assessments. Therefore, these changes would be contrary to the court's mandate.

To promulgate the recommended regulations, Interior must seek Congressional clarification on the calculation of option and existence values. Interior should request amendments to CERCLA that 1) require the calculation of consumptive and non-consumptive use values and 2) allow the trustee to consider nonuse option and existence values when no use values can be determined. With the incorporation of these ideas, CERCLA would read: "Such regulations shall . . . take into consideration factors including but not limited to, replacement value, [consumptive and non-consumptive] use value[s], and ability of the ecosystem or resource to recover. [When the trustee finds that no use values can be determined, the regulations shall permit consideration of option and existence values."

Under a scenario limiting the calculation of option and existence values, fair damage assessments are possible. Such a scenario precludes compensation for nonuse values regardless of injury to option and existence attributes. However, by including non-consumptive use values, damage assessments are comprehensive. Trustees can seek damages sufficient to compensate for all lost use values. Interior has determined that such damages should sufficiently compensate for the lost use value of damaged resources and thus fulfill the intent of CERCLA while remaining fair.

Denis Swords