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THE ROLE OF DEFERENCE IN JUDICIAL REVIEW OF PUBLIC USE DETERMINATIONS

Lynda J. Oswald

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Abstract: In *Kelo v. City of New London*, the United States Supreme Court emphasized its longstanding practice of deferring to legislative determinations of public use. However, the Court also explicitly acknowledged that the U.S. Constitution sets a floor, not a ceiling, on individual rights and that the state courts are entitled to take a less deferential approach under their own state constitutions or statutes. This manuscript examines: (1) the ways in which the role of deference in judicial review of public use determinations can vary between federal and state courts and among state jurisdictions; and (2) the difficult issues raised by the interplay between legislatures and courts in public use determinations. Because the Supreme Court’s deferential approach to public use disputes provides little succor to property owners challenging takings, state court challenges to takings are likely to become increasingly important. Property owners, therefore, need to understand the issues raised by deference in judicial review of public use challenges in both federal and state courts.

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*Elizabeth A. Kayatta*

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**ACCOUNTING FOR EMISSIONS TRADING: HOW ALLOWANCES APPEAR ON FINANCIAL STATEMENTS COULD INFLUENCE THE EFFECTIVENESS OF PROGRAMS TO CURB POLLUTION**

*Laura Souchik*

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**Abstract:** Cap-and-trade programs to curb carbon emissions frequently rely on the use of tradable emissions credits known as “allowances.” To date, companies' presentations of their usage of these allowances on their financial statements has not been uniform. Cap-and-trade programs will be most effective when presentation of allowances on financial statements is standardized, since all companies will be forced to be transparent about their methods of compliance with carbon emissions trading systems. Therefore, the Financial Accounting Standards Board and the International Accounting Standards Board should implement standards for the presentation of allowances on companies’ financial statements.
THE ROLE OF DEFERENCE IN JUDICIAL REVIEW OF PUBLIC USE DETERMINATIONS

LYNDA J. OSWALD*

Abstract: In *Kelo v. City of New London*, the United States Supreme Court emphasized its longstanding practice of deferring to legislative determinations of public use. However, the Court also explicitly acknowledged that the U.S. Constitution sets a floor, not a ceiling, on individual rights and that the state courts are entitled to take a less deferential approach under their own state constitutions or statutes. This manuscript examines: (1) the ways in which the role of deference in judicial review of public use determinations can vary between federal and state courts and among state jurisdictions; and (2) the difficult issues raised by the interplay between legislatures and courts in public use determinations. Because the Supreme Court’s deferential approach to public use disputes provides little succor to property owners challenging takings, state court challenges to takings are likely to become increasingly important. Property owners, therefore, need to understand the issues raised by deference in judicial review of public use challenges in both federal and state courts.

Introduction

Recent developments in takings jurisprudence highlight important but unsettled questions in eminent domain law. To what degree is determination of public use a judicial, rather than legislative, question? How much deference do courts owe legislatures in takings determinations? Are different types of legislative determinations afforded different degrees of deference? And how do the answers to such questions change if the taking is challenged in a state court, under a state constitutional or statutory provision, rather than in federal court under the U.S. Constitution? Although these questions are not new to eminent
domain law and theory, they were brought to the fore by the Supreme Court’s decision in *Kelo v. City of New London.*

The Court’s fractured 5–4 decision in *Kelo* has opened a Pandora’s Box of difficult doctrinal and theoretical questions. The uncertainties posed by *Kelo* are evident in the extensive legal commentary on the Court’s adoption of an expansive definition of “public use” as being coterminous with “public purpose” and the thorny issue of determining pretext in condemnations. Less attention has been focused upon

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1 See 545 U.S. 469, 480 (2005). The facts of *Kelo v. City of New London* are straightforward. Connecticut identified the city of New London as a “distressed municipality” in 1990, with an unemployment rate nearly twice that of the rest of the state. *Id.* at 473. In an effort to revitalize, the city authorized the New London Development Corporation (NLDC), a private nonprofit entity, to assist the city in its economic redevelopment efforts. *Id.* Ultimately, the NLDC came up with an ambitious plan for a mixed-use development in a waterfront location. *Id.* at 473–75. The NLDC was able to purchase most of the property that it identified as necessary to implement its plan, but nine property owners, including Susette Kelo, refused to sell. *Id.* at 475. The NLDC started condemnation proceedings. *Id.* The property owners responded by filing suit to enjoin the takings in state court. *Id.* The trial court issued a permanent injunction restraining the taking of certain parcels, but allowing the taking of others. *Id.* at 475–76. Both sides appealed. *Id.* at 476. The Connecticut Supreme Court determined that all of the takings were permissible. *Id.* Ms. Kelo and the other property owners appealed to the U.S. Supreme Court. See *id.* at 477. The Supreme Court upheld the Connecticut Supreme Court’s decision. *Id.* at 470, 490.

2 See *id.* at 470; see, e.g., Robert H. Thomas, *Recent Developments in Public Use and Pretext in Eminent Domain*, 41 Urb. Law. 563, 565 (2009) (noting that the Supreme Court’s “amorphous standards” left “issues for another day”). Two aspects of *Kelo* in particular were hailed as path-breaking holdings. See Thomas, *supra,* at 563–64. First, the *Kelo* Court stated that under the U.S. Constitution economic development can be a valid public use for purposes of eminent domain law, even if the property taken will ultimately be owned by another private party and not the public. 545 U.S. at 484–86. Second, the Court established that takings in which the stated public use or purpose was a “pretext” intended to bestow “a private benefit” are unconstitutional, but provided no criteria for identifying pretext in this setting. See *id.* at 478.

the predicate question, however, of how to balance the traditional deference courts give to legislative determinations of public use with the constitutional guarantees given to private property owners. Under what circumstances should the courts moderate their traditionally deferential stance to inquire into the motives of legislatures? How do we balance the traditional deference given by courts to legislative determinations of the need to take property by eminent domain (a deference drawn from traditional separation of powers and institutional competency notions) with the Kelo Court’s holding that pretextual takings are unconstitutional?

The Kelo Court reaffirmed the highly deferential review that federal courts afford legislative determinations, ensuring that most takings will continue to receive, at best, a cursory review if challenged in federal court. The Court also explicitly acknowledged that state courts might take a less deferential approach under their own state constitutions or statutes. Thus, at the same time the Supreme Court slammed the federal courtroom door on property owners challenging takings, it pointed out that the state courtroom doors remain ajar. As a result, state statutory and constitutional provisions are likely to take on an increasingly larger role in the protection of private property rights.

Part I provides a brief overview of the evolution of the Supreme Court’s deferential review of legislative determinations of public use, and discusses the precedent that led to the culmination of the Supreme Court’s hands-off approach in Kelo. Part II addresses the manner in which the state courts’ roles in judicial review of public use determinations are expanding even as the federal courts’ role is contracting. Part III first examines the growing schism between the views of federal and some state courts on the proper role of courts in reviewing such determinations. Then, it examines the various ways in which public use analysis can vary among state jurisdictions and the thorny issues raised

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4 See infra notes 153–177 and accompanying text.
5 545 U.S. at 480; see infra notes 59–64 and accompanying text (discussing the Court’s treatment of deference).
6 See 545 U.S. at 483 (avoiding “intrusive scrutiny” and allowing legislatures “broad latitude” in public use determinations).
7 Id. at 489 (“We emphasize that nothing in our opinion precludes any State from placing further restrictions on its exercise of the takings power.”).
8 See id. at 489–90.
9 See id. (discussing the federal judiciary’s willingness to step in only to consider whether takings constitute a constitutional “public use” and noting that state constitutions and statutes may allow for stricter standards of review).
by the interplay between legislatures and courts in takings analyses. For example, should public use be viewed as a judicial or legislative question? How does deference relate to the separation of powers doctrine? Unfortunately, rather than providing the clarity for which commentators and lower courts had hoped, *Kelo* merely opened the door to such inquiries.\(^\text{10}\) One thing is clear post-*Kelo*—although the primary battleground for protection of private property rights in recent years has been the federal courts, the pendulum is swinging back toward a greater role for state courts in takings cases.\(^\text{11}\)

I. THE CONTRACTING ROLE OF THE FEDERAL COURTS IN PUBLIC USE DISPUTES

In theory, there is a (somewhat) tidy divide between the roles of legislatures and courts in eminent domain cases.\(^\text{12}\) Questions of the necessity for the taking (i.e., whether a particular public improvement should be undertaken, where it should be sited, and whether the eminent domain power should be used to acquire the property on which the improvement will be located) are issues generally left to the legislature.\(^\text{13}\) Questions of whether a particular use is a public use are generally, although not always,\(^\text{14}\) for the judiciary.\(^\text{15}\)

In practice, courts—particularly federal courts—have increasingly abdicated control over public use determinations to the legislature.\(^\text{16}\) This Part discusses the jurisprudential developments that led to the federal courts’ extremely deferential approach to public use challenges in eminent domain cases and concomitant shrinking of judicial review in federal takings cases.

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\(^\text{10}\) See infra notes 178–254 and accompanying text.

\(^\text{11}\) See infra notes 153–177 and accompanying text.

\(^\text{12}\) See *Kelo*, 545 U.S. at 488–89 (acknowledging the limit of the Court’s authority when deciding eminent domain cases); *Shoemaker v. United States*, 147 U.S. 282, 298 (1892) (limiting the role of the courts in eminent domain cases to determining only whether the use is in fact a public use).

\(^\text{13}\) See Robert C. Bird & Lynda J. Oswald, *Necessity As a Check on State Eminent Domain Power*, 12 U. Pa. J. Const. L. 99, 107–09 (2009); Laura Mansnerus, *Note, Public Use, Private Use, and Judicial Review in Eminent Domain*, 58 N.Y.U. L. Rev. 409, 424 (1983) (“In the hornbook scheme, the legislature prescribes conditions under which eminent domain may be exercised and decides the necessity of acquiring any particular parcel, while the courts decide whether the public use clause has been satisfied.”).

\(^\text{14}\) See Bird & Oswald, supra note 13, at 116–18.

\(^\text{15}\) See *Shoemaker*, 147 U.S. at 298.

\(^\text{16}\) See Bird & Oswald, supra note 13, at 114–15, 114 n.65.
The fundamental underpinnings of the eminent domain power are the same at both the state and federal levels—state and federal legal systems each recognize the eminent domain power as an inherent and essential attribute of sovereignty. Actual governmental exercise of that power, however, can be very different in those two arenas.

At the federal level, the Fifth Amendment to the U.S. Constitution limits the federal government’s ability to exercise its sovereign power of eminent domain by prohibiting the taking of private property except for a public use and only upon payment of just compensation. Both requirements must be met. If the taking fails to satisfy the public use requirement, or is so arbitrary as to be a violation of due process, the exercise of eminent domain is unconstitutional and “[n]o amount of compensation can authorize” the taking.

Initially, the Constitution’s constraint upon the use of eminent domain reached only the federal government, not the state governments or their political subdivisions. In 1896, however, the Supreme Court extended the reach of the Constitution’s protections, limiting takings by states under the Due Process Clause of the Fourteenth Amendment. Thus, property owners can challenge state, as well as federal, takings under the U.S. Constitution.

Most state constitutions contain takings clauses with public use and just compensation requirements similar to those in the Fifth Amendment to the U.S. Constitution. States, however, have the ability to im-

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17 See Georgia v. City of Chattanooga, 264 U.S. 472, 480 (1924) (“The taking of private property for public use upon just compensation is so often necessary for the proper performance of governmental functions that the power is deemed to be essential to the life of the State.”); Mayor of New Orleans v. United States, 35 U.S. 662, 723 (1836) (“The power of appropriating private property to public purposes is an incident of sovereignty.”). The Supreme Court has also stated that the Fifth Amendment to the U.S. Constitution is a “tacit recognition of a preexisting power to take private property for public use, rather than a grant of new power.” United States v. Carmack, 329 U.S. 230, 241–42 (1946); see also Oswald, supra note 3, at 52–53.
18 See Kelo, 545 U.S. at 489 (describing differences between federal and state requirements for public use).
19 See U.S. CONST. amend. V (“[N]o private property be taken for public use, without just compensation.”).
21 Id. at 543.
22 See id. at 536.
24 See Kelo, 545 U.S. at 472 & n.1.
pose more stringent limitations upon their own power to take through either more restrictive state constitutional provisions or state statutes.\textsuperscript{26} Many have chosen to do so.\textsuperscript{27} Thus, takings initiated by state actors can be challenged in state courts under state constitutional or statutory provisions, or in the federal courts under the U.S. Constitution.\textsuperscript{28}

This plethora of causes of action does not necessarily translate to heightened protection for private property rights.\textsuperscript{29} At the federal level, courts apply a rational basis standard of review to governmental decisions to take property—a standard that upholds legislative taking decisions in most situations.\textsuperscript{30} As summarized by the Supreme Court in 1984: “[W]here the exercise of the eminent domain power is rationally related to a conceivable public purpose, the Court has never held a compensated taking to be proscribed by the Public Use Clause.”\textsuperscript{31} The \textit{Kelo} majority reaffirmed this deferential standard of review,\textsuperscript{32} making it clear that the federal courts defer both to legislative and state court determinations of public use.\textsuperscript{33}

Deference arises in two distinct contexts in eminent domain cases: (1) determinations of public use; and (2) determinations of necessity.\textsuperscript{34}

\begin{footnotesize}
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\item \textsuperscript{26} \textit{Id.} § 7.10[1].
\item \textsuperscript{27} \textit{Id.}
\item \textsuperscript{28} \textit{See Kelo}, 545 U.S. at 489–90 (noting that federal review of state action is limited to ensuring compliance with the Fifth Amendment, while state power can be restricted by a state’s statutes or constitution).
\item \textsuperscript{29} \textit{See} Alberto B. Lopez, \textit{Revisiting Kelo and Eminent Domain’s “Summer of Scrutiny,”} 59 Ala. L. Rev. 561, 576 (2008) (showing that federal court review of public use has been narrowed).
\item \textsuperscript{30} \textit{See Kelo}, 545 U.S. at 490 (Kennedy, J., concurring). For a discussion of the federal standard see \textit{infra} notes 54–56, 85–100 and accompanying text.
\item \textsuperscript{32} \textit{See} 545 U.S. at 488 (“When the legislature’s purpose is legitimate and its means are not irrational, our cases make clear that empirical debates over the wisdom of takings . . . are not to be carried out in the federal courts.”) (quoting \textit{Midkiff}, 467 U.S. at 242–43).
\item \textsuperscript{33} \textit{See id.}, at 482 (highlighting “the ‘great respect’ that [federal courts] owe to state legislatures and state courts in discerning local public needs”) (citing Hairston v. Danville & W. Ry. Co., 208 U.S. 598, 606–07 (1908)). In \textit{Rindge Co. v. County of Los Angeles}, the Supreme Court advanced a deferential position to state court judgments in determining whether a use was public or private, since the question was judicial in nature. See 262 U.S. 700, 705–06 (1923). The Court noted that “the determination of this question is influenced by local conditions; and this Court, while enforcing the Fourteenth Amendment to the U.S. Constitution, should keep in view the diversity of such conditions.” \textit{Id}. Some pre-\textit{Kelo} decisions did note that the federal courts were not completely abdicating their role of judicial review, but such indications were rare. \textit{See}, e.g., 99 Cents Only Stores v. Lancaster Redev. Agency, 237 F. Supp. 2d 1123, 1129 (C.D. Cal. 2001) (stating that “even under such a deferential standard, however, public use is not established as a matter of law whenever the legislative body acts”), \textit{dismissed}, 60 F. App’x 123 (9th Cir. 2003).
\item \textsuperscript{34} \textit{See Bird} & \textit{Oswald}, \textit{supra} note 13, at 115; \textit{Oswald, supra} note 3, at 56.
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The Supreme Court addressed judicial deference in public use cases in *Shoemaker v. United States*. There, the Court found that the judiciary may review a legislative decision to take private property in order to determine whether the use is public. If the court identifies a public use, its inquiry ceases, and the legislature may determine “the extent to which such property shall be taken for such use” so long as there is just compensation. Theoretically, necessity is a separate inquiry from public use, and addresses factors that are largely factual in nature and of a type more commonly left to legislative decision making. The distinction between public use and necessity is not razor-sharp, however, and the terms have a tendency to merge, making analyses unclear and the scope of the judicial role and the level of deference due uncertain. All of this adds to the general confusion that permeates this area of eminent domain law.

Under the necessity doctrine, the condemning authority must justify an intended taking as necessary to further a proposed public use. For a host of pragmatic and theoretical reasons, including judicial respect for the independent roles of legislatures and courts, and separation of powers notions, the courts have long established that issues of necessity lie within the purview of the legislature. Courts typically intervene in necessity determinations only where there are clear abuses...

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35 See 147 U.S. at 298.
36 See id.
37 See id.; United States v. Gettysburg Elec. Ry. Co., 160 U.S. 668, 685 (1896) (establishing that public use may be a judicial question but the quantity of land to be taken is a legislative question).
38 See 1 John Lewis, Treatise on the Law of Eminent Domain in the United States § 255, at 502–03 (3d ed. 1909) [hereinafter 1 Lewis] (“Nearly all the cases . . . hold that the question of necessity is distinct from the question of public use, and that the former question is exclusively for the legislature.”).
39 See Bird & Oswald, supra note 13, at 108.
40 See id. at 116–18.
41 See id. at 113–18 (describing the overlap between necessity and public use, and the general confusion this causes).
42 Id. at 99. Necessity implicates three distinct questions, each of which is narrowly drawn to the specific facts of the proposed taking at issue: (1) whether the legislature should pursue a particular public improvement; (2) where that improvement should be located; and (3) whether the eminent domain power (as opposed to the police power, a voluntary purchase, or other acquisition mechanism) should be used to obtain the property interests needed for the improvement. See id. at 108.
43 See id. at 112–13.
44 See id. at 109–10.
of discretion by the legislature or where a statute specifically assigns the court a role in these determinations.\textsuperscript{45}

State courts also traditionally have drawn a distinction between whether a use is public, which they deem a judicial question, and whether the power of eminent domain should be exercised, or its necessity, which they deem a legislative question.\textsuperscript{46} As the New York Court of Appeals explained in an 1894 case: “The legislature must be presumed to be the best judge of the necessity of public works and improvements; of how they shall be instituted and of how they should be carried on so as to best subserve public ends.”\textsuperscript{47} But, as the court went on to caution, “whether the use for which the property is to be taken is a public use, which justifies its appropriation, is a judicial question upon which the courts are free to decide.”\textsuperscript{48}

More recently, the Supreme Court of Rhode Island explicitly drew the traditional distinction between necessity and public use, stating that the “necessity and expediency” of a specific taking is a legislative question outside the purview of the court.\textsuperscript{49} Legislative declarations of public use, by contrast, although “instructive and entitled to deference,” are nonetheless subject to judicial review.\textsuperscript{50}

Therefore, in theory, both state and federal courts have an important role to play in reviewing public use determinations.\textsuperscript{51} The Supreme Court, however, has constricted the federal courts’ role in judicial review


\textsuperscript{46} See Christopher G. Tiedeman, A Treatise on the Limitations of the Police Power in the United States Considered from Both a Civil and a Criminal Standpoint 378 (The Lawbook Exchange Ltd. 2001) (1886).

\textsuperscript{47} In re City of Brooklyn, 38 N.E. 983, 989 (N.Y. 1894), aff’d sub nom. Long Island Water-Supply Co. v. City of Brooklyn, 166 U.S. 685 (1897). Early commentators also agreed with this view. See, e.g., 1 Lewis, supra note 38, § 252, at 499 (“[P]rivate property can be taken only for public use, and . . . what is a public use is a question for the courts.”); Tiedeman, supra note 46, at 378 (“It is a legislative question whether the public exigencies require the appropriation, but it is clearly a judicial question, whether a particular confiscation of land has been made for a public purpose.”). Furthermore, a commentator noted that “[t]he question of necessity is distinct from the question of public use, and . . . the former question is exclusively for the legislature.” 1 Lewis, supra note 38, § 256, at 503.

\textsuperscript{48} In re City of Brooklyn, 38 N.E. at 989. The Supreme Court reached a similar conclusion in Rindge Co. v. County of Los Angeles in 1923: “The necessity for appropriating private property for public use is not a judicial question. This power resides in the legislature, and may either be exercised by the legislature or delegated by it to public officers.” 262 U.S. at 709.


\textsuperscript{50} See id. at 101.

of public use determinations to the point that such review is little more than a routine linguistic exercise.\textsuperscript{52} \textit{Kelo} is merely the capstone in a long progression of Supreme Court decisions leading to this endpoint.\textsuperscript{53}

B. \textit{Deference in the Federal Courts: Kelo and Its Predecessors}

The Supreme Court’s decision in \textit{Kelo} highlights the deferential stance that the federal courts take to legislative determinations of public use under the U.S. Constitution. \textit{Kelo} addressed the difficult question of how to define public use.\textsuperscript{54} Was a redevelopment project that resulted in property being taken from one set of private owners only to end up in the hands of another set of private owners a legitimate public use if undertaken to revitalize an economically depressed area?\textsuperscript{55} Public use can be defined narrowly as use by the public (such as a taking for a road, dam, or school), or broadly as a public purpose or public benefit (such as a taking for blight remediation).\textsuperscript{56} The Supreme Court historically leaned toward the broad view of the public use power, although until \textit{Kelo} it had not directly addressed the issue.\textsuperscript{57} The \textit{Kelo}
Court explicitly adopted the broader view of public use in the Fifth Amendment as a public purpose. 58

More importantly for the objectives of this Article, the Kelo Court emphasized the minor role that the federal judiciary plays, and the starring role that the legislature and state courts play, in determining what the public good demands. 59 In so doing, the Kelo Court made clear the high degree of judicial deference to legislative determinations of public use in federal takings cases. 60 The Court highlighted the “great respect” that the federal courts should pay legislatures in identifying local needs, 61 stating: “When the legislature’s purpose is legitimate and its means not irrational, our cases make clear that empirical debates over the wisdom of takings—no less than the debate over the wisdom of other kinds of socioeconomic legislation—are not to be carried out in the federal courts.” 62 Rather, the Court historically has “afford[ed] legislatures broad latitude in determining what public needs justify the use of the takings power.” 63 In short, the federal courts defer to the legislative branch, whether state or federal, in determinations of public use and apply a rational basis standard of review that is notoriously deferential. 64

The deferential approach to public use determinations evolved over time. 65 Early federal decisions, in fact, stressed that determinations of public use were judicial, not legislative, questions. 66 In Fallbrook Irrigation District v. Bradley, decided in 1896, the Supreme Court noted that legislative determinations of public use are not conclusive but rather public use is a question that the justices “must decide . . . in accordance with [their] views of constitutional law.” 67 In 1908, the Supreme Court, in Hairston v. Danville & Western Railway Co., stated further that “[t]he one and only principle in which all courts seem to agree is that the na-

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58 545 U.S. at 479–80. Justice Stevens, writing for the majority, stated that “this ‘Court long ago rejected any literal requirement that condemned property be put into use for the general public.’” Id. at 479 (quoting Midkiff, 467 U.S. at 244). Rather, public purpose or public benefit suffices. Id. at 480.

59 See id. at 489–90.

60 See id. at 488–90.

61 See id. at 482 (quoting Hairston, 208 U.S. at 606–07).

62 Id. at 488 (quoting Midkiff, 467 U.S. at 242–43).

63 See id. at 483.

64 See Kelo, 545 U.S. at 490 (Kennedy, J., concurring).

65 See id. at 479–83 (majority opinion).

66 See, e.g., Hairston, 208 U.S. at 606; Shoemaker, 147 U.S. at 298.

67 164 U.S. at 159.
ture of the uses, whether public or private, is ultimately a judicial question."

The Court soon began to chip away at the notion that public use determinations were judicial questions. In 1923, the Court indicated in *Rindge Co. v. County of Los Angeles* that although public use is a judicial question, “the determination of this question is influenced by local conditions; and this Court, while enforcing the Fourteenth Amendment, should keep in view the diversity of such conditions and regard with great respect the judgments of state courts upon what should be deemed public uses in any State.” Similarly, in *Cincinnati v. Vester*, decided in 1930, the Court emphasized the role of the courts in making public use determinations under Fourteenth Amendment takings questions. Nonetheless, the Court also acknowledged the expertise of legislatures and state courts in identifying local needs and making judgments about public use in light of those needs. Yet, the Court went on to caution, “the question [of what is a public use] remains a judicial one which this Court must decide in performing its duty of enforcing the provisions of the Federal Constitution.”

The abandonment of the substantive due process review of the *Lochner* era, however, caused the Supreme Court to retract its role in reviewing economic legislation, including takings questions. In its famous footnote four in *United States v. Carolene Products Co.*, the Supreme Court indicated that fundamental individual rights, such as free speech and religious freedom, would receive a higher degree of due process scrutiny than property rights. Although state actions that potentially infringed upon fundamental rights would receive heightened scrutiny (strict or intermediate), economic legislation was to be presumed valid and to be reviewed under a cursory rational basis test.

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68 208 U.S. at 606.
69 See 262 U.S. at 705–06.
70 See 281 U.S. 439, 446 (1930).
71 Id.
72 Id.
73 Charles E. Cohen, *The Abstruse Science: Kelo, Lochner, and Representation Reinforcement in the Public Use Debate*, 46 Duq. L. Rev. 375, 391–99 (2008). “The *Lochner* era . . . refers to a period spanning from roughly the 1870s through the late 1930s, when the Supreme Court employed a now-discredited interpretation of the Due Process Clause of the Fourteenth Amendment to invalidate a significant number of government economic and public welfare regulations.” Id. at 378–79.
74 See 304 U.S. 144, 152–53, 152 n.4 (1938).
75 See id. at 152, 152 n.4 (“[R]egulatory legislation affecting ordinary commercial transactions is not to be pronounced unconstitutional unless . . . it is of such a character as to pre-
The *Carolene Products* stance quickly translated into reduced protection for property rights in the eminent domain area.\(^{76}\) For example, in 1946, the Supreme Court stated in *United States ex rel. Tennessee Valley Authority v. Welch*: “We think that it is the function of Congress to decide what type of taking is for a public use and that the agency authorized to do the taking may do so to the full extent of its statutory authority.”\(^{77}\) Justice Felix Frankfurter wrote a concurring opinion in *Welch* emphasizing that public use remained a judicial question, and suggesting that the majority undoubtedly recognized this.\(^{78}\) The majority’s deferential language, however, is a prescient precursor to later eminent domain cases decided by the Court.\(^{79}\)

Certainly, by the middle of the twentieth century, the Court began defining its role in evaluating legislative determinations of public use in increasingly narrow terms. For example, the Supreme Court held in *Berman v. Parker* that “[t]he concept of the public welfare is broad and inclusive” enough to allow the use of eminent domain to achieve any legislatively permissible end.\(^{80}\) The *Berman* Court unanimously upheld the taking of a department store in furtherance of an urban redevelopment plan for a blighted neighborhood, despite the property owners’ objections that their property was not blighted.\(^{81}\) Justice William Douglas, writing for the Court, explained the relative roles of the federal courts and the legislature in public use determinations: “Subject to specific constitutional limitations, when the legislature has spoken, the public interest has been declared in terms well-nigh conclusive. In such cases the legislature, not the judiciary, is the main guardian of the public needs to be served by social legislation . . . .”\(^{82}\) The *Berman* Court emphasized the limited role of the federal courts in reviewing takings,

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\(^{76}\) See, e.g., *Carmack*, 329 U.S. at 242–43 (demonstrating deference to legislative authority on a takings decision); *Welch*, 327 U.S. at 552 (showing deference to a legislative decision unless “it is shown to involve an impossibility”).

\(^{77}\) 327 U.S. at 551–52.

\(^{78}\) *Id.* at 557–58 (Frankfurter, J., concurring) (“I assume that . . . the Court again recognizes the doctrine that whether a taking is for a public purpose is not a question beyond judicial competence.”).

\(^{79}\) See *Cohen*, supra note 73, at 380–83 (discussing significant modern public use cases and the Supreme Court’s increasing deference to the legislature); *Mansnerus*, supra note 13, at 428–32 (summarizing the evolution of the property and personal rights dichotomy in U.S. law).


\(^{81}\) See *id.* at 31, 35–36.

\(^{82}\) See *id.* at 32.
finding that the judiciary’s role in evaluating whether the eminent domain power “is being exercised for a public purpose is an extremely narrow one.” The Court refused to interfere with the legislature’s determination that slum clearance was in the public benefit, stating “Congress and its authorized agencies have . . . take[n] into account a wide variety of values. It is not for us to reappraise them.”

The Supreme Court again addressed the public use issue three decades later in Hawaii Housing Authority v. Midkiff. Large landowners who controlled most of the privately-owned land in Hawaii challenged a state plan to condemn their land and sell it in fee to tenants then in possession. The plaintiffs unsuccessfully argued that, because private parties would ultimately own the land, the taking did not serve a public use. Writing for a unanimous Court, Justice Sandra Day O’Connor wrote a sweeping endorsement of the legislature’s power to take: “The ‘public use’ requirement is . . . coterminous with the scope of a sovereign’s police powers” and “[r]egulating oligopoly and the evils associated with it is a classic exercise of a State’s police powers.”

Although the Midkiff Court emphasized the unconstitutionality of “purely private taking[s],” it also specifically adopted the rational basis standard for reviewing public use questions, stating that a taking would be upheld if it was “rationally related to a conceivable public purpose.” The Midkiff Court couched this standard of review in very broad terms, stating that the federal courts must defer to a legislative determination of public use “‘until it is shown to involve an impossibility’” or “‘the use be palpably without reasonable foundation.’” The subsequent role of the federal courts in reviewing such determinations is very narrow: “When the legislature’s purpose is legitimate and its means are not irrational, our cases make clear that empirical debates over the wisdom of takings—no less than debates over the wisdom of other kinds of socioeconomic legislation—are not to be carried out in

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83 Id.
84 Id. at 33.
85 See 467 U.S. at 229–31.
86 See id. at 232–35.
87 See id. at 243–44.
88 Id. at 240.
89 Id. at 242.
90 Id. at 245.
91 467 U.S. at 241.
92 See id. at 240 (quoting Old Dominion Land Co. v. United States, 269 U.S. 55, 66 (1925)).
the federal courts.” The Court further explained that a state legislature meets the public use requirement if it could have rationally believed that the legislation would meet its intended goal, regardless of whether the legislation actually does so.

Moreover, the *Midkiff* Court explicitly grounded its lenient standard of review in concerns regarding deference and the relative roles of courts and legislatures. The Court explained that “[j]udicial deference is required because, in our system of government, legislatures are better able to assess what public purposes should be advanced by an exercise of the taking power.” Furthermore, the Court drew no distinction between state and federal legislatures in terms of the level of deference that federal courts were required to show. Consequently, the Court advocated deference to any legislature, state or federal, which decided that the takings power was warranted to serve a public use.

As a result, for the past several decades, federal courts have provided little relief for property owners challenging takings on public use grounds. The federal courts’ deferential stance spread to many state courts as well, resulting in a severe contraction in the ability of property owners to challenge public use determinations. As one student commentator summarized a quarter-century ago:

> [Courts] treat legislative authorization as raising the presumption that a public use exists. Most courts ask at some point whether the condemning authorities were “arbitrary and capricious,” or, conversely, whether they might rationally have considered the proposed use to be public. Some courts have made clear their refusal to interfere unless a condemnation was undertaken in bad faith. Most do not articulate a single

94 See id. at 242–43.
95 See id. at 242. One concern is that the general parameters of the rational basis test can lead to virtual rubberstamping of legislative decisions. See Gideon Kanner, *The Public Use Clause: Constitutional Mandate or “Hortatory Fluff”?*, 33 *Pepp. L. Rev.* 335, 360–62 (2006) (stating that the presumption of permissibility found in rational basis review “usually motivates trial judges to see no evil, hear no evil, and speak no evil in such cases, even when [the cases] fail the ‘smell test’”).
96 See 467 U.S. at 242–44.
97 Id. at 244.
98 Id.
99 Id.
100 See Cohen, supra note 73, at 377–78.
test but in practice tend toward the soft side of a rational defense standard. They uphold any condemnations not shown to be “wholly arbitrary” or “manifestly irrational,” or they cite the [Supreme Court’s] proposition that the legislature’s judgment is “well-nigh conclusive.”

The commentator also explained that the practical effect of the adoption of a lenient standard of review is a reduction of the courts’ role in the protection of private property rights. The commentator noted that “at some point, however, deference shades into abstention, the court averring that for institutional reasons it should not reconsider the government’s decision at all.” Theoretically, courts still have the power to evaluate whether a particular use is public, yet they have chosen to leave these determinations to the political branches.

While the Supreme Court’s extreme deference to legislative determinations of public use was not eliminated in *Kelo*, it did show signs of erosion. The Supreme Court unanimously agreed that they should generally not attempt to “second-guess” the wisdom of local legislatures. The *Kelo* Court splintered sharply, however, over the degree and type of deference appropriate in such instances—including a retreat from extreme judicial deference in a dissent written by Justice O’Connor, the author of the *Midkiff* opinion.

Writing for the *Kelo* majority, Justice John Paul Stevens stated that public use in the Fifth Amendment meant public purpose, not use by the public, and that promoting economic development was a legitimate public purpose. Justice Stevens seemed to recognize the dan-

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103 Mansnerus, *supra* note 13, at 424.
104 *Id.*
105 *Id.*
106 *See Kelo*, 545 U.S. at 497 (O’Connor, J., dissenting).
107 *See id.* at 488–89 (majority opinion); *id.* at 498–99 (O’Connor, J., dissenting); *id.* at 520 (Thomas, J., dissenting).
108 *See id.* at 482–83 (majority opinion); *id.* at 497 (O’Connor, J., dissenting); *Midkiff*, 467 U.S. at 231.
109 *See 545 U.S.* at 479–80.
110 *See id.* at 483–84. “Public use” is a term that historically has been subject to varying interpretations. *See City of Norwood v. Horney*, 853 N.E.2d 1115, 1129–36 (Ohio 2006) (describing the evolution of the term “public use”); Joseph J. Lazzarotti, *Public Use or Public Abuse*, 68 UMKC L. Rev. 49, 59–63 (1999) (discussing various interpretations and applications of the public use standard); Oswald, *supra* note 3, at 52–57 (summarizing changes in the public use doctrine over time). In the narrow and increasingly rejected view, public use is seen as requiring that the condemned property be taken only for projects where the
gers inherent in adopting the broad view of public use—he tried to narrow the holding by clarifying that pretextual public uses were constitutionally forbidden\textsuperscript{111} and that the municipality could not take private property “for the purpose of conferring a private benefit on a particular private party.”\textsuperscript{112}

The *Kelo* Court directly addressed the issue of deference in judicial review of public use determinations.\textsuperscript{113} The *Kelo* majority emphasized the Court’s “longstanding policy of deference to legislative judgments” of public use.\textsuperscript{114} The majority grounded its position in notions of federalism, stressing the “great respect” that the federal courts “owe to state legislatures and state courts in discerning local public needs.”\textsuperscript{115} The Court summarized as follows: “For more than a century, our public use jurisprudence has wisely eschewed rigid formulas and intrusive scrutiny in favor of affording legislatures broad latitude in determining what public needs justify the use of the takings power.”\textsuperscript{116} The majority therefore adhered to the rational relationship test that it traditionally applies to takings—asking if the taking is rationally related to a conceivable public purpose.\textsuperscript{117}

Justice Anthony Kennedy’s concurrence did not argue that the rational basis standard of review should be completely jettisoned, but emphasized that the public use clause required “meaningful rational-basis review.”\textsuperscript{118} He called for a heightened standard of review—a higher standard than the rational basis test set forth in *Berman* and *Midkiff*—for public may use the property acquired, such as roads, dams, parks, or schools. See Nichols, *supra* note 25, § 7.02[1]–[2], at 7-26 to -32. Under the broader view, public use is treated as coterminous with public purpose or public advantage, thus allowing the condemnation of private property to further the public good or general welfare, or to secure a public benefit. See id. § 7.02[3], at 7-33 to -37.

\textsuperscript{111} See 545 U.S. at 478. Justice Kennedy, who joined the 5–4 majority opinion, wrote a separate concurrence in which he agreed “that transfers intended to confer benefits on particular, favored private entities, and with only incidental or pretextual public benefits, are forbidden by the Public Use Clause.” Id. at 490 (Kennedy, J., concurring).

\textsuperscript{112} See id. at 477. The Court stated that “a one-to-one transfer of property, executed outside the confines of an integrated development plan . . . would certainly raise a suspicion that a private purpose was afoot.” Id. at 487.

\textsuperscript{113} See id. at 480.

\textsuperscript{114} Id.

\textsuperscript{115} Id. at 482 (quoting Hairston, 208 U.S. at 607). In *Kelo*, the local legislature found that economic development would lead to increased jobs and tax revenue as well as revitalization of an economically depressed city, even though all concerned agreed that the plaintiffs’ properties were not themselves blighted. See id. at 472, 475.

\textsuperscript{116} Id. at 483.

\textsuperscript{117} See *Kelo*, 545 U.S. at 488.

\textsuperscript{118} See id. at 492 (Kennedy, J., concurring) (emphasis added).
a narrow category of cases in which “impermissible favoritism” seemed to be a risk.\textsuperscript{119}

The two dissents in \textit{Kelo}, by contrast, took a much narrower view of the appropriate degree of deference.\textsuperscript{120} Justice O’Connor wrote a dissent, joined by Chief Justice William Rehnquist and Justices Antonin Scalia and Clarence Thomas, in which she took strong issue with the majority’s treatment of deference, finding that the lax standard espoused by the majority rendered the public use clause a virtual nullity.\textsuperscript{121} She underscored the point that for the public use requirement to remain meaningful, there was need for some independent judicial check on how the political branches construed public use.\textsuperscript{122} Justice O’Connor explained: “We give considerable deference to legislatures’ determinations about what governmental activities will advantage the public. But where the political branches are the sole arbiters of the public-private distinction, the Public Use Clause would amount to little more than hortatory fluff.”\textsuperscript{123} Justice O’Connor acknowledged that in certain circumstances property could be taken to be used for purposes that ultimately turned out to be private.\textsuperscript{124} She also acknowledged that the Court would defer to legislative judgments about public purpose.\textsuperscript{125} But, in order to preserve the integrity of the Fifth Amendment, she argued, the courts must retain and use their “extremely narrow” role in reviewing legislative determinations of what constitutes a public use.\textsuperscript{126}

Justice Thomas’s dissent went a step further, arguing that a public use existed only when the public had the legal right to use the property after the taking—in effect adopting the narrow view of public use.\textsuperscript{127} He provided a detailed analysis of the development of the Supreme

\textsuperscript{119} \textit{Id.} at 493 (“There may be private transfers in which the risk of undetected impermissible favoritism of private parties is so acute that a presumption (rebuttable or otherwise) of invalidity is warranted under the Public Use Clause.”). Justice Kennedy noted, however, that \textit{Kelo} did not raise such concerns of impermissible favoritism because of ample evidence that the city had planned the project with the goal of economic development and without the intent to benefit any particular private party. \textit{See id.} at 491–92.

\textsuperscript{120} \textit{See id.} at 497 (O’Connor, J., dissenting); \textit{id.} at 517 (Thomas, J., dissenting).

\textsuperscript{121} \textit{See id.} at 494, 503 (O’Connor, J., dissenting).

\textsuperscript{122} \textit{See id.} at 497.

\textsuperscript{123} \textit{Kelo}, 545 U.S. at 497 (O’Connor, J., dissenting). Justice O’Connor also argued for the middle ground between the broad and narrow views of public use, stating that property should be taken only where it “directly achieve[s] a public benefit.” \textit{See id.} at 500.

\textsuperscript{124} \textit{See id.} at 499.

\textsuperscript{125} \textit{See id.}

\textsuperscript{126} \textit{See id.} at 500 (quoting \textit{Midkiff}, 467 U.S. at 240).

\textsuperscript{127} \textit{See id.} at 521 (Thomas, J., dissenting) (“[T]he government may take property only if it actually uses or gives the public a legal right to use the property.”).
Court’s deferential stance on legislative determinations of public use, characterizing the Supreme Court’s stance on both the adoption of the broad definition of public use and deference as deriving from “two misguided lines of precedent.” He wrote that “[t]here is no justification . . . for affording almost insurmountable deference to legislative conclusions that a use serves a ‘public use.’” As a result, the Court’s position on judicial review of property rights was inherently inconsistent and incongruous: “[I]t is backwards to adopt a searching standard of constitutional review for nontraditional property interests, such as welfare benefits, while deferring to the legislature’s determination as to what constitutes a public use when it exercises the power of eminent domain, and thereby invades individuals’ traditional rights in real property.” He concluded that “it is most implausible that the Framers intended to defer to legislatures as to what satisfies the Public Use Clause, uniquely among all the express provisions of the Bill of Rights.” Justice Thomas thus explicitly reclaimed a significant role for judicial review, stating: “[A] court owes no deference to a legislature’s judgment concerning the quintessentially legal question of whether the government owns, or the public has a legal right to use, the taken property.”

The majority opinion in *Kelo* stands for both the adoption of the broad view of public use at the federal level and confirmation of a deferential standard of review by federal courts of public use determinations. The net result of the combination of these two positions has been a noticeable contraction in the federal courts’ role in protecting private property rights. The presumption of permissibility found in the rational basis review affirmed in *Kelo* leads the federal courts to leave questions of public use to the legislature and gives discontented property owners little to pursue in the way of judicial redress in federal court.

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128 See id. at 515–20.
129 See *Kelo*, 545 U.S. at 519 (Thomas, J., dissenting).
130 Id. at 517.
131 Id. at 518 (citation omitted).
132 Id. at 517–18.
133 Id. at 517.
134 See id. at 480 (majority opinion).
136 See *Kelo*, 545 U.S. at 480, 487–88.
Post-*Kelo*, federal court decisions reflect the deferential stance toward legislative takings mandated by the *Berman*, *Midkiff*, and *Kelo* line of precedent. For example, in *Goldstein v. Pataki*, decided in 2008, the Second Circuit noted that the federal courts’ focus shifted over the past century: “[B]oth in doctrine and in practice, the primary mechanism for enforcing the public-use requirement has been the accountability of political officials to the electorate, not the scrutiny of the federal courts.” Thus, the *Goldstein* court concluded, the federal courts should look at what type of government action creates a taking and what amount of compensation is needed to be just. The federal courts, however, should leave the public use determination to the legislature “in all but the most extreme cases.” The Second Circuit acknowledged that the federal courts do play a role in the public use debate, but noted that the role “is ‘an extremely narrow one.’”

In *Carole Media LLC v. New Jersey Transit Corp.*, also decided in 2008, a public corporation established by the New Jersey legislature was sued for revoking billboard licenses without proper compensation. The Third Circuit made it clear that the court would defer to the legislature so long as there was not a glaring example of a transfer for pure private gain. And, once a public purpose was shown, the court essentially abandoned any further duty to review the legislature’s actions, stating “the Supreme Court has made it clear that the means of executing the [challenged] project are for the [legislature] alone to determine, once the public purpose has been established.”

Similarly, in 2010, in *Fideicomiso De La Tierra Del Caño Martin Peña v. Fortuño*, the First Circuit acknowledged that there is a place for challenges to takings but emphasized that it was not the courts’ place to second-guess legislative determinations of the best mechanisms for accomplishing clear public policy objectives. The court concluded that “[p]ublic policy disagreements about the best of several rational means

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137 516 F.3d 50, 57 (2d Cir. 2008).
138 Id. at 57.
139 Id.
140 Id. (quoting *Berman*, 348 U.S. at 32).
141 550 F.3d 302, 304–05 (3d Cir. 2008).
142 See id. at 309–11.
143 Id. at 311 (quoting *Berman*, 348 U.S. at 33).
144 604 F.3d 7, 18–19 (1st Cir. 2010).
to accomplish legitimate public purposes are not the grist of a Takings Clause claim.”

Likewise, in *Hsiung v. City & County of Honolulu* the federal trial court refused to invalidate certain city ordinances that significantly altered condemnation procedures. The court quoted *Kelo* and *Midkiff* in stating that when the legislature’s purpose “is legitimate, and its means are not irrational,” the federal courts are not to engage in debates over the wisdom of the takings. Should the state wish to restrict its power of eminent domain beyond that countenanced by the U.S. Constitution, it was free to do so, but the federal courts would not interfere with the state’s sovereignty.

II. The Expanding Role of the State Courts in Public Use Cases

*Kelo* is one of those relatively rare Supreme Court opinions where the American public not only took note of what the Court said, but reacted passionately to the Court’s decision. In this instance, the public response was one of outrage. The vocal public outcry prompted forty-three states to adopt laws that would (purportedly, at least) temper the expansive condemnation power espoused in *Kelo*. Most of these post-*Kelo* state laws focused on narrowing the broad definition of public use adopted by the Supreme Court—the state laws sought to limit takings for economic development and takings where private property was to be transferred to another private owner. A few state statutes, how-

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145 Id. at 18. The court emphasized the “necessarily deferential” standard of review applied to public use questions. Id. (citing *Midkiff*, 467 U.S. at 242–43; *Pataki*, 516 F.3d at 57–58).
147 Id. at 1265–66 (quoting *Kelo*, 545 U.S. at 488 (quoting *Midkiff*, 467 U.S. at 242–43)).
148 Id.
150 See Coleman, *supra* note 149, at B2. One noteworthy failed grass-roots effort involved an attempt to condemn Justice Souter’s home in New Hampshire because he voted with the *Kelo* majority. See id.
151 See Harvey M. Jacobs & Ellen M. Bassett, *After “Kelo”*: *Political Rhetoric and Policy Responses*, *Land Lines* (LINCOLN INST. OF LAND & POL’Y, Cambridge, Mass.) Apr. 2010, at 14, 15. Alabama was one state that narrowed the broad definition of public use as a direct response to anti-*Kelo* sentiment. See *Ala. Code §§ 18-1B-1 to -2* (2011) (noting that the state legislature’s intent was to limit the expansive reach of takings under state statutes “in light of the decision and certain opinions recently announced by the United States Supreme Court”).
ever, focused on the issue of judicial deference to legislative determinations, which state courts have addressed in a handful of notable post-
Kelo opinions discussed below.

A. State v. Federal Views on Deference

Nationwide, many condemnations proceed at the state level, where they are undertaken by state or local governmental entities. Although the avenue for challenging state takings in federal court is very narrow as a result of the Kelo Court’s hands-off deferential approach, property owners can and do turn to state courts, state constitutions, and state statutes for protection of private property rights. Moreover, those state constitutions and statutes can provide a higher degree of protection than that afforded by the U.S. Constitution, which sets a minimum, not a maximum, for protection of property rights.

In particular, state courts are not bound by the Supreme Court’s determinations concerning public use in the federal context or under the Constitution, nor are they bound by federal notions of deference. The Kelo Court noted this, stating that “nothing in our opinion states). Most commentators, however, seem to agree that the post-Kelo state reforms are largely window dressings with little or no impact upon outcomes. See, e.g., Timothy Sandefur, The “Backlash” So Far: Will Americans Get Meaningful Eminent Domain Reform?, 2006 Mich. St. L. Rev. 709, 712 (surveying new state laws in response to Kelo and concluding that political action in addressing problems caused by eminent domain); Somin, supra, at 2103–05 (summarizing state legislative reforms passed in response to Kelo and explaining how the reforms are generally ineffective).

Statistics on takings are notoriously hard to find because of the multitude of entities that may exercise the power, and because data regarding takings is generally not tracked by those entities. See Daniel L. Chen & Susan Yeh, The Economic Impacts of Eminent Domain 3 (Mar. 2012 draft), available at www.duke.edu/~dlc28/papers/EminentDomain.pdf (“Few centralized sources of data document the condemnation of property across jurisdictions exist since various levels of government, local, state, and federal, are able to invoke the power of eminent domain.”); U.S. Gov’t Accountability Office, GAO-07-28, Eminent Domain: Information About Its Uses and Effect on Property Owners and Communities Is Limited 8 (2006) (noting that “the lack of data precludes a determination of the extent to which eminent domain has been used across the nation”).

Kelo, 545 U.S. at 482–83.

See Somin, supra note 152, at 2114–21 (describing state statutes on eminent domain); infra notes 157, 160–171 and accompanying text (examining state court cases and state constitutions and discussing their respective protection of private property rights).

See State v. Sieyes, 225 P.3d 995, 1003 (Wash. 2010) (“Supreme Court application of the United States Constitution establishes a floor below which state courts cannot go to protect individual rights. But states of course can raise the ceiling and afford greater protection under their own constitutions.”).

See City of Norwood v. Horney, 853 N.E.2d 1115, 1136 (Ohio 2006) (“In addressing the meaning of the public-use clause in Ohio’s Constitution, we are not bound to follow the United States Supreme Court’s determinations of the scope of the Public Use Clause
precludes any State from placing further restrictions on its exercise of the takings power,” and observing that many states had indeed imposed public use requirements “strictly than the federal base line.” Subsequent state court opinions likewise have remarked on the higher degree of protection potentially available under state constitutions or state statutes.

Of course, <i>Kelo</i>’s declaration that states could set higher protections for private property rights than the U.S. Constitution afforded was by no means new law. <sup>160</sup> <i>Kelo</i> simply highlighted the role that state statutes and constitutions could play by announcing the limited protection available under the U.S. Constitution and explicitly pointing to state law as an alternative. <sup>161</sup> Many state courts had already recognized that their state constitutions or state statutes prohibited exercises of eminent domain that would pass muster under the U.S. Constitution. <sup>162</sup>
The Michigan Supreme Court, for example, in overruling its controversial *Poletown Neighborhood Council v. City of Detroit* decision in *County of Wayne v. Hathcock* in 2004, explicitly renounced the rational basis standard of review. The court stated that it had “never employed the minimal standard of review in an eminent domain case” and “always made an independent determination of what constitutes a public use for which the power of eminent domain may be utilized.” Although the court’s pronouncement smacks somewhat of revisionist history, it was certainly within the Michigan Supreme Court’s purview to reject the rational basis standard and to adopt a higher, less deferential standard of review under its own state constitution.

Although it may seem obvious that state courts can impose higher standards and afford greater protection under state law, it is a point that needs periodic reiteration, as state courts (and likely, the lawyers who argue before them) do occasionally lose sight of this important principle. There are numerous examples in which state courts have mistakenly asserted they were constrained by the Supreme Court’s deferential stance.

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163 304 N.W.2d at 459–60 (per curiam) (holding that condemning to protect jobs and economic viability was a valid public use).
164 684 N.W.2d at 785.
165 Id. (quoting *Poletown*, 304 N.W.2d at 475 (Ryan, J., dissenting) (emphasis in original)).
166 See id.
Over three decades ago, Justice William J. Brennan, Jr. wrote an influential *Harvard Law Review* article about what he saw as a regrettable retraction by the Supreme Court in constitutional protections.\(^{168}\) Justice Brennan encouraged litigants to protect their individual liberties by looking beyond the U.S. Constitution, noting that state constitutions often provide greater protections of individual liberties than federal law.\(^{169}\) As Justice Brennan noted, state courts have often deviated from Supreme Court opinions despite similar or even identical language in their state constitution and the U.S. Constitution.\(^{170}\) In the words of the Hawaii Supreme Court: “While this results in a divergence of meaning between words which are the same in both federal and state constitutions, the system of federalism envisaged by the [U.S.] Constitution tolerates such divergence where the result is \textit{greater} protection of individual rights under state law than under federal law.”\(^{171}\)

Although Justice Brennan was concerned primarily with what he perceived to be erosions of individual rights under the Bill of Rights,\(^{172}\) the concerns he raised are equally applicable in the context of the Takings Clause—and the solution he offered of seeking protection under state, rather than federal, constitutional provisions is equally practicable.\(^{173}\) Justice Brennan, in fact, presaged the *Kelo* aftermath and subsequent state-level rejection of *Kelo*’s holding when he suggested that state court judges and practitioners should closely scrutinize federal decisions in the eminent domain realm before using them to interpret state constitutional counterparts.\(^{174}\) Justice Brennan concluded with an explicit call for lawyers to consider the protections offered by state constitutions, stating that “it would be most unwise these days not also to raise state constitutional questions.”\(^{175}\)


\(^{169}\) \textit{Id.} at 491. Justice Brennan articulated a similar thought in a dissent in *Michigan v. Mosley*. 423 U.S. 96, 120 (1975) (Brennan, J., dissenting) (noting that states have the power to “impose higher standards” for “police practices under state law than is required by the Federal Constitution”).

\(^{170}\) Brennan, \textit{supra} note 168, at 500.

\(^{171}\) \textit{State v. Kaluna}, 520 P.2d 51, 58 n.6 (Haw. 1974).

\(^{172}\) Brennan, \textit{supra} note 168, at 492. Justice Brennan’s article focused on equal protection, procedural due process protections for governmental benefits, and the “specific guarantees of the Bill of Rights against encroachment by state action.” \textit{Id.} at 491–92.

\(^{173}\) \textit{See id.} at 491–92, 502–04.

\(^{174}\) \textit{Id.} at 502.

\(^{175}\) \textit{Id.}
Scholars subsequently labeled the movement toward increased state protection of individual rights based on state constitutional provisions “new judicial federalism.” It is not really necessary to expound on the development of such theoretical language, however, to understand the trend. States have always been free to grant more protection than the U.S. Constitution mandates. It is simply that the retreat by the Supreme Court on federal protection of private property rights makes pursuit of state protections more appealing to litigants, thus bringing heightened attention to state activities. This is precisely what we now see happening in the eminent domain arena.

B. State Court Approaches to Deference

Post-\textit{Kelo} developments in state courts suggest that takings litigants are having some success in following Justice Brennan’s suggested strategy of seeking protection under their state constitutions or statutes. The most detailed post-\textit{Kelo} analysis of the role of deference in state takings is found in \textit{City of Norwood v. Horney}, a 2006 decision by the Ohio Supreme Court. The \textit{Norwood} court deliberately availed itself of


\footnotesize{177} See \textit{Kelo}, 545 U.S. at 489.

\footnotesize{178} See, e.g., \textit{City of Stockton v. Marina Towers LLC}, 88 Cal. Rptr. 3d 909, 925 ( Ct. App. 2009) (failing to provide adequate project description in resolution of necessity renders proposed taking invalid under state statute); Mayor of Balt. City v. Valsamaki, 916 A.2d 324, 356 (Md. 2007) (striking down a city’s attempt to use quick-take condemnation procedures for an urban renewal project because of lack of evidence that the buildings at issue were “immediately injurious” to public health and safety, and noting that “the evidence presented below of public use was sparse”); \textit{McCarran}, 137 P.3d at 1126 (finding a regulatory taking occurred under the state constitution and noting that \textit{Kelo} recognized that states may expand their citizens’ rights beyond those provided in the U.S. Constitution); Gallen-thin Realty Dev., Inc. v. Borough of Paulsboro, 924 A.2d 447, 449 (N.J. 2007) (striking down a taking based on a determination by the local government that land was in need of redevelopment on grounds that state constitution permitted government redevelopment of only blighted areas); \textit{Lowery}, 136 P.3d at 650–51 (stating that takings for economic development purposes do not satisfy the state constitution or state statute); Benson v. State, 710 N.W.2d 131, 146 (S.D. 2006) (finding that the state constitution and case law provide property owners with more protection than the U.S. Constitution because the state applies the narrower rather than the broader definition of public use).

\footnotesize{179} 853 N.E.2d at 1129–42. See generally Alberto B. Lopez, \textit{Revisiting Kelo and Eminent Domain’s “Summer of Scrutiny,”} 59 \textit{Ala. L. Rev.} 561 (2008) (noting \textit{Norwood} as an example of a post-\textit{Kelo} reform); Andrew S. Han, \textit{Note, From New London to Norwood: A Year in the Life}
Kelo’s invitation to view federal constitutional protections in the takings area as a minimum, not a maximum.\textsuperscript{180} In so doing, the Norwood court issued an unusually detailed and thoughtful decision analyzing the relative roles of the judiciary and legislature in eminent domain matters.\textsuperscript{181} Given the federal courts’ explicit retreat on takings issues, Norwood provides a constructive example of how state courts might rediscover and revitalize their role in protection of property rights.\textsuperscript{182}

Norwood, like Kelo, involved a taking for economic redevelopment purposes.\textsuperscript{183} The trial court found that the use of eminent domain for purposes of urban renewal was constitutional as a valid public use under both Ohio and Supreme Court precedent, and upheld the condemnation of the property owners’ parcels.\textsuperscript{184} The Ohio Court of Appeals affirmed, noting first that the finding of the city council regarding the deteriorating nature of the area was entitled to judicial deference\textsuperscript{185} and, second, that the redevelopment plan was a valid public use under the Ohio Constitution.\textsuperscript{186} In effect, the intermediate appellate court foreshadowed the reasoning of Kelo, which was issued by the U.S. Supreme Court a few weeks later.\textsuperscript{187}

However, the Ohio Supreme Court unanimously reversed.\textsuperscript{188} The court did not hesitate to confront directly and in detail the thorny issue of the degree of deference courts should afford legislative determinations of public use.\textsuperscript{189} Although Kelo was issued before Norwood, the

\textsuperscript{180}Norwood, 853 N.E.2d at 1122.
\textsuperscript{181}See id. at 1122, 1137–42.
\textsuperscript{182}See id. at 1129.
\textsuperscript{183}Id. at 1122; see Kelo, 545 U.S. at 472.
\textsuperscript{184}Norwood v. Horney, 830 N.E.2d 381, 391 (Ohio Ct. App. 2005), overruled by 853 N.E.2d 1115.
\textsuperscript{185}Id. at 388, 394.
\textsuperscript{186}See id. at 391.
\textsuperscript{187}See Kelo, 545 U.S. at 489–90.
\textsuperscript{188}Norwood, 853 NE.2d at 1153.
\textsuperscript{189}See id. at 1137. The Norwood court also specifically addressed the other major issue raised in Kelo—the scope of public use. See id. at 1135–36. The court highlighted the risk of expanding public use to include takings intended solely for economic development purposes, finding that such a broad notion of public use would have the effect of eradicating the public use limitation of the Ohio Constitution. See id. at 1135–36. Thus, the Norwood court held that economic development alone cannot satisfy the public use requirement of the Ohio Constitution. Id. at 1142. The court then turned to the city’s finding that the area was “deteriorating” to determine whether that finding would justify the use of the eminent
Ohio Supreme Court declined to adopt the U.S. Supreme Court’s reasoning, instead issuing an opinion in which it delved into considerable detail about the nature of public use and the role of judicial deference in state takings cases.\textsuperscript{190} The court noted the “inherent tension” between the state’s power of eminent domain and the need to protect individual private property rights.\textsuperscript{191}

\textit{Norwood} and similar recent state court decisions highlight two key insights into judicial deference to the legislature in eminent domain cases. First, the degree to which a court specifically and openly approaches the issue of public use as a judicial question influences the degree of judicial scrutiny the taking receives.\textsuperscript{192} The degree of scrutiny affects the level of deference afforded legislative decision making and the likelihood that the taking will survive a challenge.\textsuperscript{193} Second, deference notions are closely tied to separation of powers principles.\textsuperscript{194} Discussion of judicial review of public use determinations necessarily implicates the relationship between, and relative roles of, legislatures and courts.\textsuperscript{195} Both factors, taken together, have a significant impact on the type of judicial review afforded to takings decisions and upon the degree of judicial protection offered to private property rights within a given jurisdiction.

\textsuperscript{190} See id. at 1122, 1130–46.

\textsuperscript{191} Id. at 1130–31. The Northwest Ordinance initially, and the Ohio Constitution subsequently, limited the state’s power of eminent domain based on “equitable considerations of just compensation and public use.” Id. at 1130. The Ohio Constitution actually phrases this requirement in language somewhat different from that of the U.S. Constitution: “Private property shall ever be held inviolate, but subservient to the public welfare . . . . [W]here private property shall be taken for public use, a compensation therefore shall first be made . . . .” \textit{Ohio Const.} art. I, § 19.

\textsuperscript{192} See \textit{Norwood}, 853 N.E.2d at 1136–42; \textit{infra} notes 196–223 and accompanying text.

\textsuperscript{193} See \textit{Norwood}, 853 N.E.2d at 1136–42; \textit{infra} notes 196–206 and accompanying text.

\textsuperscript{194} See \textit{Norwood}, 853 N.E.2d at 1137–42; \textit{infra} notes 224–254 and accompanying text.

\textsuperscript{195} See \textit{Norwood}, 853 N.E.2d at 1137–42; \textit{infra} notes 224–254 and accompanying text.
1. Public Use as a Judicial Question

The degree to which a state court explicitly views public use as a judicial question has an observable impact on the degree of protection afforded to private property rights within a jurisdiction. This is an instance where the vocabulary used by the court greatly influences the outcome. Norwood is a prime example. The Norwood court discussed the relative roles of the courts and legislature in takings cases in detail.\textsuperscript{196} The Ohio Supreme Court explained that the state’s lower courts had mistakenly interpreted the standard of review in takings cases as one of absolute deference to legislative determinations.\textsuperscript{197} Rather, the proper standard of review in Ohio requires that the court conduct an independent review of the legislature’s decision to take.\textsuperscript{198} As the Norwood court noted, it is the role of the judiciary to delineate the limits of the legislature’s eminent domain power.\textsuperscript{199} Moreover, the court recognized that although its role is limited, it is crucial in reviewing state actions to ensure that the state takes no more than necessary to promote the public use, and that the state proceeds fairly and effectuates takings without bad faith, pretext, discrimination, or criminal purposes.\textsuperscript{200}

The Norwood court also acknowledged that legislatures should be afforded broad discretion in eminent domain matters; however, courts must ensure that the legislature’s actions remain within the scope of its authority, which is not abused or used in bad faith.\textsuperscript{201} The court emphasized the independent role of the judiciary, framing this role in the context of “the courts’ traditional role as guardian of constitutional rights and limits.”\textsuperscript{202}

By couching its role in these terms, the Ohio Supreme Court put review of public use determinations squarely under the purview of the courts, not the legislature.\textsuperscript{203} Other states vary in how they approach

\textsuperscript{196} Norwood, 853 N.E.2d at 1137–39.
\textsuperscript{197} Id. at 1136, 1138.
\textsuperscript{198} Id. at 1138.
\textsuperscript{199} Id. at 1137.
\textsuperscript{200} Id. at 1138.
\textsuperscript{201} Id. Justice Zarella also addressed this in his partial concurrence and partial dissent in the Connecticut Supreme Court’s decision in Kelo. See 843 A.2d 500, 581, 582 (Conn. 2004) (Zarella, J., concurring in part and dissenting in part), aff’d, 545 U.S. 469 (2005). Although Justice Zarella conceded that “[i]t is well established that judicial deference to determinations of public use by state legislatures is appropriate,” he noted that “[n]evertheless, judicial deference to legislative declarations of public use does not require complete abdication of judicial responsibility.” Id. at 581–82.
\textsuperscript{202} Norwood, 853 NE.2d at 1138–39 (stating that “we thus act with deference to legislative pronouncements, but we are independent of them”).
\textsuperscript{203} See id. at 1138.
this issue. Although some state constitutions\textsuperscript{204} and statutes\textsuperscript{205} provide that public use is a judicial question, in other instances the issue is broached through judicial opinions.\textsuperscript{206} The bottom line is that a surprising number of states have constitutional, statutory, or case law language clearly assigning review of public use determinations to the judiciary.

\textsuperscript{204} See, e.g., \textsc{Ariz. Const.} art. 2, § 17 ("Whenever an attempt is made to take private property for a use alleged to be public, the question whether the contemplated use be really public shall be a judicial question, and determined as such without regard to any legislative assertion that the use is public."); \textsc{Colo. Const.} art. II, § 15 ("[W]hen an attempt is made to take private property for a use alleged to be public, the question whether the contemplated use be really public shall be a judicial question, and determined as such without regard to any legislative assertion that the use is public."); \textsc{La. Const.} art. I, § 4 (stating that no property shall be taken "by any private entity authorized by law to expropriate, except for a public and necessary purpose" and "in such proceedings, whether the purpose is public and necessary shall be a judicial question"); \textsc{Miss. Const.} art. 3, § 17 ("[W]hen an attempt is made to take private property for a use alleged to be public, the question whether the contemplated use be public shall be a judicial question, and, as such, determined without regard to legislative assertion that the use is public."); \textsc{Mo. Const.} art. I, § 28 ("[W]hen an attempt is made to take private property for use alleged to be public, the question whether the contemplated use shall be judicially determined without regard to any legislative declaration that the use is public."); \textsc{Okla. Const.} art 2, § 24 ("In all cases of condemnation of private property for public or private use, the determination of the character of the use shall be a judicial question."); \textsc{Wash. Const.} art. 1, § 16 ("Whenever an attempt is made to take private property for a use alleged to be public, the question whether the contemplated use be really public shall be a judicial question . . . . "). \textit{But see Va. Const.} art I, § 11 ("[T]he term 'public uses' [is] to be defined by the General Assembly . . . . ").

\textsuperscript{205} See, e.g., \textsc{Ariz. Rev. Stat. Ann.} § 12–1132 (2011) (establishing that in takings, "the question whether the contemplated use be really public shall be a judicial question, and determined as such without regard to any legislative assertion that the use is public"); \textsc{Okla. Stat. tit. 66 § 57} (2011) ("In all cases of condemnation of property for either public or private use, the determination of the character of the use shall be a judicial question . . . . "); \textsc{Or. Rev. Stat.} § 35.015 (2011) (limiting the circumstances under which private property can be taken, and providing that "[a] court shall independently determine whether a taking of property complies with the requirements of this section, without deference to any determination made by the public body"); \textsc{Wash. Rev. Code} § 8.12.090 (2012) ("Whenever an attempt is made to take private property, for a use alleged to be public . . . the question whether the contemplated use be really public shall be a judicial question . . . . ").

\textsuperscript{206} See, e.g., \textit{City of Little Rock v. Raines}, 411 S.W.2d 486, 493 (Ark. 1967) ("Whether or not a proposed use for which property is to be taken, even with legislative sanction, is a public or private use is a judicial question which the owner has a right to have determined by the courts."); \textit{Bassett v. Swenson}, 5 P.2d 722, 725 (Idaho 1931) (holding that what is a "public use" is a judicial question); \textit{Logan v. Stogdale}, 24 N.E. 135, 136 (Ind. 1890) ("Whether the use is a public one is a judicial question, and not a legislative one . . . ."); \textit{R.I. Econ. Dev. Corp. v. Parking Co.}, 892 A.2d 87, 96 (R.I. 2006) (stating that "[i]t is well settled in this state that whether a taking constitutes a public use is a judicial question" and citing cases in support).
Thus, state courts—even those without explicit constitutional or statutory provisions on point—are more likely than federal courts to treat public use determinations as a judicial question.\textsuperscript{207} Often, state courts see a meaningful role for themselves in reviewing whether a particular taking satisfies the public use requirement and resist attempts by state legislatures to reduce judicial power in this arena.\textsuperscript{208} For example, the Rhode Island Supreme Court, in \textit{Rhode Island Economic Development Corp. v. Parking Co.}, emphasized “the rebuttable nature of the legislative determination of public use” and affirmed the role of judicial review when owners challenged public use decisions.\textsuperscript{209} The court must examine the particular factors in each case and approve those takings “designed to protect the public health, safety and welfare,” even if the takings incidentally benefit private interests.\textsuperscript{210} The court emphasized that public use is nonetheless a judicial question that requires careful scrutiny of the good faith and due diligence on the part of the condemnor.\textsuperscript{211} In addition, the court declined to blindly defer to conclusory legislative statements of public use.\textsuperscript{212}

Even when state statutory or constitutional language gives an explicit role to the courts in evaluating public uses, a court may reduce its role through judicial interpretation. The Washington Constitution, for

\textsuperscript{207} Compare \textit{Berman}, 348 U.S. at 32 (stating that the federal judiciary has an “extremely narrow” role in public use determinations), \textit{with \textit{High Ridge Ass’n, Inc. v. Cnty. Comm’rs of Carroll Cnty., Md.}}, 660 A.2d 951, 956–57 (Md. Ct. Spec. App. 1995) (stating that public use determinations are judicial questions and the legislature cannot simply declare a use to be public), and \textit{Lakehead Pipe Line Co. v Dehn}, 64 N.W.2d 905, 911 (Mich. 1954) (“The question of whether the proposed use is a public use is a judicial one.”) (quoting Cleveland v. City of Detroit, 33 N.W.2d 747, 750 (Mich. 1948)).

\textsuperscript{208} See, e.g., \textit{High Ridge Ass’n}, 660 A.2d at 955–57 (emphasizing that whether a use is a public use is a judicial question); \textit{Lakehead Pipe Line Co.}, 64 N.W.2d at 911 (stating that it is the role of the judiciary to determine whether the proposed use is a public use). However, some state courts still view questions of public use as a legislative question. See, e.g., Mount Laurel Twp. v. Mipro Homes, LLC, 878 A.2d 38, 49 (N.J. Super. Ct. App. Div. 2005) (“Whether a taking is for a public use ‘is largely a legislative question beyond the reach of judicial review except in the most egregious cases.’”) (quoting Twp. of W. Orange v. 769 Assocs., 800 A.2d 86, 93 (N.J. 2002)).

\textsuperscript{209} 892 A.2d at 101.

\textsuperscript{210} Id. at 104. The court ultimately struck down the taking, finding it was motivated by an impermissible desire to increase revenue and not a legitimate public purpose. \textit{Id}; see Bird & Oswald, \textit{supra} note 13, at 113–22 (discussing the relationship between public use and necessity).

\textsuperscript{211} \textit{R.I. Econ. Dev. Corp.}, 892 A.2d at 104–06.

\textsuperscript{212} Id. at 103 (“[I]t is not the function of this Court to dissect a legislative declaration to glean a public purpose . . . . [W]e . . . continue to endorse ‘the well-established rule that what constitutes a public use is a judicial question.’”) (quoting \textit{Romeo v. Cranston Redev. Agency}, 254 A.2d 426, 434 (R.I. 1969)).
example, appears to have a very clear statement of a substantial judicial role in reviewing takings determinations: “Whenever an attempt is made to take private property for a use alleged to be public, the question whether the contemplated use be really public shall be a judicial question, and determined as such, without regard to any legislative assertion that the use is public . . . .”213 Despite this seemingly clear language regarding the primacy of the judicial role in determining public use, the Washington Supreme Court has interpreted the judicial role to be narrower. In *HTK Management, LLC v. Seattle Popular Monorail Authority*, decided mere months after *Kelo*, the majority of the Washington Supreme Court stated that legislative declarations of public use are “not dispositive,” but nonetheless are “entitled to great weight.”214 This was soon followed by the court’s decision in *Central Puget Sound Regional Transit Authority v. Miller*, where the majority stated that it would “show great deference to legislative determinations.”215 Thus, litigants seeking protection in state court must look beyond constitutional or statutory language to figure out the degree to which a court will involve itself in public use disputes.216

As discussed above, federal courts have a strong policy of deference to legislative determinations of public use.217 By contrast, state courts can, and many do, reject such a deferential stance.218 The Ohio Supreme Court in *Norwood*, while acknowledging the role of judicial deference to legislative determinations, also emphasized the importance of not abandoning the judicial role in public use questions, noting that courts must ensure the legislature does not exceed its authority or abuse its power.219

Some courts seem to find it easier to employ judicial review in pretextual challenges. For example, in *County of Hawai‘i v. C&EJ Coupe Family Ltd. Partnership*, the condemning county argued that the court was only obligated to determine whether the condemnor “‘might reasonably have considered the use public, not whether the use is public.’”220 The Hawaii Supreme Court, however, stated that the lower courts had an obligation

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213 Wash. Const. art. 1, § 16.
214 121 P.3d 1166, 1175 (Wash. 2005) (citations omitted).
215 128 P.3d 588, 593 & n.2 (Wash. 2006).
216 See id. at 593 n.2; *HTK Mgmt.*, 121 P.3d at 1175.
217 See *Kelo*, 545 U.S. at 480; *Midkiff*, 467 U.S. at 240–41; *Berman*, 348 U.S. at 32; supra notes 76–117 and accompanying text.
218 See *Norwood*, 853 N.E.2d at 1138.
219 *Id.*
under both the state and U.S. constitutions to consider whether the asserted public purpose behind the taking was pretextual.\(^{221}\) Although economic development cases seem to attract the most allegations of pretext, the court noted that even “classic” public uses such as roads (the issue in this case) were subject to challenges on these grounds.\(^{222}\) Similarly, in *Middletown Township v. Lands of Stone*, the Pennsylvania Supreme Court stated that the judiciary’s role was to look for the government’s real reasons for a taking and not to defer to governmental “lip service” or post-hoc justifications.\(^{223}\)

2. Deference as a Separation of Powers Issue

The level of judicial deference in takings cases can also be viewed as a separation of powers issue. The Washington Supreme Court, for example, noted in *Miller* that the court’s deferential standard of review evolved “[o]ut of respect for a coordinate branch of government,” and was thus a separation of powers notion.\(^{224}\) Unfortunately, this issue cuts both ways—in favor of both a more deferential and a less deferential review of public use determinations. The separation of powers doctrine requires that each branch of government respect the relative roles of the other branches. Conversely, the doctrine also requires that no branch relinquish its power or role to another.

The notion of the appropriate balance of power between the legislature and the judiciary permeates early articulations of eminent domain law.\(^{225}\) Philip Nichols, the author of an influential early treatise on eminent domain law, emphasized the importance of courts not intruding into the legislatures’ realm, stating “[t]he exercise by a court of the power to nullify the wishes of the representatives of the people, enacted into law in solemn form, is indeed full of grave responsibility and not to be called into play indiscriminately.”\(^{226}\) Nichols articulated an early version of the rational basis standard of review for public use, stating that the issue “is not whether the use for which the property is taken is pub-

\(^{221}\) *Id.* at 638 (noting that the presumption that the legislature’s purpose is valid is not “unfettered,” and that under appropriate circumstances courts may consider whether a purported public use is pretextual).

\(^{222}\) *Id.* at 647.

\(^{223}\) 939 A.2d 331, 338 (Pa. 2007).

\(^{224}\) 128 P.3d at 593.


\(^{226}\) *Id.* § 10, at 34.
lic, but whether the legislature might reasonably consider it public.” 227 Nichols acknowledged, however, that a court’s duty was to declare un-
constitutional any taking that lacked any “real and substantial relation to the public use.” 228

The Norwood court viewed the separation of powers doctrine as en-
forcing, not limiting, the court’s role in public use disputes. 229 The court noted that while the judiciary should afford some deference to legislative determinations of public use, the separation of powers doctrine would be violated if the judiciary simply acquiesced in every in-
stance to the legislature’s invocation of the police power. 230 Each branch has its own respective role to play, and it ought not to abdicate that role to another branch. 231 As the Norwood court stated, “[d]eferential review is not satisfied by superficial scrutiny.” 232 Rather, “the separation-of-powers doctrine ‘would be unduly restricted’ if the state could invoke the police power to virtually immunize all takings from judicial review.” 233 Thus, the court concluded that although a court’s ability to scrutinize takings cases is limited, “it clearly remains a critical constitutional component.” 234

The U.S. Supreme Court seems to have adopted the opposite view, essentially stating that the remedy to abusive governmental action often lies in the ballot box and not the federal courtroom. 235 In an 1876 deci-
sion, Munn v. Illinois, the Court stated that the way to protect against the legislature’s potential abuse of economic regulation is through “the polls, not . . . the courts.” 236 Similarly, the Second Circuit noted in Gold-
stein v. Pataki that “the primary mechanism for enforcing the public-use requirement has been the accountability of political officials to the electorate, not the scrutiny of the federal courts.” 237

Commentators, too, have argued that respect for the relative roles of the co-equal branches of government should lead courts to be reti-

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227 Id. § 52, at 154.
228 Id. § 52, at 155.
229 See 853 N.E.2d at 1137.
230 Id.
231 See id. at 1148–50.
232 Id. at 1137.
233 Id. (quoting U.S. ex rel. TVA v. Welch, 327 U.S. 546, 556–57 (1946) (Reed, J. con-
curring)).
234 Id. at 1138.
235 See Munn v. Illinois, 94 U.S. 113, 134 (1876).
236 Id.
237 516 F.3d 50, 57 (2d Cir. 2008).
cent in intruding too far into legislative decision making. As noted by Professor John Hart Ely:

When a court invalidates an act of the political branches on constitutional grounds . . . it is overruling [the legislature’s] judgment, and normally doing so in a way that is not subject to “correction” by the ordinary law making process. Thus the central function, and it is at the same time the central problem, of judicial review: a body that is not elected or otherwise politically responsible in any significant way is telling the people’s elected representatives that they cannot govern as they’d like.

Thus, the reluctance to interfere with the political process may at least partially explain the refusal of some courts to review public use determinations.

Moreover, relying upon the political process is no panacea as there is no assurance that elected officials are either wiser or more impartial in their decision making than the courts, or that the political process is effective in constraining legislators’ behavior. Professors William Riker and Barry Weingast note that “neither the Court nor legal scholarship has provided the theoretical underpinnings for the presumption of the adequacy of legislative judgment and, indeed, neither has even asked whether legislative judgment really works.” Riker and Weingast, however, go on to conclude that heightened judicial scrutiny is not the answer either: “Judicial scrutiny that allows judges to substitute their own logic for that of the legislature merely transfers the problem of unpredictability and insecurity of economic rights from the legislature to the judicial stage; it does not solve the problem of protecting rights.” Riker and Weingast identified the problem in clear and compelling terms, but the solution remains much more elusive.

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239 Id.
241 Id. at 378. The authors note a number of unanswered questions, including what protection exists against majorities providing benefits to themselves “under the guise of political purposes,” how to “distinguish between legitimate public purposes and those undertaken solely for private redistribution,” and whether the “articulation of public benefits” is merely “rhetorical window dressing to rationalize private redistribution.” Id. at 379.
242 Id. at 400.
Indeed, hortatory calls for greater supervision of the legislative process by the judiciary are common, but roadmaps for doing that effectively and appropriately are hard to devise. Professor John Hart Ely, for example, argued that courts must oversee the democratic process, while conceding that when a court is convinced that the majority is not abusing the process, the legislative determination should stand.243 The vexatious question, of course, is how does a court determine that the process is not being abused?

In addition, the level of the governmental unit making the taking decision can also affect the standard of review applied by state courts. To many commentators and state courts, the more local the governmental unit involved in the taking, the more likely that abuse of the political process may occur.244 In such instances, some state courts are more reluctant to apply a deferential standard of review and are more likely to scrutinize the government’s decision.245 The Oregon Supreme Court, for example, explained that because local governments are not comparable to state and federal legislatures, local governing decisions should not be presumed valid and “shielded from less than constitutional scrutiny by the theory of separation of powers.”246

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243 See Ely, supra note 238, at 101–04.
244 See Kelo, 843 A.2d 500, 581 (Conn. 2004) (Zarella, J., concurring in part and dissenting in part) (public use determinations by state legislative bodies are entitled to more deference than taking decisions by local public authorities); Norwood, 853 N.E.2d at 1138 (noting that while the state may delegate the eminent domain power to municipalities, the courts must then ensure that “the grant of authority is construed strictly and that any doubt over the propriety of the taking is resolved in favor of the property owner”). See generally Charles L. Siemon & Julie P. Kendig, Judicial Review of Local Government Decisions: “Midnight in the Garden of Good and Evil,” 20 NOVA L. REV. 707, 710 (1996) (stating that a lack of judicial enforcement at the local level contributes to a lack of “incentive for local governments to do a ‘good’ job”); Mansnerus, supra note 13, at 432–35 (arguing that the risk of abuse of power increases as the level of the government unit involved decreases).

President James Madison also recognized the heightened risk of abuse that flows from more localized decision-making. THE FEDERALIST NO. 10, at 59 (James Madison) (E.H. Scott ed., 2002).

The smaller the society, the fewer probably will be the distinct parties and interests composing it; the fewer the distinct parties and interests, the more frequently will a majority be found of the same party; and the smaller the number of individuals composing a majority, and the smaller the compass within which they are placed, the more easily will they concert and execute their plans of oppression.

Id.
246 Id.
State courts may also fear that local officials may be more subject to undue influence from private interests\(^{247}\) or that even a local condemning authority acting in “good faith” will fail to be objective when evaluating the wisdom of expropriating property to implement an economic development that it itself developed.\(^{248}\) Another potential abuse that may arise from local takings decisions, identified by Professor William Fischel, is that “[l]ocal governments are more prone to majoritarianism,” due to less diverse electorates and fewer constitutional checks on majority rule than exist at higher levels of government.\(^{249}\) Thus, local decisions to take pose the risk of over-reaching by the majority as well as the potential for abuse by well-connected special interest groups.

The problems inherent in the relative roles of courts and legislatures are laid out in stark relief in the takings arena.\(^{250}\) As described by Professor Thomas Merrill, historically, public use analysis has focused upon the ends—the purpose to which the property will be put once taken—as opposed to the means by which the government achieves its goal.\(^{251}\) As legislatures have increasingly turned their attention to socio-economic regulation, however, the courts have become even more deferential to legislative determinations of the proper ends of government.\(^{252}\) In large part, this can be traced to notions of separation of powers—questions regarding the proper ends of government to “demand an exercise in high political theory that most courts today are unwilling (or unable) to undertake,”\(^{253}\) and so the courts often defer to the “more democratic” legislative and executive branches to address these difficult political questions.\(^{254}\)

In sum, although notions of separation of powers and the respective roles of the judiciary and legislature underlie much of the analysis

\(^{247}\) See *Kelo*, 843 A.2d at 579 (Zarella, J., concurring in part and dissenting in part) (“Because public agencies must work hand in glove with private developers to achieve plan objectives, the taking agency may employ the power to favor purely private interests.”); Mansnerus, *supra* note 13, at 434 (stating that “the decisions of local officials, at least more so than those made by larger bureaucracies . . . are especially vulnerable to power private interests”).

\(^{248}\) See Mansnerus, *supra* note 13, at 434 (“[T]he parent agency cannot be expected to assess its own plan soberly, much less to account for a condemnee’s interests.”) (citations omitted).


\(^{251}\) Id. at 64.

\(^{252}\) See id.

\(^{253}\) Id. at 66–67.

\(^{254}\) Id. at 68.
in this area, these concepts are only marginally helpful in delineating where the lines between judicial and legislative questions should be drawn in the takings arena.

Conclusion

The relative roles of the state and federal courts in protecting private property rights are shifting. Half a century of Supreme Court precedent has established that property owners run grave risks in relying upon the U.S. Constitution or the federal courts for protection of their property interests in takings cases. It is perhaps too soon to sound a death knell for federal protection of property rights, as _Kelo_ was a divisive 5–4 decision, and even slight shifts in the Court’s composition could alter future holdings in this area. Nonetheless, current property owners can count on little relief from the federal courts when it comes to their claims of unconstitutional takings.

James Madison wrote in _The Federalist Papers_ that “[g]overnment is instituted no less for the protection of the property, than of the persons of individuals.” Contrary to this lofty statement about the sanctity of private property, the stance regarding property rights protection that has evolved in recent decades in the federal courts in general, and in the Supreme Court in particular, is a curiously weak one. This perhaps reflects the declining stature given to property rights by the federal courts vis-à-vis other types of rights, such as privacy rights or rights afforded to accused criminals. As Justice Thomas noted in his dissent in _Kelo_, it is hard to imagine the Supreme Court declining to address issues of alleged improprieties in police procedures in criminal cases by deferring to legislative determinations of fairness, or by calling upon

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255 See _supra_ notes 44–117 and accompanying text.

256 See _Kelo_, 545 U.S. at 470. Justices Stevens, Kennedy, Souter, Ginsburg, and Breyer joined in the majority opinion, Justice Kennedy filed a concurring opinion, Justices O’Connor, Rehnquist, Scalia, and Thomas joined in a dissenting opinion, and Justice Thomas filed a dissenting opinion.

257 See _supra_ notes 44–117 and accompanying text.


259 See _The Federalist_ No. 54, _supra_ note 258; _Kelo_, 545 U.S. at 517–18 (Thomas, J., dissenting).

260 See _Kelo_, 545 U.S. at 517–18 (Thomas, J., dissenting).
states to adopt more stringent standards. Yet, that is precisely what we find in the takings field.

Perhaps federal courts do not feel the same need to protect rights in eminent domain cases because of the constitutional guarantee of just compensation. Perhaps courts see the just compensation as an equivalency to private property rights, even though property owners do not. Speculation about the federal courts’ motivations, however, is unproductive with respect to the extent and type of relief property owners can hope for from the federal courts. We can see that the Supreme Court itself is not completely comfortable with where its path has taken it, as illustrated by both the split in *Kelo* and the *Kelo* majority’s effort to avoid the more pressing problems created by its lenient standard of review—providing a pretext exception that is hard to articulate and difficult to apply.

Although we could propose new rules for the Supreme Court to adopt in this context, such proposals do little to assist property owners facing the difficult task of challenging takings today. The only realistic advice we can give such property owners is to turn to the state courts. Justice Brennan, in a call to state courts to increase their own levels of scrutiny, stated that “state courts no less than federal courts are and ought to be the guardians of our liberties.”

Under current takings doctrine, state courts certainly offer more hope for property owners challenging takings than do federal courts.

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261 *Id.* (stating that the Court “would not defer to a legislature’s determination . . . when a search of a home would be reasonable, or when a convicted double-murderer may be shackled during a sentencing proceeding without on-the-record findings, or when state law creates a property interest by the Due Process Clause”) (citation omitted); see also James W. Ely, Jr., “Poor Relation” Once More: The Supreme Court and the Vanishing Rights of Property Owners, 2005 Cato Sup. Ct. Rev. 39, 62 (“The Supreme Court does not defer to legislative decisions regarding criminal procedures or the enjoyment of free speech. In fact, among all the guarantees of the Bill of Rights, only the public use limitation is singled out for heavy deference to legislatures.”).

262 See U.S. Const. amend. V. (“[N]or shall private property be taken for public use, without just compensation.”).

263 See Frank I. Michelman, *Property as a Constitutional Right*, 38 Wash. & Lee L. Rev. 1097, 1112 (1981) (Condemnors “cannot be made whole by monetary just compensation . . . . [P]roperty may represent more than money because it may represent things that money itself can’t buy—place, position, relationship, roots, community, solidarity, status—yes, and security too . . . .”). See Cohen, *supra* note 73, at 401–06 (discussing why just compensation alone does not suffice to justify the use of eminent domain).

264 See *supra* notes 49–115 accompanying text.

265 See *Kelo*, 545 U.S. at 470, 478; *supra* notes 109–136 and accompanying text.

266 See *supra* notes 153–177 and accompanying text.

Although the state rules are not completely cast in terms favorable to property owners, the growing recognition by state courts of their power to reject federal doctrine, and to grant more exacting review of legislative decisions to take, offers hope for greater scrutiny of legislative actions and greater protection of property rights in the future. It is a nascent trend, to be sure, but nonetheless a promising one for property owners.
THE ROLE OF NEPA IN FOSSIL FUEL RESOURCE DEVELOPMENT AND USE IN THE WESTERN UNITED STATES

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Abstract: The National Environmental Policy Act (NEPA) has become a legal tool used to slow or prevent the development and use of energy in the United States. This Article reviews the elements of NEPA that are most important in energy project compliance. It then examines recent NEPA case law regarding energy projects in the western United States, including the integration of climate change analysis into the NEPA process. This Article focuses specifically on NEPA compliance by the Department of Energy and the Bureau of Land Management in the Department of the Interior, and concludes that federal agencies are susceptible to NEPA challenges against energy development projects.

Introduction

The nation’s use of fossil fuel results in obvious benefits as well as adverse environmental and economic impacts—for example, the nation’s petroleum consumption is a significant contributor to the U.S.
trade deficit. Nevertheless, the United States has no discernible comprehensive energy policy. The United States is the third most populated nation in the world, and has the highest population growth rate of any developed nation (with a population increase of more than sixty-two million between 1990 and 2012). Moreover, as of 2005, the United States used energy on a per capita basis that was 4.4 times the world average and the seventh highest of developed nations. In 2009, oil consumption in the United States reached 18.69 million barrels per day (mb/d), which is 21.8 percent of the 85.6 mb/d world demand. Per capita use of electric power in the United States was 5.25 times the world per capita use and 1.39 times the per capita use found in high-income countries in 2005. Fossil fuel provides eighty-five percent of all
the energy used in the United States and generates two-thirds of the nation’s electric power. This use of fossil fuel may not be sustainable.

The National Environmental Policy Act (NEPA) can be viewed as a tool to pressure the federal government to develop an energy policy that is sustainable. NEPA is frequently used in conjunction with the Administrative Procedure Act (APA), environmental statutes, and other substantive energy laws to stop or delay fossil energy development. A motivation behind the strategic use of NEPA includes increasing the costs and unpredictability of fossil fuel development in order to make alternative energy a more attractive option. This Article will focus primarily on the use of NEPA to challenge energy-related projects in the western United States. It will address the relevant NEPA requirements and will discuss the recent cases shaping the law on this subject. NEPA requirements apply to actions of the federal government, which includes actions involving land owned by the federal government. Because much of the land in the western United States is federally owned, NEPA may have significant influence over energy policy decisions in the western United States.

This Article begins with an overview of...
NEPA and then evaluates how courts apply NEPA’s regulatory requirements for projects involving energy development. It concludes by establishing the susceptibility of federal agencies to NEPA challenges regarding future energy development projects, especially in light of climate change developments.

I. NEPA Overview

NEPA was signed into law on January 1, 1970. The original version of NEPA consisted of only five pages, but over the ensuing years it more than tripled in size. These expansions, however, did not materially change the Act. Section 101 of NEPA established a “continuing policy of the Federal Government . . . to use all practicable means and measures . . . to create and maintain conditions under which man and
nature can exist in productive harmony.”  

Section 101(b) set out more specific responsibilities including the need for the federal government to act “as trustee of the environment” for future generations and to “achieve a balance between population and resource use.”

To prevent citizens from using the statute as a basis for claiming a right to an unsullied environment, section 101(c) added a provision “that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.”

Thus, NEPA’s section 101 did not appear to impose any significant new obligation on the federal government or provide new legal rights to citizens.

The reason that NEPA became an important environmental law was the action-forcing provision of section 102(2)(C), which required that “every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment” include “a detailed statement by the responsible official.” NEPA requires that this statement include:

(i) the environmental impact of the proposed action,
(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
(iii) alternatives to the proposed action,
(iv) the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity, and
(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

The detailed statement is now called an environmental impact statement (EIS). Section 102(2)(E) buttressed the EIS process by stating that agencies shall “study, develop, and describe appropriate alternatives to

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17 Id.
18 Id. § 101(c), 83 Stat. at 853.
20 Id. § 102(2)(C), 83 Stat. at 853.
recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.”

To carry out the responsibilities created by NEPA, section 202 established a three-member Council on Environmental Quality (CEQ) in the Executive Office of the President. Its duties and functions are set forth in sections 204 and 205 in one page. NEPA is a poorly drafted statute, which may be the result of compromises made to ensure its enactment. NEPA originated in the U.S. Senate’s 1969 bill, S. 1075, introduced by Senator Henry Jackson (D-Wa.). S. 1075 did not contain any provision for judicial review, enforcement, or sanctions for failure of a federal agency to comply. The important “action-forcing” provision requiring an EIS was added after a single day of legislative hearings on the bill. Thus, this provision has virtually no legislative history. NEPA, as enacted, represents a synthesis of the U.S. House of Representatives’ H.R. 6750 and the Senate’s S. 1075, but the important sections—101 through 105—are based on S. 1075. NEPA’s section 209 authorized funding “not to exceed $300,000 for fiscal year 1970, $700,000 for fiscal year 1971, and $1,000,000 for each fiscal year thereafter.” This level of funding signaled that not much would be accomplished under the Act. NEPA also failed to provide for staff to carry out its function. This led Congress to include Title II in the 1970 Federal Water Pollution Control amendment, which included financial provisions to staff the CEQ and implement NEPA. NEPA costs are often integrated into an agency’s responsibilities related to its mission, so determining costs associated solely with NEPA compliance is difficult. Agencies implementing NEPA, however, are permitted to utilize external resources, including personnel; many agencies can

21 Id. § 102(2)(E), 83 Stat. at 853.
pass costs on to others, such as applicants seeking a federal permit or other federal benefits.28

NEPA might have been consigned to the backwater of environmental law but for the aggressive interpretation of its provisions in cases argued by the fledgling environmental law bar in the 1970s before federal courts. Very quickly, case law established the elements needed to make NEPA a useful tool. The courts recognized that conservation groups had standing to bring suits based on “federal question” jurisdiction29 and section 702 of the APA.30 One of the most important cases that shaped NEPA jurisprudence was Calvert Cliffs’ Coordinating Committee, Inc. v. U.S. Atomic Energy Commission.31 Judge J. Skelly Wright criticized the Agency’s “crabbed interpretation of NEPA [that] makes a mockery of the Act.”32 He added, “NEPA was meant to do more than regulate the flow of papers in the federal bureaucracy.”33 NEPA requires compliance “to the fullest extent possible.”34 Today it is accepted that agency actions under NEPA can be appealed to a federal district court based on the APA’s requirement that agency action must not be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.”35 The courts have interpreted the APA to require an agency to find and record facts that provide a rational basis for its decision, which has become known as the “hard look” doctrine.36

Although NEPA provides no sanctions for a failure to comply, judges have used their equity power to enjoin a project from moving forward until NEPA’s requirements are satisfied. The first major case under NEPA involved a Department of the Interior (Interior) permit

32 449 F.2d at 1117.
33 Id.
34 Id. at 1118 (quoting National Environmental Policy Act of 1969 § 102, 42 U.S.C. § 4332 (2006)).
35 5 U.S.C. § 706(2)(A); see, e.g., Te-Moak Tribe of Nev. v. U.S. Dep’t of Interior, 608 F.3d 592, 607 (9th Cir. 2010) (holding agency action to be arbitrary and capricious under APA).
36 See, e.g., Native Ecosystems Council v. Tidwell, 599 F.3d 926, 929, 933 (9th Cir. 2010).
needed for a road to cross federal land to build the Trans-Alaska Pipeline. On April 23, 1970, the U.S. District Court for the District of Columbia enjoined the issuance of the permit until Interior complied with NEPA’s section 102(2)(C).\footnote{Wilderness Soc’y v. Morton, 479 F.2d 842, 887, 893 (D.D.C. 1973).} To obtain an injunction a party must demonstrate that it has suffered an irreparable injury, the absence of an adequate legal remedy, that the balance of the relative hardships between the parties favors the issuance of an injunction, and that the remedy is the public interest.\footnote{eBay, Inc. v. MercExchange, LLC, 547 U.S. 388, 391 (2006). Money damages are usually considered an inadequate remedy in environmental cases. See Amoco Prod. Co. v. Vill. of Gambell, 480 U.S. 531, 545 (1987).} Injunctive relief is not automatic, however, and sometimes a partial injunction is appropriate.\footnote{See, e.g., Weinberger v. Romero-Barcelo, 456 U.S. 305, 313 (1982).} “The district court has broad latitude in fashioning equitable relief when necessary to remedy an established wrong.”\footnote{Alaska Ctr. for Env’t v. Browner, 20 F.3d 981, 986 (9th Cir. 1994); see N. Cheyenne Tribe v. Norton, 503 F. 3d 836, 843 (9th Cir. 2007).}

The rapid development of case law concerning compliance with the EIS process led the CEQ to issue guidelines summarizing the law on NEPA section 102 on April 23, 1971.\footnote{Statements on Proposed Federal Actions Affecting the Environment, 36 Fed. Reg. 7724, 7724 (Apr. 23, 1971).} These guidelines evolved into regulations in 1978.\footnote{National Environmental Policy Act—Regulations, 43 Fed. Reg. 55,990, 55,978–56,007 (Nov. 28, 1978).} The regulations require agencies to provide high quality environmental information to citizens and public officials before a decision can be made.\footnote{40 C.F.R. § 1500.1(b) (2011).}

NEPA requires an EIS to be prepared whenever a proposal involves a major federal action that will significantly affect the quality of the human environment.\footnote{See National Environmental Policy Act of 1969 § 102(2)(C), 42 U.S.C. § 4332(2)(C) (2006); 40 C.F.R. §§ 1508.18, .27 (defining “Major Federal action” and “Significantly,” respectively).} Regulations promulgated to implement NEPA have modified this requirement. The regulations provide for the use of draft, final, and supplemental EISs (DEISs, FEISs, SEISs, respectively) and the use of “tiering” to avoid repetitive coverage of material.\footnote{See infra notes 300–590 and accompanying text.} The DEIS has a recommended format.\footnote{40 C.F.R. §§ 1502.10–.13.} It must include consultation with
agencies preparing studies mandated by specified environmental laws and the comments of federal agencies that have “jurisdiction by law or special expertise with respect to any environmental impact involved.”

To determine whether an EIS is required, federal agencies may prepare an environmental assessment (EA). The EA “[s]hall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.” The EA must foster informed decision making and public participation. Then, if, based on the EA, the agency finds the proposed action will produce no significant impact on the environment, it can choose not to prepare an EIS by issuing a finding of no significant impact (FONSI). The D.C. Circuit articulated a four-part test to scrutinize an agency’s FONSI. The court will determine: (1) whether the agency took a “hard look” at the proposal; (2) whether “the relevant areas of environmental concern” were addressed; (3) whether the agency made a convincing determination that the environmental impact was insignificant; and (4) if the impact is significant, whether the changes in the proposed project will sufficiently reduce the adverse environmental impact.

An agency must comply with NEPA’s documentation requirements before it makes “any irreversible and irretrievable commitment of resources.” At the time of decision, the agency must prepare a concise Record of Decision (ROD) that identifies the alternatives considered and the relevant factors used by the agency in making its decision, and the mitigation, monitoring, and enforcement measures selected to avoid environmental harm.

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47 Id. § 1502.25.
48 Id. § 1503.1(a)(1).
49 Id. § 1501.4(b)–(c).
50 Id. § 1508.9(b).
52 40 C.F.R. § 1501.4(e).
53 Sierra Club v. Peterson, 717 F.2d 1409, 1413 (D.C. Cir. 1983) (internal quotation marks omitted).
54 Id.
55 Metcalf v. Daley, 214 F.3d 1135, 1143 (9th Cir. 2000) (quoting Conner v. Burford, 848 F.2d 1441, 1446 (9th Cir. 1988)).
56 40 C.F.R. § 1505.2.
NEPA requires a process for determining the scope of the EIS in order to identify the significant issues to be addressed.\textsuperscript{57} NEPA requires discussion of both the direct and indirect environmental consequences.\textsuperscript{58} In \textit{Department of Transportation v. Public Citizen}, the Supreme Court explained that there must be "a reasonably close causal relationship" between the environmental effect and the alleged cause.\textsuperscript{59} The causal relationship requirement is analogous to the tort law doctrine of proximate cause.\textsuperscript{60} Satisfying the "but for" test, also used in tort law, is insufficient to establish a causal relationship under NEPA.\textsuperscript{61} Agencies must circulate DEISs and FEISs to federal agencies with special expertise or jurisdiction, to appropriate state or local agencies, and to other persons or organizations requesting the documents.\textsuperscript{62} The agency preparing the EIS must request comments and respond to any received.\textsuperscript{63} When issuing its decision, the agency must develop a ROD that includes a discussion of alternatives and the factors leading to the agency’s selection of a course of action, as well as the steps taken to minimize environmental harm and the mitigation measures that are to be applied.\textsuperscript{64}

NEPA regulations require agencies to "review their policies, procedures, and regulations accordingly and revise them as necessary to assure full compliance with the purposes and provisions of the Act."\textsuperscript{65} The regulations require agencies to adopt implementing procedures that include identifying actions that normally require an EA or EIS and those that do not.\textsuperscript{66} The Department of Energy (DOE), for example, promulgated its NEPA compliance regulations on April 24, 1992.\textsuperscript{67}

The NEPA regulations of 1978 were promulgated at a time when the Supreme Court was working to undo expansive pro-environment

\textsuperscript{57} Id. § 1501.7.
\textsuperscript{58} Id. §§ 1502.16(a)–(b), 1508.8.
\textsuperscript{60} Id.
\textsuperscript{61} Id.
\textsuperscript{62} 40 C.F.R. § 1502.19.
\textsuperscript{63} Id. §§ 1503.1–.4.
\textsuperscript{64} Id. §§ 1505.2–.3.
\textsuperscript{65} Id. § 1500.6.
\textsuperscript{66} Id. § 1507.3(b) (2)(i)–(iii).
decisions of the lower courts. The Court made several important distinctions that limited the scope of environmental review and allowed agencies great discretion as long as they complied with the procedural requirements of NEPA.

In Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., the Court held that NEPA’s requirements are “essentially procedural,” ending efforts by environmentalists to establish substantive rights under NEPA. In Strycker’s Bay Neighborhood Council, Inc. v. Karlen the Court upheld the Department of Housing and Urban Development’s decision to reject an alternative that was environmentally preferable, emphasizing that any change would cause delay. The Court reiterated that once an agency meets its procedural requirements under NEPA, “the only role for a court is to ensure that the agency has considered the environmental consequences” of its actions.

An agency’s action or inaction under NEPA can be challenged in a federal district court. A Ninth Circuit decision dramatically increased the number of potential defendants, allowing non-federal defendants to intervene in NEPA cases. The scope of review is based on the APA’s standard that agency action may not be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” The court limits its review of an agency’s decision to whether a satisfactory explanation of the agency’s action was articulated and there is “a rational connection between the facts found and the choice made.” An agency decision is arbitrary and capricious if it relies on factors Congress did not intend to be part of the review, if it failed to consider important aspects of the proposal, or if the agency’s explanation for its actions either runs counter to the evidence or is implausible. NEPA’s primary requirement is that the agency preparing an EA or EIS takes a hard

69 435 U.S. 519, 558 (1978); see Kalen, supra note 68, at 7.
71 Id. at 227–28 (citing Vermont Yankee, 435 U.S. at 558).
72 Wilderness Soc’y v. U.S. Forest Serv., 630 F.3d at 1176.
75 Friends of the Bow v. Thompson, 124 F.3d 1210, 1215 (10th Cir. 1997).
look at the environmental impacts of a proposal. Courts use this hard look test to ensure an “agency has adequately considered and disclosed the environmental impact of its [proposed] actions.”

In *Western Watersheds Project v. Kraayenbrink*, for example, environmental organizations challenged the Bureau of Land Management’s (BLM’s) revisions to nationwide grazing regulations based on NEPA, the Endangered Species Act (ESA), and the Federal Land Policy and Management Act. The BLM’s regulatory changes would have reduced public participation in the grazing management policies, given federal water rights to grazing lessees—with adverse consequences for wildlife—and made it significantly more difficult for the BLM to deal with grazing violations. To accomplish this, the BLM ignored the concerns of state agencies, the Environmental Protection Agency (EPA), the Fish and Wildlife Service, and its own experts. The Ninth Circuit concluded that “BLM violated NEPA by failing to take a hard look at the environmental consequences of the proposed regulatory amendments.” The court also noted that because the BLM was changing its regulations, a reasoned explanation “including a rational connection between the facts found and the choice made” was required. Such an explanation was not provided, and thus the BLM’s decision that its action would have no significant environmental impact was arbitrary and capricious.

The overarching goal of NEPA is to require federal agencies to consider environmental issues before acting. “The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” As will be discussed in more detail, NEPA is now being interpreted to require the considera-

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78 632 F.3d 472, 476–77 (9th Cir. 2011).
79 Id. at 479–81.
80 Id. at 492.
81 Id. at 493 (internal quotation marks omitted).
82 Id. at 494.
83 Id. at 495.
85 40 C.F.R. § 1500.1(c) (2010).
tion of global climate change as it relates to decisions within an agency’s jurisdiction. If a federal agency does not comply with NEPA, a legal challenge can be used to slow the progress of proposed projects. Because NEPA is primarily limited to achieving procedural compliance, eventually a federal agency will produce a document that meets the statute’s requirements. However, delay can result in the applicable law being changed or a project being abandoned by an applicant. In addition, many cases involving challenges to development also involve claims based on other federal environmental and land management statutes, particularly the ESA, and NEPA-based claims may help buttress such challenges to government actions.

The EPA must “comply with the procedural requirements of NEPA for its research and development activities, facilities construction, wastewater treatment construction grants under Title II of the Clean Water Act (CWA), EPA-issued National Pollutant Discharge Elimination System permits for new sources, and for certain projects funded through EPA annual Appropriations Acts.” Other EPA actions under the CWA are exempt from the requirements of NEPA. Actions under the Clean Air Act (CAA) are exempt from the requirements of NEPA. The Comprehensive Environmental Response, Compensation, and Liability Act also exempts the EPA from the procedural requirements of environmental laws for its response actions. Courts have held “that EPA procedures or environmental reviews under enabling legislation are functionally equivalent to the NEPA process” and consequently exempt from NEPA’s procedural requirements.

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86 See infra notes 817–879 and accompanying text.
88 See Axtell, supra note 87, at 336.
89 See Ackman, supra note 87, at 332, 340–41.
91 See, e.g., Or. Natural Res. Council v. Goodman, 505 F.3d 884, 892 (9th Cir. 2007).
95 Notice of Policy and Procedures, supra note 92, at 58,046.
96 Id.
The EPA has had a policy of voluntarily preparing EAs since 1974, which became formalized on October 29, 1998. The policy explains that the “EPA will prepare an EA or, if appropriate, an EIS on a case-by-case basis . . . where the Agency determines that such an analysis would be beneficial.” The policy lists the criteria for making such a determination and identifies various statutes implicating NEPA, with the CAA as the most applicable to energy development.

Based on section 309 of the CAA, the EPA also has an oversight responsibility to review and comment on the environmental impact of legislation, federal construction projects, major federal actions, and proposed regulations published by any federal agency. This provides the EPA with leverage to influence federal agency actions. If the Administrator determines any legislation, action, or regulation adversely impacts public health, welfare, or environmental quality, they can publish this determination and refer the matter to the CEQ.

In addition to complying with NEPA, executive orders require federal agencies to meet more challenging environmental protection goals. Executive Order 13,175 of November 6, 2000, requires an assessment of an action’s impact on tribal trust resources. Executive Order 13,211 of May 18, 2001, requires a report for energy related actions that may have an adverse effect on distribution, use, or supply. Executive Order 13,212 of May 18, 2001, requires agencies to expedite energy-related projects by streamlining internal processes “while maintaining safety, public health, and environmental protections.” Executive Order 13,423 of January 24, 2007, imposes requirements that go beyond the goals of the Energy Policy Act of 2005. It calls for federal agencies to reduce their energy intensity and to increase the use of re-

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98 Notice of Policy and Procedures, supra note 92, at 58,045–47.
99 Id. at 58,046.
100 Id. at 58,047.
102 Id. § 7609(b).
newable energy.\textsuperscript{107} Issued on October 5, 2009, Executive Order 13,514 expanded the energy reduction and environmental performance requirements of Executive Order 13,423 by directing each federal agency to develop a strategic plan to further reduce greenhouse gas (GHG) emissions.\textsuperscript{108} The CEQ released guidance for implementing Executive Order 13,514 on March 4, 2011.\textsuperscript{109} The instructions call on each agency to issue climate change adaptation plans that address the challenges posed by climate change to the agency’s mission, programs, and operations.\textsuperscript{110} The Strategic Plan for each agency was to be submitted to the CEQ and to the Office of Management and Budget by June 4, 2012.\textsuperscript{111}

A. Major Federal Action

NEPA requires that the federal government prepare a detailed statement of the environmental impact of proposed “major Federal actions significantly affecting the quality of the human environment.”\textsuperscript{112} Section 102 requires that agencies comply “to the fullest extent possible.”\textsuperscript{113} “To the fullest extent possible” means that federal agencies must act in accordance with the statute unless other statutory requirements demand otherwise.\textsuperscript{114} The term “major” reinforces the term “significantly” but does not have an independent meaning.\textsuperscript{115}

If there is a substantial question whether an action may have a “significant effect” on the environment, then the agency must prepare

\textsuperscript{107} Exec. Order No. 13,423, 3 C.F.R. § 193.
\textsuperscript{111} Federal Agency Strategic Sustainability Performance Plans, supra note 110.
\textsuperscript{113} Id. § 4332.
\textsuperscript{114} 40 C.F.R. § 1500.6 (2011); see id. § 1507.3(b) (requiring agencies to comply with the regulations therein except where compliance would be inconsistent with statutory requirements).
\textsuperscript{115} Id. § 1508.18.
an EIS.\textsuperscript{116} Whether a proposed action will have a significant effect on the environment requires consideration of context and intensity.\textsuperscript{117} Context refers to the scope of the proposed action, including the interests affected.\textsuperscript{118} Intensity includes the cumulative effects, future effects, and the potential impact on endangered or threatened species or their habitat.\textsuperscript{119} Intensity concerns factors such as: (1) beneficial and adverse impacts; (2) effects on public health or safety; (3) unique characteristics of the geographic area including proximity to wetlands, cultural or historic resources, park lands, or ecologically critical areas; (4) the degree to which the effects are likely to be highly controversial;\textsuperscript{120} (5) the degree to which the environmental effects are uncertain or involve unknown or unique risks; (6) the degree to which the action may set a precedent; (7) whether the action is related to others that have individually insignificant but cumulatively significant impacts;\textsuperscript{121} (8) the degree to which the action may adversely affect places listed in the National Register of Historic Places or may cause the loss or destruction of significant historical, cultural, or scientific resources; (9) the degree to which the action may have an adverse effect on a threatened or endangered species or its habitat; and (10) whether the action risks violating federal, state, or local law or requirements that protect the environment.\textsuperscript{122}

From the inception of NEPA litigation, courts have rejected NEPA applicability to truly minor federal actions. For example, in 1972, a federal judge held that a cold-weather training exercise by nine hundred marines bivouacking in Maine’s Reid State Park was not a major federal action.\textsuperscript{123} Parties continue to bring claims that minor actions are in fact major actions. For example, in \textit{City of Los Angeles v. National Highway

\textsuperscript{116} See, e.g., Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1212 (9th Cir. 1998).

\textsuperscript{117} 40 C.F.R. § 1508.27.

\textsuperscript{118} Id. § 1508.27(a).

\textsuperscript{119} See id. § 1508.27(b).

\textsuperscript{120} Id. § 1508.27(b)(4). Controversy is “where a substantial dispute exists as to the size, nature, or effect of the major federal action rather than to the existence of opposition to a use.” Rucker v. Willis, 484 F.2d 158, 162 (4th Cir. 1973).

\textsuperscript{121} 40 C.F.R. § 1508.27(b)(7). The cumulative impact is that which results from the aggregation of other past, present, and reasonably foreseeable future actions, regardless of which agency undertakes the actions. \textit{Id.} § 1508.7. Even minor actions can aggregate cumulative impacts over time. \textit{Id.}

\textsuperscript{122} Id. § 1508.27(b).

Traffic Safety Administration, the court held that the plaintiff had standing to bring a NEPA case, but a one mile per gallon change in the Corporate Average Fuel Economy standard was not significant enough to trigger the need for an EIS.\(^{124}\) The threshold for determining what is a major federal action is low.\(^{125}\)

An energy case interpreting what constitutes “significant” is Anglers of the Au Sable v. U.S. Forest Service.\(^{126}\) The case involved an action by one private citizen and two environmental groups who alleged that the BLM and the Forest Service violated three federal acts by approving gas and oil drilling within the Huron-Manistee National Forest. The plaintiffs asked for review of the agencies’ decisions, as well as declaratory and injunctive relief. They also alleged violations of NEPA, the National Forest Management Act, the Mineral Leasing Act, and the APA, claiming the BLM and the Forest Service conducted an inadequate EA, improperly issued a FONSI, and failed to prepare an EIS regarding the project.\(^{127}\)

The district court held that the defendants failed to comply with the procedural requirements of NEPA in determining that the project would have no significant impact, but the Forest Service did not violate either the National Forest Management Act or the Mineral Leasing Act.\(^{128}\) The court agreed with a magistrate’s report, finding that: (1) the defendants failed to comply with NEPA’s procedural requirements; (2) the EA was faulty; and thus (3) the FONSI was incorrect.\(^{129}\) The magistrate did not address the plaintiffs’ claims under the Mineral Leasing Act or National Forest Management Act—which resulted in summary judgment for the defendants.\(^{130}\)

The court concluded “[t]he Forest Service acted arbitrarily and capriciously in finding that the leaseholder’s . . . proposed drilling project would have no significant environmental impact.”\(^{131}\) The court found that the defendants did not adequately address four of the CEQ’s intensity factors in issuing the FONSI.\(^{132}\) “[T]he Forest Service

\(^{124}\) 912 F.2d 478 (D.C. Cir. 1990).
\(^{125}\) See 40 C.F.R. § 1508.18.
\(^{127}\) Id. at 815.
\(^{128}\) Id. at 840.
\(^{129}\) Id. at 815.
\(^{130}\) Id.
\(^{131}\) Id.
\(^{132}\) Anglers, 656 F. Supp. 2d at 816.
failed to study the possible impact of the project on the unique recreational characteristics” of the impacted area including the impact “on tourism at the local, county, and state levels.”\textsuperscript{133} Moreover, the effects of the project were highly uncertain, and the Agency failed to explain the lack of better data.\textsuperscript{134} The court also found the biological assessment to be “woefully inadequate” in assessing the impact of the project on the endangered Kirtland’s warbler.\textsuperscript{135}

In addition, “the Forest Service did not consider an appropriate range of alternatives to [the] proposed drilling project as required by NEPA and CEQ regulations.”\textsuperscript{136} According to NEPA, an agency must consider a project’s appropriate alternatives that might affect the cost-benefit balance.\textsuperscript{137} Moreover, an agency may not use its own objectives to prevent the consideration of meaningful alternatives.\textsuperscript{138} The Forest Service did not take the required hard look at the “No Action” alternative and did not consider alternative locations for the drilling site.\textsuperscript{139} The Court declared the EA and the FONSI inadequate, and enjoined the defendants from authorizing the project.\textsuperscript{140}

To achieve consistency in the determination of what constitutes a major federal action, CEQ regulations call for federal agencies to identify three classes of actions: (1) those that normally require an EIS; (2) those that normally do not require either an EIS or an EA (categorical exclusions); and (3) those that normally require EAs but do not necessarily require an EIS.\textsuperscript{141} The most common technique agencies use for avoiding NEPA’s requirement for drafting an EA or EIS is the categorical exclusion.\textsuperscript{142}

\textsuperscript{133} Id.
\textsuperscript{134} Id.
\textsuperscript{135} Id.
\textsuperscript{136} Id.
\textsuperscript{137} Id.
\textsuperscript{138} Anglers, 565 F. Supp. 2d at 816
\textsuperscript{139} Id.
\textsuperscript{140} Id. at 817.
\textsuperscript{141} 40 C.F.R. § 1507.3(b) (2011). Categorical exclusions are defined at 40 C.F.R. § 1508.4.
Categorical exclusions are defined as actions that do not individually or cumulatively have a significant effect on the human environment using the procedures set out in CEQ regulations.\textsuperscript{143} The application of a categorical exclusion is not allowed if there are “extraordinary circumstances” that indicate a specific activity may have a significant environmental effect.\textsuperscript{144} The DOE’s supplemental regulations provide guidelines for when an agency may use categorical exclusions—only if “[t]here are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.”\textsuperscript{145} The regulations further describe extraordinary circumstances as “unique situations presented by specific proposals, such as scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; or unresolved conflicts concerning alternate uses of available resources within the meaning of section 102(2)(E) of NEPA.”\textsuperscript{146}

On November 23, 2010, the CEQ issued its final guidance on how federal agencies should establish, apply, and revise categorical exclusions.\textsuperscript{147} The guidance includes the admonition that agencies must consider whether extraordinary circumstances exist when evaluating whether a categorical exclusion applies.\textsuperscript{148} An example of extraordinary circumstances in energy development projects is the potential for impacting protected species habitat under the ESA.\textsuperscript{149} In California v. Norton, for example, Interior failed to prepare an EA or an EIS before granting oil and gas lease suspensions based on its claimed categorical exclusion.\textsuperscript{150} The Ninth Circuit affirmed the lower court’s holding that the claimed categorical exclusion was not adequately documented.\textsuperscript{151} The record showed the lease suspensions could affect the threatened southern sea otter, the Monterey Bay National Marine Sanctuary, and

\begin{thebibliography}{99}
\bibitem{2012} 40 C.F.R. §§ 1507.3, 1508.4.
\bibitem{2012} Id. § 1508.4.
\bibitem{2012} Id.
\bibitem{2012} Id.
\bibitem{2012} Id.
\bibitem{2012} Final Guidance for Federal Departments and Agencies on Establishing, Applying, and Revising Categorical Exclusions Under the National Environmental Policy Act. 75 Fed. Reg. 75,628 (Dec. 6, 2010). The guidance does not apply to “categorical exclusions established by statute.” Id. at 75,631 n.6.
\bibitem{2012} Id. at 75,629.
\bibitem{2012} See id.
\bibitem{2012} See 311 F.3d 1162, 1175 (9th Cir. 2002).
\bibitem{2012} Id. at 1165.
\end{thebibliography}
the Channel Islands National Marine Sanctuary. The court held that if any of the exceptions to the categorical exclusion apply, a categorical exclusion may not be utilized to avoid NEPA-based requirements. Moreover, prior to making a decision, the agency must consider the environmental consequences of its actions and make a factual determination that a categorical exclusion applies. CEQ guidance identifies the documentation that may be needed to utilize a categorical exclusion.

DOE lists its categorical exclusions within its regulations, however, categorical exclusions may also be established by statute. For example, the Energy Policy Act of 2005 included five categorical exclusions for oil and gas development, but the Act is silent concerning whether the limitation on the use of categorical exclusions is applicable when there are extraordinary circumstances. The BLM took advantage of this silence by issuing 2000 drilling permits in fiscal year 2006 and part of fiscal year 2007 without a review for extraordinary circumstances.

B. Considering Alternatives

CEQ’s NEPA policy is “to emphasize real environmental issues and alternatives” and to use the NEPA process to “assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects” on the human environment. CEQ regulations require that an EIS “shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the pro-

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152 Id. at 1176.
153 Id. at 1177 (citing National Environmental Policy Act: Revised Implementing Procedures, 49 Fed. Reg. 21,437, 21,439 (May 21, 1984)).
154 See id. at 1176 (citing Comm. for Idaho’s High Desert v. Collinge, 148 F. Supp. 2d 1097, 1103 (D. Idaho 2001)).
158 See id. § 15,942(b).
159 Stephanie Young, Categorical Exclusions: Are Agencies Silencing the Public’s Voice?, NAT. RESOURCES & ENV’T, Spring 2009, at 39, 43.
160 40 C.F.R. § 1500.2(b), (e) (2010).
posed action.”  Externally generated proposals may be used for back-
ground information, but the agency is responsible for an independent
statement of purpose and need.

Agencies are to develop appropriate alternatives for “any proposal
which involves unresolved conflicts concerning alternative uses of avail-
able resources.” This requirement is extended by NEPA to include all
proposals, not just those included in an EIS review. The EIS shall
state whether considered alternatives meet the requirements of NEPA
and other environmental laws and policies. The alternatives analyzed
by an EIS shall include those considered by the “ultimate agency deci-
sionmaker.” Prior to making a decision, an agency shall not invest
resources that might prejudice the selection of alternatives. The al-
ternatives analysis is considered “the heart of the [EIS]” and is to be
presented in comparative form so as to provide “a clear basis for choice
among options by the decisionmaker and the public.” An agency
must analyze significant alternatives that are called to its attention by
other agencies, organizations, communities, and members of the pub-
lic.

When performing an alternatives analysis, an agency must follow
six requirements. First, an agency must thoroughly consider and
evaluate all reasonable alternatives, and must explain the basis for ex-
cluding any alternative from future detailed study. Second, an agency
must consider each alternative in detail so that reviewers may objec-
tively evaluate the merits of each option. Third, an agency must in-
clude alternatives outside its own jurisdiction. Fourth, it must include
any “no action” alternative. Fifth, an agency must identify its pre-

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161 Id. § 1502.13.
162 Id.
163 Id. § 1501.2(c).
164 Id. § 1507.2(d).
165 Id. § 1502.2(d).
166 40 C.F.R. § 1502.2(c); see id. § 1505.1(e).
167 Id. § 1502.2(f); see id. § 1506.1(a).
168 Id. § 1502.14.
169 Seacoast Anti-Pollution League v. Nuclear Regulatory Comm’n, 598 F.2d 1221, 1230
(1st Cir. 1979).
171 Id. § 1502.14(a).
172 Id. § 1502.14(b).
173 Id. § 1502.14(c).
174 Id. § 1502.14(d).
ferred alternative in both the draft statement and the final state-
ment. Finally, an agency’s alternatives analysis must include any miti-
gation measures not already considered in the proposed action or al-
ternatives.

The range of impacts considered in an EIS may be direct, indirect, or cumulative. One alternative that receives inadequate attention in the NEPA process is the use of consumption reducing techniques. Many scholars have addressed the increase in GHG emissions due to increases in per capita use of energy, but the growth in energy use does not appear to be an important concern to those charged with analyzing alternatives when complying with NEPA.

The seminal natural resource case dealing with alternatives, de-
cided by the D.C. Circuit, is *Natural Resources Defense Council, Inc. v. Morton*. That case involved an oil and gas lease sale located off the coast of Louisiana. The court required Interior to consider the elimination or reduction of the oil import quota as a viable alternative in the EIS,

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175 Id. § 1502.14(e). Should another law prohibit the expression of such a preference, an agency need not meet this requirement. Id.

176 40 C.F.R. § 1502.14(f).

177 Id. § 1508.25(c).


179 See, e.g., Kaswan, supra note 178; Salzman, supra note 178, at 1245; Vandenbergh, supra note 178, at 542; Kysar & Vandenbergh, supra note 178, at 10,828.


182 Morton, 458 F.2d at 829.
even though it was not within the authority of the agency.\textsuperscript{183} The court also held that agencies need not consider alternatives such as oil shale, tar sands, geothermal resources, or other alternative energy sources because at that time these energy sources were not well developed and could not be adequately analyzed.\textsuperscript{184}

In \textit{Colorado Environmental Coalition v. Dombeck}, the Tenth Circuit ruled on NEPA claims involving U.S. Forest Service approval of a ski area expansion.\textsuperscript{185} The court addressed the claim that the impact on the lynx population was not adequately evaluated as part of an alternatives analysis.\textsuperscript{186} The court noted that NEPA “does not require agencies to analyze the environmental consequences of alternatives it has in good faith rejected as too remote, speculative . . . impractical or ineffective.”\textsuperscript{187} NEPA does require, however, information “sufficient to permit a reasoned choice of alternatives as far as environmental aspects are concerned.”\textsuperscript{188} The court noted that some courts, including the Seventh Circuit, have interpreted this requirement to prevent agencies from defining their objectives in unreasonably narrow terms so as to favor a desired alternative like the applicant’s proposed project.\textsuperscript{189}

The Tenth Circuit went on to say that there are no hard and fast rules to guide the alternatives analysis: “Our task, then, is to determine whether the Forest Service stepped outside the established parameters by declining to give more attention to the Conservation Biology Alternative the Appellants prefer, or, stated differently, whether the alternatives analysis provided satisfies the rule of reason.”\textsuperscript{190} The court held that the Forest Service was fully authorized “to limit its consideration to expansion alternatives designed to substantially meet the recreation development objectives of the Forest Plan.”\textsuperscript{191} As such, the court held the statements of purpose and need that the Forest Service drafted to guide the environmental review process for the proposed expansion

\textsuperscript{183} \textit{Id.} at 834–35.
\textsuperscript{184} \textit{Id.} at 837.
\textsuperscript{185} 185 F.3d 1162, 1165 (10th Cir. 1999).
\textsuperscript{186} \textit{Id.} at 1165, 1168.
\textsuperscript{187} \textit{Id.} at 1174 (quoting \textit{All Indian Pueblo Council v. United States}, 975 F.2d 1437, 1444 (10th Cir. 1992)) (internal quotation marks omitted).
\textsuperscript{188} \textit{Id.} (quoting \textit{Pueblo Council}, 975 F.2d at 1444) (citations omitted) (internal quotation marks omitted).
\textsuperscript{189} \textit{Id.}.
\textsuperscript{190} \textit{Id.} at 1175.
\textsuperscript{191} \textit{Dombeck}, 185 F.3d at 1175.
were not “unreasonably narrow.” The court stated that “the Forest Service provided a reasonable explanation for declining to further consider the Conservation Biology Alternative in accordance with 40 C.F.R. § 1502.14(a)”.

This case is particularly applicable to energy development cases because it provides insight into the application of NEPA to cases involving ideological differences. The plaintiffs wanted the Tenth Circuit to protect wilderness values while the Forest Service was carrying out multiple use management, which included providing expanded recreational opportunities. The Tenth Circuit appears to shape its NEPA review to accommodate the reality that development is not inconsistent with maintaining a pristine environment, and NEPA requirements should not inhibit development.

Although NEPA imposes an obligation on an agency to consider alternatives, the courts have rejected intervenors’ efforts to vacate an agency’s EIS because the agency failed to consider an alternative that was not brought to its attention. If a court bases its rejection of an EIS on alternatives of concern to intervenors, the intervenors must identify those alternatives or forfeit judicial review. Because many proposed energy projects require water for development, an alternatives analysis may need to consider reasonable uses of the water for purposes unrelated to the proposed energy project. For example, in a case involving the expansion of a ski resort on national forest lands, the First Circuit held that the Forest Service failed to examine reasonable alternatives to the use of water for snowmaking.

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192 Id.
193 Id. at 1176.
194 Id. at 1165.
195 Id.
196 See id. at 1166 & n.1 (discussing the conflict between ski area development in Vail and preservation of natural habitats).
199 U.S. DEP’T OF ENERGY, ENERGY DEMANDS ON WATER RESOURCES: REPORT TO CONGRESS ON THE INTERDEPENDENCY OF ENERGY AND WATER 9 (2006), available at http://www.rivernetwork.org/sites/default/files/EnergyDemands_0.pdf (“Water is an integral element of energy resource development and utilization. It is used in energy-resource extraction, refining and processing, and transportation.”).
200 See, e.g., Dubois v. U.S. Dep’t. of Agric., 102 F.3d 1273, 1288 (1st Cir. 1996).
201 Id.
C. Mitigation

CEQ regulations require an agency to discuss possible mitigation measures in an EIS.\(^{202}\) On January 21, 2011, the CEQ released guidance concerning how GHG mitigation and monitoring should be treated in the NEPA process, but it does not independently establish legally binding requirements.\(^ {203}\) The guidance, however, is based on CEQ regulations and executive orders that impose legally binding requirements.\(^ {204}\) It is aimed at improving federal agencies’ procedures for dealing with mitigation.\(^ {205}\) The guidance states that mitigation measures should be explicitly described, and include measurable performance standards.\(^ {206}\) The appendix includes an overview of a regulation adopted by the Department of the Army, which the CEQ approves as a model that satisfies the mitigation and monitoring requirements.\(^ {207}\) Mitigation can be part of the integral components of a proposed project’s design or can be alternatives that are considered in the EA or EIS.\(^ {208}\) An EA can identify mitigation measures that reduce the potentially significant environmental effects of proposed actions that would otherwise require preparation of an EIS.\(^ {209}\) This could allow the agency to issue a FONSI or a “mitigated FONSI” if the agency makes a commitment to ensure the mitigation supports the FONSI.\(^ {210}\)

The guidance sets out five functions of mitigation. Mitigation includes:

\[(1)\] Avoiding an impact by not taking a certain action or parts of an action; \[(2)\] Minimizing an impact by limiting the degree or magnitude of the action and its implementation; \[(3)\] Rectifying an impact by repairing, rehabilitating, or re-
storing the affected environment; [(4)] Reducing or eliminating an impact over time, through preservation and maintenance operations during the life of the action; and [(5)] Compensating for an impact by replacing or providing substitute resources or environments.211

All mitigation should be explicitly described as on-going commitments and subject to measurable performance standards with adequate implementation, monitoring, and reporting mechanisms included.212 If mitigation commitments are used as either a viable alternative or to avoid the need for an EIS, they should specify measurable performance standards and set clear performance expectations.213 “[T]he decision document following the EA should—and a [ROD] must—identify those mitigation measures that the agency is adopting and committing to implement, including any monitoring and enforcement program applicable to such mitigation commitments.”214 If mitigation commitments are required to reduce environmental impacts below significant levels for a FONSI, they should be clearly identified as necessary, and detailed mitigation plans must be developed and implemented.215 Once an agency has approved mitigation commitments, it should implement internal procedures to make sure “relevant funding, permitting, or other agency approvals and decisions are made conditional on performance of mitigation commitments.”216

If the agency does not undertake mitigation commitments or finds them to be ineffective, the agency should consider whether further NEPA remedies, including preparing an EIS, are needed.217 The agency should only undertake such remedies if it determines that some portion of the federal action remains to be completed and that there are opportunities to address the mitigation failure.218 Adaptive management or providing for alternative mitigation measures can help the agency react to mitigation failures.219 Monitoring is a key focus of the

213 Id. at 3848–49.
214 Id.
215 Id.
216 Id.
217 Id. at 3851.
218 76 Fed. Reg. at 3851.
219 Id. at 3849.
guidance, and agencies are encouraged to monitor to ensure that mitigation commitments are carried out and provide the expected benefits. Monitoring is required for EIS mitigation commitments as well as other mitigation deemed “important” by the agency, which would include mitigation necessary to support a FONSI. The federal agency is responsible for monitoring and ensuring that monitoring information is available either online or in print. The public should be involved in mitigation and monitoring when such involvement is deemed appropriate. This may not be the case in all situations, and needs such as privacy or confidentiality should be weighed against the benefits of disclosing the information.

In Neighbors of Cuddy Mountain v. U.S. Forest Service, the Ninth Circuit ruled the EIS’s description of proposed mitigation measures were inadequate in a case involving timber sales in an area of existing old-growth habitat used by the pileated woodpecker and the redband trout. The Forest Service acknowledged the negative impact an increase in sedimentation from the timber sale would have on the three creeks affected. It did not, however, identify which mitigation measures might reduce any such sedimentation increases or their potential effectiveness. Additionally, it was unclear whether the Forest Service would adopt any of the proposed mitigation measures. In fact, the Forest Service’s experts stated that the anticipated mitigation measures “are so general that it would be impossible to determine where, how, and when they would be used and how effective they would be.” Ultimately, the Forest Service’s sweeping statements and imprecise references to mitigation measures did not provide sufficient detail about actual mitigation procedures that would occur.

Reliance on mitigation measures to justify a FONSI or avoid the preparation of an EIS is allowed only if such measures are imposed by

220 Id.
221 Id.
222 Id. at 3851.
223 Id. at 3850.
224 76 Fed. Reg. at 3851.
225 137 F.3d 1372, 1380, 1382 (9th Cir. 1998).
226 Id. at 1381.
227 Id.
228 Id.
229 Id. (quoting the Administrative Record).
230 Neighbors of Cuddy Mountain, 137 F.3d at 1381.
statute or regulation, or are submitted as part of the initial plan. In *Diné Citizens Against Ruining Our Environment v. Klein*, environmental groups sued the Office of Surface Mining (OSM), a department within Interior, claiming that the OSM violated NEPA’s procedural requirements when it issued a permit renewal and permit revision allowing coal mining on a Navajo reservation. Among the alleged NEPA violations were claims that the OSM failed to discuss the mitigation of the impacts from mining. The court agreed and found the failure arbitrary and capricious in part because the mining operations would affect seventy-three significant historical and cultural sites, many of which were eligible for listing in the National Register of Historic Places. Therefore, the court ruled that the OSM must analyze the effects of the proposed permit revision on these resources before reaching a final decision. Though a mitigation plan need not be fully developed, it must include a reasonably complete discussion of the mitigation measures such that an assessment of the environmental costs of a proposed project can be appropriately considered before OSM reaches a final determination. A “mere listing of mitigation measures, without supporting analytical data, is not sufficient to support a [FONSI].” The court found the lack of specificity in identifying mitigation measures that could be considered in issuing the FONSI barred any meaningful judicial review. In fact, the mitigation plans were to be created as a condition of OSM’s approval of the revised permit. Thus, OSM’s reliance on such potential mitigation measures was arbitrary and capricious because, at the time, OSM did not have any detailed mitigation plans upon which to base its finding.

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233 *Id.* at 1258.
234 *Id.* at 1258–59.
235 *Id.* at 1258.
236 *Id.* (citing Colo. Envtl. Coal. v. Dombeck, 185 F.3d 1162, 1173 (10th Cir. 1999)).
237 *Id.* (quoting San Luis Valley Ecosystem Council v. U.S. Fish & Wildlife Serv., 657 F. Supp. 2d 1233, 1245 (D. Colo. 2009)).
239 *Id.*
240 *Id.*
D. Programmatic EIS, Tiering, and Cumulative Effects

“[EISs] may be prepared, and are sometimes required, for broad Federal actions such as adoption of new agency programs or regulations.” 241  “Agencies shall prepare statements on broad actions so that they are relevant to policy and are timed to coincide with meaningful points in agency planning and decisionmaking.” 242  Such broad actions may be evaluated geographically, generically, or by the stage of technological development. 243  Whenever a broad EIS has been prepared, a subsequent EIS or EA needs only to summarize issues discussed in the broader statement and incorporate them by reference in a process known as tiering. 244  “In many ways, a programmatic EIS (PEIS) is superior to a limited, contract-specific EIS because it examines an entire policy initiative rather than performing a piecemeal analysis within the structure of a single agency action.” 245  Tiering allows the NEPA process to proceed from policy development to site-specific statements without revisiting issues already addressed. 246  If a project results in substantial changes or if significant new information becomes available that raises relevant environmental concerns, a supplemental document shall be prepared. 247

CEQ regulations dealing with the scope of a NEPA-based analysis provide that actions that are “connected,” interdependent parts of a larger action, or are “cumulative” in impact should be discussed in the same EIS; actions that are “similar” may be analyzed in the same statement. 248  A cumulative impact occurs if an action when added to other past, present, and reasonably foreseeable future actions can collectively have a significant impact on the environment. 249  The impact can be caused by direct or indirect effects and may include induced changes in

242 Id.
243 Id. § 1502.4(c).
244 Id. § 1502.20. Incorporation by reference is covered in § 1502.21.
245 Ass’n of Pub. Agency Customer, Inc. v. Bonneville Power Admin., 126 F.3d 1158, 1184 (9th Cir. 1997).
246 See 40 C.F.R. § 1508.28. For an example of tiering, see Nevada v. Department of Energy, 457 F.3d 78, 92 (D.C. Cir. 2006).
247 40 C.F.R. § 1502.9.
248 Id. § 1508.25.
249 Id. §§ 1508.25, .7.
land use, population density, or growth rate and effects on air, water, and ecosystems.\textsuperscript{250}

In \textit{Kleppe v. Sierra Club}, the Supreme Court held that a coal PEIS was not required for the Northern Great Plains region because the national coal-leasing program did not involve an action of regional scope.\textsuperscript{251} The district court found that Interior had no proposed or existing plan for the regional development of the discussed area.\textsuperscript{252} Though three studies had been initiated by Interior in the region, the district court found that these studies were not part of any comprehensive plan or program to promote growth in the Northern Great Plains.\textsuperscript{253} Furthermore, the district court found that individual coal development projects planned by private industry or public utilities in the Northern Great Plains area were not integrated into any such plan or program.\textsuperscript{254}

Although the court of appeals reversed the district court, it did not find a regional development program for the Northern Great Plains.\textsuperscript{255} The Court of Appeals, however, concluded that the petitioners “contemplated” such a regional plan.\textsuperscript{256} The court noted that the three studies initiated by Interior signified individual companies’ “attempts to control development” on a regional scale.\textsuperscript{257} It also concluded that the interim report from one of the studies, the Northern Great Plains Resources Program (NGPRP), would provide the petitioners with needed information, allowing them to formulate the “contemplated” regional plan.\textsuperscript{258}

The Supreme Court disagreed, holding that the Court of Appeals erred in deciding that petitioners had contemplated a regional development plan.\textsuperscript{259} The Court found that the record before it presented no sign that the NGPRP was aimed at a regional plan or program, and recent events proved that such a plan was not the purpose of the

\textsuperscript{250} \textit{Id.} \S 1508.8. In two other mining cases, the Ninth Circuit held that the BLM must account for the cumulative impacts of all activities in the area in its environmental assessments. \textit{See Te-Moak}, 608 F.3d at 606; Great Basin Mine Watch v. Hankins, 456 F.3d 955, 972–74 (9th Cir. 2006).

\textsuperscript{251} 427 U.S. 390, 401–02 (1976).

\textsuperscript{252} \textit{Id.} at 400.

\textsuperscript{253} \textit{Id.} at 400–01.

\textsuperscript{254} \textit{Id.} at 401.

\textsuperscript{255} \textit{Id.} at 403.

\textsuperscript{256} \textit{Id.}

\textsuperscript{257} \textit{Kleppe}, 427 U.S. at 403.

\textsuperscript{258} \textit{Id.}

\textsuperscript{259} \textit{Id.}
study.\textsuperscript{260} All parties agreed that no proposal for a regional plan or development program existed.\textsuperscript{261}

Contemplation of action, without more, is not enough to mandate the drafting of an EIS.\textsuperscript{262} Although the Court of Appeals recognized this fact, it nonetheless believed the statute gave it the power to compel preparation of an impact statement before any formal recommendation or report was released.\textsuperscript{263} The Supreme Court, however, held that neither the express language nor legislative history of NEPA supported such a conclusion.\textsuperscript{264} Rather, the statute explicitly addresses the timing of when an impact statement is required.\textsuperscript{265} An agency must have a final statement only at the time it actually makes a recommendation or report on a proposed federal action.\textsuperscript{266} The contemplation of a project and an accompanying study do not, without more, constitute a proposal for significant federal action.\textsuperscript{267}

Respondents, including the Sierra Club, argued that, “even without a comprehensive federal plan for the development of the Northern Great Plains, a regional impact statement nevertheless is required on all coal-related projects in the region because they are intimately related.”\textsuperscript{268} Therefore, when an agency has multiple proposals pending before it for coal-related activities in a specific region, and the actions will have cumulative environmental consequences, the environmental costs of all activities must be jointly considered.\textsuperscript{269} In other words, an agency can only assess different courses of action if it first considers all pending proposals in full.\textsuperscript{270} Respondents argued for the necessity of a complete impact statement on the Northern Great Plains because the coal-related activity in that area was “‘programmatically,’ ‘geographically,’ and ‘environmentally’ related.”\textsuperscript{271} The programmatic and geographic components were similar—both supported the argument that

\begin{footnotes}
\footnotetext[260]{Id. at 404.}
\footnotetext[261]{Id.}
\footnotetext[262]{Id.}
\footnotetext[263]{Kleppe, 427 U.S. at 404.}
\footnotetext[264]{Id. at 405.}
\footnotetext[265]{Id.}
\footnotetext[266]{Id. at 406.}
\footnotetext[267]{Id.}
\footnotetext[268]{Id. at 408.}
\footnotetext[269]{Kleppe, 427 U.S. at 410.}
\footnotetext[270]{Id.}
\footnotetext[271]{Id. at 412.}
\end{footnotes}
a comprehensive EIS was proper, especially considering that Interior had a regional approach for assessing environmental impact in the Northern Great Plains area.\textsuperscript{272}

The Supreme Court refused to rule that petitioners’ decisions with respect to the EIS were arbitrary.\textsuperscript{273} The Court found that “[e]ven if environmental interrelationships could be shown conclusively to extend across basins and drainage areas, practical considerations of feasibility might well necessitate restricting the scope of comprehensive statements.”\textsuperscript{274} Furthermore, the Court found that although relationships between the multiple proposed coal-related projects in the Northern Great Plains region may have existed, such connections on their own are not enough to require that the petitioners prepare a full impact statement for the region before approving individual pending applications.\textsuperscript{275} Because there was “no proposal for regionwide action that could require a regional impact statement,” the Supreme Court reversed the Court of Appeals and reinstated and affirmed the district court.\textsuperscript{276}

In \textit{League of Wilderness Defenders Blue Mountains Biodiversity Project v. Allen}, the Ninth Circuit held that an EIS complied with the requirements of NEPA concerning its assessment of cumulative impacts in a case involving commercial logging and thinning.\textsuperscript{277} The case involved alleged violations of NEPA and the National Forest Management Act.\textsuperscript{278} The court reversed the district court’s grant of summary judgment to the conservation groups, vacated the injunction, and remanded the case.\textsuperscript{279} The land at issue contains an old-growth forest that is habitat for the northern spotted owl, part of which was impacted by a forest fire.\textsuperscript{280} The Forest Service developed a plan to allow logging to reduce the risk of fire damage that would minimize harvesting in spotted owl habitat and allowed more intense logging in other areas.\textsuperscript{281} The Forest Service evaluated three alternatives: A) no action; B) the most intensive

\textsuperscript{272} \textit{Id.}
\textsuperscript{273} \textit{Id.} at 414.
\textsuperscript{274} \textit{Id.}
\textsuperscript{275} \textit{Kleppe}, 427 U.S. at 414.
\textsuperscript{276} \textit{Id.} at 414–15.
\textsuperscript{277} 615 F.3d 1122, 1125–26 (9th Cir. 2010).
\textsuperscript{278} \textit{Id.} at 1125.
\textsuperscript{279} \textit{Id.} at 1125, 1138.
\textsuperscript{280} \textit{Id.} at 1125.
\textsuperscript{281} \textit{Id.} at 1126.
treatment; and C) a less intensive treatment to reduce the average burn probability by forty percent over alternative A. 282 The Forest Service adopted Alternative C, which was designed to protect the spotted owl. 283 The Fish and Wildlife Service reviewed the plan and supported it. 284 Nevertheless, the district court found that the analysis of cumulative impacts in the EIS contained insufficient quantitative information about past projects. 285

In 2005, the CEQ issued a memorandum counseling agencies that they “are not required to list or analyze the effects of individual past actions unless such information is necessary to describe the cumulative effect of all past actions combined.” 286 After reviewing the EIS, the Ninth Circuit held that the Forest Service’s discussion of cumulative impacts complied with its guidance and NEPA requirements because it sufficiently considered effects of past, present, and reasonably foreseeable future actions. 287

In a similar case, Neighbors of Cuddy Mountain v. U.S. Forest Service, the Ninth Circuit ruled that the cumulative impact analysis insufficiently discussed the impact of timber harvests in areas with old-growth habitat that house the pileated woodpecker. 288 Thus, the court reversed and remanded the case to the Forest Service. 289 Specifically, the discussion of the cumulative effects of the four timber sales proposed for the Cuddy Mountain Roadless area was too general and did not meet the “hard look” test required by NEPA. 290

The EIS’s discussion of past timber harvests and future planned conversions of old-growth forest did not provide the information needed to assess the impact on the old-growth forest and pileated woodpecker. 291 The Forest Service neglected to evaluate the share of old-growth trees that would be eliminated by the three other potential tim-

282 Id. at 1127.
283 Allen, 615 F.3d at 1127.
284 Id. at 1129.
285 Id.
287 Id. at 1136–37.
288 137 F.3d at 1378–80.
289 Id. at 1382.
290 Id. at 1378–80.
291 Id. at 1379.
ber sales in the area, and whether the sales would disrupt the same pi-leated woodpecker home ranges.292 In fact, the only mention of future sales in the EIS provided, “[f]uture timber sales over the next several years would propose to treat additional old-growth habitat.”293 A consideration of cumulative effects requires detailed and quantified information.294 Since all three proposed sales were “reasonably foreseeable,” the Forest Service was required to evaluate the cumulative effects of all sales on the old-growth forest area.295

The Tenth Circuit in another Forest Service case stated that it is not the court’s place to second guess the prudence of the Agency’s final choice or its conclusion regarding the extent of the proposed project’s indirect cumulative effects.296 “Rather, we must examine the administrative record, as a whole, to determine whether the Forest Service made a reasonable, good faith, objective presentation of those impacts sufficient to foster public participation and informed decision making.”297

The NEPA rules, discussed above, were developed prior to climate change becoming an issue of concern, and it will be a challenge to integrate climate change analysis into the NEPA process because its impacts are both indirect and cumulative.298 Most proposed actions have little, if any, potential for modification in order to prevent climate change and could result in costly delays to produce data with little or no relevance for a federal decisionmaker.299

II. NEPA-BASED LITIGATION CONCERNING OIL AND GAS DEVELOPMENT

The United States obtains about 85% of its energy from natural gas, coal, and oil.300 Petroleum supplies about 36% and natural gas

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292 Id.
293 Id.
294 Cuddy Mountain, 137 F.3d at 1379–80.
295 Id. at 1380. The court’s decision goes on to review the information that should have been considered to evaluate the impact of the sales on the redband trout. Id. at 1381.
296 Colo. Envtl. Coal., 185 F.3d at 1176.
297 Id. at 1177.
299 See id. at 10,199–200.
about 25% of the nation’s energy. Domestic petroleum production in 2010 accounted for about 51% of U.S. consumption—the United States is well positioned to obtain its natural gas from domestic sources. In 2010, the nation consumed over 23 trillion cubic feet of natural gas, of which only approximately 3.7 trillion cubic feet were net imports. Much of the potential expansion of oil and gas production involves activities that require compliance with NEPA.

In New Mexico ex rel. Richardson v. Bureau of Land Management, New Mexico and a coalition of environmental organizations challenged the Bureau of Land Management’s (BLM) land management plan for fluid mineral development in New Mexico’s Otero Mesa, the nation’s largest area of publicly owned, undisturbed Chihuahuan Desert grassland. The land serves as a habitat for endangered species and contains approximately fifteen million acre-feet of potable ground water. This case concerned NEPA, the Federal Land Policy and Management Act (FLPMA), the National Historic Preservation Act (NHPA), and the ESA. The court found that the BLM’s conclusions in its EIS, which covered its resource management plan (RMP) under FLPMA, were arbitrary and capricious. The EIS was rejected because the BLM concluded that the impacts on the aquifer would be minimal, despite evidence suggesting that non-trivial impacts were possible. Moreover, the BLM acted arbitrarily and capriciously in issuing an oil and gas development lease without conducting a site-specific EIS. The BLM also acted outside the scope of its DEIS when it adopted a new management plan without preparing a SEIS. For these reasons, the court required the BLM to conduct further site-specific analysis prior to leasing.

301 Id.
303 Id. at 3.
305 565 F.3d 683, 688 (10th Cir. 2009).
306 Id. at 688–89.
307 Id. at 688.
308 See id. at 711, 715, 718–19.
309 Id. at 714–15.
310 Id. at 718–19.
311 Ex rel Richardson, 565 F.3d at 707; see 40 C.F.R. § 1502.9(c)(1)(i) (2011).
312 Id. at 721.
In *Alaska Wilderness League v. Kempthorne*, environmental groups challenged the Minerals Management Service’s (MMS) approval of a plan to drill oil wells off the coast of Alaska. In 2002, the MMS issued a five-year leasing plan and, in 2003, prepared a detailed EIS on the planned oil exploration, which included both an extensive program to monitor the bowhead whale and a conflict avoidance process. Lease sales occurred in 2003, 2004, and 2006, and a supplemental environmental assessment was prepared for each sale “tiered” to the original EIS. *Kempthorne* involved the 2004 lease sale. The lessee, Shell Offshore Inc., prepared an exploratory plan (EP) as required by the Outer Continental Shelf Lands Act. During the EP approval process, experts within the MMS voiced concerns regarding the potential impact of drilling on bowhead whales, polar bears, and the Inupiat subsistence harvest. Nevertheless, the MMS issued an eighty-seven page EA and FONSI.

Upon review, the Ninth Circuit found that the MMS “ha[d] not provided a convincing statement of reasons explaining why Shell’s exploratory drilling plans at these specific sites would have an insignificant impact on bowhead whales and Inupiat subsistence activities.” The court held that the MMS had not taken a “hard look” at the environmental effects of the project, as required by NEPA. The MMS could not rely on the previous EIS to avoid a site-specific analysis of the impact on whales. The proposed monitoring program did not qualify as mitigation that could be used to avoid the impact of potentially harmful action. The MMS also failed to take a “hard look” at the effects of the project on the Inupiat. The agency could not rely on a mitigation measure unless it was supported by data analysis regarding its effective-
ness. The court found the “conflict avoidance agreement process [to be] too vague and uncertain as a mitigation measure to justify the agency’s decision not to engage in further analysis.” Moreover, such agreements cannot be used to avoid the agency’s NEPA obligations. The court also criticized the MMS’s failure to sufficiently analyze the impacts of the project on fish populations. The court vacated the agency’s approval of the EP and remanded the case to the MMS to prepare a revised EA or, if necessary, an EIS. After this decision Shell withdrew its EP on May 5, 2009, and the MMS later withdrew its prior approval thereof. Because the MMS considered the EP to be null and void, the petitioner’s case was moot, and therefore the case was dismissed.

In San Luis Valley Ecosystem Council v. U.S. Fish & Wildlife Service, environmental groups successfully moved for a preliminary injunction to prevent oil and gas activities on the Baca National Wildlife Refuge (Refuge) until the U.S. Fish and Wildlife Service (USFWS) complied with NEPA. The federal government owned the surface rights to the Refuge, but a private party held the mineral rights and the right to use the surface. After the USFWS issued a permit to drill on the land, local conservation groups filed a lawsuit.

Plaintiffs asserted the following claims against the USFWS:

(1) violation of NEPA by failing to conduct NEPA analysis before “reviewing, accepting, authorizing, approving, regulating, and/or assisting with Lexam’s staking/survey activities, geophysical explorations, and other activities” on the Refuge; (2) violation of NEPA by authorizing activity during the ongoing NEPA process, particularly by taking action that will “limit the choice of reasonable alternatives in the ongoing development of the Comprehensive Conservation Plan”; (3) violation of

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325 Id. at 828.
326 Id. at 830.
327 Id.
328 Id. at 831.
329 Id. at 835.
330 Alaska Wilderness League v. Salazar, 571 F.3d 859, 860 (9th Cir. 2009).
331 Id.
333 Id. at 1237.
334 Id. at 1237–38.
NEPA by issuing an Environmental Assessment which failed to take a hard look at the direct, indirect, and cumulative impacts of the . . . proposal to drill oil and gas wells in the Refuge; (4) violation of NEPA by failing to analyze a full range of alternative courses of actions; (5) violation of NEPA by issuing a Finding of No Significant Impact despite the existence of significant impacts which require preparation of an Environmental Impact Statement; and (6) violation of NEPA by unlawfully denying Saguache County’s request to participate as a “cooperating agency.”

The court concluded that the plaintiffs presented sufficient evidence that drilling could cause irreversible harm, including soil disturbance and dust, which could harm endangered species and interfere with the generation of baseline data required to develop a Comprehensive Conservation Plan. The USFWS asserted that the plaintiffs’ apprehensions related to extensive development and drilling of the entire area, rather than to the mere creation of two exploratory wells. The Agency posited that if extensive oil and gas reserves were revealed, the USFWS would perform an additional NEPA analysis before commercial development of the area occurred. The USFWS also contended that plaintiffs’ claims were speculative and no irreversible harm would occur due to the existence of sufficient safeguards to protect and mitigate the effects of the proposed drilling. Lastly, the Agency argued that “the Final EA specifically addressed issues such as sedimentation, impact on aquifers, harm to the Rio Grande sucker fish, noise and visual impacts, and effect on wildlife migrations.”

The Final EA noted that although the oil and gas activities would disturb the soil and create dust, which could be mitigated through watering, the watering might itself cause environmental consequences such as runoff, soil erosion, and sedimentation. The EA acknowledged that full vegetation recovery could take fifteen to twenty years,

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335 Id. at 1239. Lexam owns the mineral rights and submitted the development proposal. Id. at 1237.
336 Id. at 1240.
337 Id.
338 San Luis Valley, 657 F. Supp. 2d at 1240.
339 Id. at 1240–41.
340 Id. at 1241.
341 Id.
which the court opined “may constitute irreparable damage.”\textsuperscript{342} If the process were allowed to go forward, the court noted, alternative actions would no longer be available and the damage would be irreparable.\textsuperscript{343}

Plaintiffs first questioned whether the USFWS should have carried out an examination under NEPA before allowing seismic testing.\textsuperscript{344} Although the court did not rule on the issue, there is persuasive authority supporting the contention that the Agency’s grant of access for surface drilling could be considered a federal action under NEPA.\textsuperscript{345} Such federal action triggers the NEPA process, which requires analysis of “not only the direct impacts of a proposed action, but also the indirect and cumulative impacts of past, present, and reasonably foreseeable future actions.”\textsuperscript{346} Plaintiffs argued that the impact analysis under NEPA was flawed because it failed to scrutinize the potential risks involved when introducing hazardous substances to the site during the drilling process.\textsuperscript{347} The USFWS agreed that the hazardous substances used in the project had the potential to harm the Refuge but maintained that the proposed mitigation measures would protect its resources.\textsuperscript{348}

The court found that the FONSI was issued despite the fact that the EA did not develop or assess significant mitigation measures, such as spill prevention and storm water management.\textsuperscript{349} Such cursory analysis was not sufficient to show that the decision to issue a FONSI was supported by substantial evidence.\textsuperscript{350} Moreover, evidence showed that the USFWS may not have actually appraised the effectiveness of many of the proposed protections.\textsuperscript{351} For example, the final EA stated that water-based drilling fluids would be used in certain situations, but there was no further discussion of potential hazards created by their use or the use of alternative substances.\textsuperscript{352}

The court also found that the manner in which the agency framed its choices was inadequate because the result was essentially predeter-

\textsuperscript{342} Id.
\textsuperscript{343} Id. at 1242.
\textsuperscript{344} San Luis Valley, 657 F. Supp. 2d at 1243–44.
\textsuperscript{345} Id. at 1244.
\textsuperscript{346} Id.
\textsuperscript{347} Id.
\textsuperscript{348} Id. 1245.
\textsuperscript{349} Id. at 1245–46.
\textsuperscript{350} San Luis Valley, 657 F. Supp. 2d at 1246.
\textsuperscript{351} Id.
\textsuperscript{352} Id.
mined. The USFWS “construed its alternatives as prohibiting all drilling, permitting drilling with no conditions, or permitting drilling with the conditions agreed to by the parties.” The Agency dismissed the prohibition of all drilling as an unreasonable option because the government did not own the mineral rights to the property. Further, allowing drilling with no conditions would clearly lead to significantly more harm to the Refuge than the parties’ proposal. Finally, the court noted that the USFWS’s insistence that the applicable federal action consisted of the conditions it placed on the private drilling, rather than the drilling itself, may have been arbitrary and capricious because it foreclosed the possibility of exploring alternative drilling procedures. The court concluded that “an agency may not define a project so narrowly that it forecloses a reasonable consideration of alternatives.”

In Sierra Club v. Mainella, the district court ruled on an EA and FONSI in which the National Park Service (NPS) allowed oil and gas drilling operations under the Big Thicket National Preserve (BTNP). The NPS controls private oil and gas drilling activities in areas covered by the National Park System, pursuant to the National Park Service Organic Act. A private company sought to drill at an angle from private land to oil reserves under park land; however, the approval of such directional drilling requires that the NPS issue a “no significant threat” determination. Prior to such a determination, the NPS must comply with NEPA, therefore each of three drilling proposals was preceded by an EA.

The NPS recognized that the BTNP surface activities would generate a range of impacts, but they found that the impacts were not significant enough to necessitate comprehensive analysis. For example, the

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353 Id. at 1247.
354 Id. at 1246.
355 Id. at 1247.
356 San Luis Valley, 657 F. Supp. 2d at 1247.
357 See id. at 1238, 1247.
358 Id. at 1247 (quoting Colo. Wild, Inc. v. U.S. Forest Serv., 523 F. Supp. 2d 1213, 1226 (D. Colo. 2007)).
360 Id. at 78.
361 Id. at 79.
362 Id. at 81–82.
363 Id. at 83.
364 Id. at 85.
NPS expected that construction activities, particularly in the drilling phase, would increase air pollution.\textsuperscript{365} The NPS concluded, however, that no further analysis was necessary because the impacts would occur “at low intensity levels, with localized, short- to long-term, negligible to minor, adverse impacts.”\textsuperscript{366} Issues concerning artificial lighting, noise, water pollution, erosion, floodplain and wetland impacts, drainage from the site, and spills were similarly found to have “no impact” or were manageable by operational mitigation measures.\textsuperscript{367} Therefore, these effects were not analyzed in exacting detail.\textsuperscript{368}

The court found that the NPS had failed to comply with the National Park Service Organic Act’s requirements and remanded the case for further explanation.\textsuperscript{369} It also held that the NPS’s NEPA analysis lacked an explanation of how the agency reached its conclusion, rather it generally described the environmental effects of a certain action and concluded that the impact was “not significant” or some other similarly vague descriptor.\textsuperscript{370} For example, the NPS stated that catastrophic events such as fires, spills, and blowouts had a low probability of occurring without any definition of low, or data in the record concerning how that conclusion was reached.\textsuperscript{371} Moreover, the NPS did not sufficiently explain why they dismissed issues from the required detailed scoping analysis, nor did the Agency properly evaluate the cumulative effects of the drilling operations.\textsuperscript{372} Thus, the court found the NPS’s decision to issue three FONSI s was arbitrary and capricious and remanded the case for NPS to prepare a new EA.\textsuperscript{373}

In \textit{Southern Utah Wilderness Alliance v. Norton}, environmental organizations challenged an EA and a FONSI issued by the BLM for seismic oil and gas exploration on approximately 57,500 acres of public and private land in eastern Utah.\textsuperscript{374} Part of the project consisted of imaging surface geology to discover potential oil and natural gas resources using “seismic reflection methods,” which involve “the genera-

\textsuperscript{365} \textit{Mainella}, 459 F. Supp. 2d at 85.
\textsuperscript{366} \textit{Id.}
\textsuperscript{367} \textit{Id.}
\textsuperscript{368} \textit{Id.} at 85–86, 88.
\textsuperscript{369} \textit{Id.} at 94–103.
\textsuperscript{370} \textit{Id.} at 106.
\textsuperscript{371} \textit{Mainella}, 459 F. Supp. 2d at 108.
\textsuperscript{372} \textit{Id.} at 107.
\textsuperscript{373} \textit{Id.} at 108.
\textsuperscript{374} 326 F. Supp. 2d 102, 105 (D.D.C. 2004).
tion of ground vibrations or seismic waves, and the recording of seismic waves at source points and receiver points that would be located throughout the project area, respectively.\footnote{Id. \hspace{1em} (internal quotation marks omitted). Two primary methods used to generate seismic waves are: (1) drilling holes, called “shot holes,” into which explosives, called “shots,” are dropped and detonated; and (2) a mechanical method called “vibroseis.” \textit{Id.} at 106. The shot hole method involves drilling fifty-foot deep holes to ensure that explosive detonation generates ground vibrations that are recordable by geophysicists. \textit{Id.} Vibroseis employs 62,000 pound vibrator buggies, which shake the ground at designated points, creating sound waves that reflect off underground geological structures and generate data used to locate gas and oil resources. \textit{Id.}}

The plaintiffs claimed that the vibrations could harm cultural landmarks in the region, including rock art and pit houses created by early civilizations.\footnote{Id. at 106.} The project area covered 5300 acres of the Nine Mile Canyon Special Recreation and Cultural Management Area (SRCMA), an area specially designated for the protection and preservation of historic resources and containing the Nine Mile Canyon Archaeological District, which is eligible for inclusion in the National Register of Historic Places.\footnote{Id. at 106.} Over 1000 historically valuable sites have been recorded in the SRCMA, most of which are rock art, which ranges from rather simple to quite elaborate structures.\footnote{Id. The area also contains remnants of prehistoric cultures, such as “cliff dwellings, masonry granaries, slab storage cists, semi-subterranean pit houses, [and] retaining walls.”\footnote{Id. at 106.} The area also encompassed portions of two wilderness study areas (WSAs) that the BLM created,\footnote{Norton, 326 F. Supp. 2d at 107. FLPMA designated WSAs as lands that must be managed “so as not to impair the suitability of such areas for preservation as wilderness.” 43 U.S.C. § 1782 (2006).} including nearly all of Jack Canyon WSA.\footnote{Norton, 326 F. Supp. 2d at 107.}

On April 30, 2004, the plaintiffs moved for a preliminary injunction to prevent initiation of the project.\footnote{Id.} After a hearing, however, the parties reached an agreement.\footnote{Id. Thus, the plaintiffs withdrew their injunction motion, and the parties continued to summary judgment.\footnote{Id. at 107.}} The court reviewed the BLM’s compliance with the NHPA and the ap-
plicable regulations. The primary concern was that the seismic vibrations would damage the cultural resources. The court however, deferred to the BLM’s scientific and technical conclusions and supported the agency’s final determination.

The court then turned to the NEPA compliance issues. The plaintiffs argued that the “BLM violated NEPA through its: (1) failure to prepare an EA that properly analyzed the cumulative effects of the project; (2) failure to prepare an EIS; and (3) failure to supplement existing NEPA analysis based on the discovery of new information.” The court ruled that the agency gave a realistic evaluation of the total impacts of the project and that the EA met NEPA’s requirements. The BLM analyzed the potential cumulative effects of the project throughout the EA, even dedicating an entire chapter to cumulative impact analysis. In addition to discussing the effects of past and present actions, the BLM considered the impact of future actions and the cumulative effects of all activities. For example, the agency acknowledged the region’s current air pollution contributors, evaluated the additional effects produced by the project, and then decided that the project would result in a temporary dust increase. Due in part to the fact that the anticipated area of disturbance created by the project covered only 11.5 acres of the 57,500 acre project area, the court held that the BLM had sufficiently assessed the project’s cumulative effects.

The court then evaluated whether the BLM’s decision not to produce an EIS was appropriate. Plaintiffs argued that the project area is unique for its “rock art, cliff dwellings, pit houses, and wilderness study areas.” The court held, however, that “[t]he determination of whether BLM should have prepared an EIS turns largely on whether the EA was adequately conducted and properly took cumulative impacts into

385 Id. at 108–16.
386 Id. at 110.
387 Norton, 326 F. Supp. 2d at 112–16.
388 Id. at 116.
389 Id. at 117.
390 Id.
391 Id.
392 Id.
393 Norton, 326 F. Supp. 2d at 117–18.
394 Id. at 118.
395 Id.
account,” which was the case here. Specifically, the court found that concerns about the area’s uniqueness and cultural value had already been covered by the procedures undertaken by the BLM pursuant to the NHPA, including special surveys designed to optimize the preservation of cultural artifacts. Furthermore, independent opinions provided evidence that the environmental and cultural effects of the exploration would be minimal.

The court noted that it plays a limited role when reviewing an agency’s decision not to prepare an EIS—it is required only to confirm that the agency has not overlooked any substantial environmental consequences and should not overturn the agency’s determination unless it is arbitrary and capricious. Given such deference, the court ruled that the BLM’s decision to issue a FONSI was appropriate. The court concluded its NEPA analysis with the determination that plaintiffs had not provided any “new” information that presented significant considerations not already addressed, and thus the court did not require supplementation of the EA. The court then granted summary judgment to the defendants.

*Northern Alaska Environmental Center v. Kempthorne* involved environmental plaintiffs challenging a FEIS produced by the BLM as part of its effort to lease 8.8 million acres of the Northwest Planning Area of Alaska for oil and gas exploration. Plaintiffs claimed that the FEIS failed to evaluate properly “site specific environmental consequences, failed to consider reasonable alternatives, did not discuss mitigation measures, and did not assess the cumulative impacts of leasing and

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396 *Id.* at 119–20.
397 *Id.* at 119.
398 *Id.*
399 *Norton*, 326 F. Supp. 2d at 119.
400 *Id.* at 120.
401 *Id.* at 122.
402 *Id.* at 124. In a development in Utah, Interior published an air quality supplement to the DEIS for the Greater Natural Buttes Area Gas Development Project that will allow up to 3675 natural gas wells to be placed on 162,000 acres in northeast Utah. Tripp Baltz, *Interior-EPA Agreement on Air Quality Clears Way for Natural Gas Project in Utah*, 42 Env’t Rep. (BNA) 1331 (June 17, 2011). Furthermore, the EPA raised concerns about air pollution resulting from development in the Uintah Basin, a region that already had significant winter-time ozone levels. *Id.* While air quality concerns remained, the prospect of an 11.7 billion dollars investment generating up to 2500 jobs created political support for the project. *See id.*
403 457 F.3d 969, 973–74 (9th Cir. 2006).
other activities plaintiffs claim to be reasonably foreseeable.” The BLM based its FEIS on a resource-by-resource analysis, but it did not assess the effects of the exploration and development on specified individual parcels. The Ninth Circuit, in affirming its grant of summary judgment in favor of the government, supported the concept of imposing site-specific standards when individual parcels are subject to an “ir-retrievable commitment of resources.”

The court recognized two categories of leases—“no surface occupancy” (NSO) leases that do not require an EIS and non-NSO leases that do. The court noted that the case involved leases more similar to non-NSO leases, and thus the BLM prepared an EIS as required. NEPA does not require multi-stage projects to cover the totality of environmental effects that cannot be determined in early stages. Leasing, exploration, and development stages of projects require EIS analysis of the environmental effects when they are identifiable. The court held that the EIS satisfied NEPA’s requirements for an analysis of alternatives because the agency is only required to consider an appropriate range of alternatives, not every available one. Plaintiffs argued that the EIS did not cover mitigation measures appropriately, but the court noted that NEPA only requires a “reasonably complete discussion” and does not require an agency to adopt a complete mitigation plan at this stage. For the same reason the court held that the cumulative impacts analysis need not be addressed until a later stage.

In League for Coastal Protection v. Norton, the district court granted summary judgment to environmental plaintiffs based on a failure by the MMS to comply with NEPA and the Coastal Zone Management Act (CZMA). The MMS granted suspensions for thirty-six oil and gas leases located off the central California coast without conducting the environmental analysis required by NEPA, or the consistency review.

404 Id. at 973.
405 Id. at 974.
406 Id. at 973, 975.
407 Id. at 976.
408 Id.
409 See Kempthorne, 457 F.3d at 977.
410 Id.
411 See id. at 978.
412 Id. at 979.
413 Id. at 980.
required by the CZMA. The MMS issued six final EAs and a FONSI for the leases without considering the potential environmental impact of exploration and development activities that would occur after the suspension. The MMS sanctioned acoustic surveys in a number of leases during the suspension period. The MMS argued, however, that it did not have to address any proposed exploration and drilling activities, even though one lessee planned to drill the day the suspension expired. The court rejected this argument and remanded the EAs and the FONSI to the MMS.

In *Native Village of Point Hope v. Salazar*, environmental groups and an Alaskan village sued Interior, among others, seeking declaratory and injunctive relief to prevent oil and gas leasing of approximately 29.4 million acres of the Chuckchi Sea. The plaintiffs claimed that the MMS’s FEIS violated NEPA, the ESA, and the APA. Plaintiffs alleged that the EIS: (1) did not provide satisfactory analysis on the environmental and community effects of Lease Sale 193; (2) failed to include necessary information about the harmful future effects on the Chuckchi Sea or any explanation as to why the information was omitted; (3) failed to analyze the lease sale in light of a warming climate; (4) minimized the potential harm of oil and gas development by looking only at a situation of limited development; (5) underestimated the potential harms of an oil spill; (6) failed to assess fully the cumulative effects from oil and gas development on eiders and their habitat, both of which are threatened; and, (7) deceivingly depicted the effect of seismic surveying. The allegedly inadequate EIS exceeded 1800 pages, including nearly 300 pages of discussion of the action’s potential impacts and a 76 page assessment of possible cumulative effects. The court observed that, when reviewing agency action involving issues of

415 Id. A suspension of a lease functions essentially as if it were an extension of the primary lease term. Id.
416 Id.
417 Id. at *2. Some of the leases allowed acoustic surveys that produced more than 160 decibels. Id.
418 Id. at *4.
419 Id. at *5.
421 Id.
422 Id.
423 Id.
fact that require highly technical analysis, it “must defer to the informed discretion of the responsible federal agencies.” 424

Although the MMS is required to conduct a NEPA analysis at each stage of its four-stage mineral leasing process, a more detailed review process requiring an EIS only occurs at the later stages, which includes site-specific analysis. 425 The MMS grants leases during the second stage, but the lease itself does not provide full exploration, development, or production rights. 426 Instead, the lessee only obtains priority to submit plans which are subject to agency approval. 427 The Ninth Circuit previously explained that natural resource development projects generally entail separate stages of leasing, exploration, and development. 428 In the beginning stages of leasing, it is impossible to be certain of future plans for development. 429 Plaintiffs argued, however, that as soon as the leases are granted the lessee obtains important rights, including the ability to conduct seismic surveying and drilling without MMS oversight. 430 Furthermore, the government only has the power to suspend or terminate the leases if it concludes that there is a possibility of harm to the environment, which could expose the agency to substantial liability with respect to the lessees. 431

Plaintiffs argued that the MMS did not take the required hard look at the impacts of seismic surveying and the cumulative effects of the activities on the threatened eiders. 432 The court, however, held that the agency did take a hard look and reasoned that essential mitigation steps could occur later, in the third and fourth phases of leasing. 433 Plaintiffs further protested that the EIS failed to analyze natural gas development, even though there was industry interest and lease incentives for such development, and only assessed the minimum possible level of oil development. 434 The court held, however, that even this minimum level of examination with respect to potential oil development satisfied the

424 Id. at 1015 (quoting City of Sausalito v. O’Neill, 386 F.3d 1186, 1206 (9th Cir. 2004)).
425 Id.
426 Point Hope, 730 F. Supp. 2d at 1015.
427 Id.
428 Kempthorne, 457 F.3d at 977 (9th Cir. 2006).
429 Point Hope, 730 F. Supp. 2d at 1016.
430 Id.
431 Id.
432 Id.
433 Id. at 1016–17.
434 Id. at 1017.
hard look requirement.\textsuperscript{435} Conversely, the court agreed with the plaintiffs that incentivizing natural gas production without examining its effects was arbitrary.\textsuperscript{436} The court stated that “[t]he agency cannot have taken a ‘hard look’ at the impact of natural gas exploration if natural gas development is omitted entirely from the EIS.”\textsuperscript{437} NEPA regulations place certain obligations on agencies acting without all the information necessary to evaluate a project’s impacts.\textsuperscript{438} The MMS’s analysis excluded relevant information regarding characteristics of the Chukchi Sea and the effects the lease sale would have on wildlife and subsistence.\textsuperscript{439} Specifically, the plaintiffs noted that potentially hundreds of conclusions in the EIS were missing data regarding species of wildlife and their habitat, as well as the effects of leasing thereon.\textsuperscript{440} The court found that the MMS failed to obtain relevant and essential information, and thus the Agency failed to comply with the regulation.\textsuperscript{441} The court found that the agency:

\begin{enumerate}
\item failed to analyze the environmental impact of natural gas development, despite industry interest and specific lease incentives for such development;
\item failed to determine whether missing information identified by the agency was relevant or essential under 40 C.F.R. § 1502.22; and
\item failed to determine whether the cost of obtaining the missing information was exorbitant, or the means of doing so unknown.
\end{enumerate}

The court held that this deficiency did not require the MMS to undergo a new permitting process, but instructed the agency to reassess its three specific failures.\textsuperscript{443} Otherwise, the court found the agency’s actions to be compliant with NEPA.\textsuperscript{444}

\textsuperscript{435} \textit{Point Hope}, 730 F. Supp. 2d at 1017.
\textsuperscript{436} \textit{Id}.
\textsuperscript{437} \textit{Id}.
\textsuperscript{438} 40 C.F.R. § 1502.22 (2011); \textit{Point Hope}, 730 F. Supp. 2d. at 1017–18.
\textsuperscript{439} \textit{Point Hope}, 730 F. Supp. 2d. at 1018.
\textsuperscript{440} \textit{Id}.
\textsuperscript{441} \textit{Id}.
\textsuperscript{442} \textit{Id}. at 1019.
\textsuperscript{443} \textit{Id}.
\textsuperscript{444} \textit{Id}. In a more recent development, Wyoming’s Desolation Road Project Area is the site of a private natural gas exploration operation in south-central Wyoming that overlaps a wilderness study area. Tripp Baltz, \textit{Conservation Groups Say Interior Failed to Take ‘Hard Look’ at Wyoming Gas Project}, 41 Env’t Rep. (BNA) 2813 (Dec. 17, 2010). The BLM issued an EA on May 10, 2010, accompanied by a FONSI and a Record of Decision that approved a
A. Potential Litigation Opportunities Concerning Natural Gas Fracking

Natural gas provides about 25% of the primary energy used in the United States, and almost 90% was produced domestically in 2010. In addition, it was used to generate 24% of the nation’s electricity in 2010. Production of natural gas in 2009 was at its highest level since 1973, primarily as a result of expanded development of shale gas. In 2010, natural gas withdrawals in the United States were up by nearly 25% from 1990. Much of the growth in natural gas production comes from unconventional gas, which includes gas from shale and tight sand formations. Since 1998, production from non-traditional sources increased by at least 65%, accounting for 46% of domestic production in 2007.

Shale gas constituted 23% of U.S. natural gas production in 2010 and is expected to increase to 49% by 2035. Much of the increase in natural gas production involves producing shale gas through hydraulic permit to drill. Environmental Organizations challenged the BLM’s decision under the theory that the Agency failed to properly consider the area’s wilderness characteristics. See id.


450 See Natural Gas Year-In-Review 2009, supra note 448.


452 Shale Gas, supra note 446.
fracturing, also called “fracking,” a practice that has long been used by the oil and gas industry and is regulated by the states. Advances in horizontal drilling technology and hydraulic fracturing, combined with rapid increases in natural gas prices, have made shale gas production economically viable. Shale gas is found in shale “plays” that are low-permeable geological formations. Two substantial plays are the Barnett Shale play in Texas and the Marcellus Shale play in the northeastern United States.

The fracking process involves injecting pressurized fluids to fracture rock hydraulically, creating or enhancing cracks through which oil or natural gas can flow to a well. Fracking of shale formations to obtain natural gas provides low cost gas from domestic sources, but it may have significant adverse environmental impacts. Large amounts of water are used for hydraulic fracturing fluid. Many chemicals with toxic qualities are used and, while the concentrations are low, the millions of gallons of fracturing fluid used create waste-disposal problems and may have adverse health effects. Moreover, methane released from the extraction process and leaks in pipes used to transport the gas may have global warming impacts because methane is a greenhouse gas (GHG) that is twenty times more potent than carbon dioxide over a 100-year period. The Energy Policy Act of 2005 exempts fracturing

453 Id.
455 See ARTHUR ET AL., supra note 451, at 3.
456 Id. at 14; Shale Gas, supra note 446.
457 Shale Gas, supra note 446.
461 See id.
from federal regulation under the Safe Drinking Water Act (SDWA), except when diesel is used as part of the fluid. On March 18, 2010, the EPA announced it was commencing a study to evaluate the potential risks to ground water from fracking pursuant to a mandate in its 2010 appropriations law, however a year later it still had not proposed any regulations. In June 2011, the EPA sent proposed oil and gas sector air quality regulations to the Office of Management and Budget. Congress has also introduced legislation that would give the EPA authority to regulate fracking under the SDWA. Another proposed bill would modify the Emergency Planning and Community Right-To-Know Act to allow states to require disclosure of chemicals used in fracking operations. Given the gridlock in Congress, however, new legislation does not appear to be close to enactment.

B. NEPA-Based Litigation Concerning Coalbed Methane

Coalbed methane (CBM) is a resource used to increase natural gas production. The Powder River Basin in Wyoming and Montana and the San Juan Basin in Colorado and New Mexico, as well as areas in North Dakota and Utah, are some of the major CBM producing areas in the United States. Environmental issues include the use of water for hydraulic fracturing and the resulting discharge of contaminated

471 Id. at 20–21.
water.\(^{472}\) CBM also produces environmentally-harmful water disposal sites, drill pad sites, new roads, and other infrastructure development, as well as cause adverse impacts on wildlife.\(^ {473}\) The adverse environmental impacts of CBM production frequently results in NEPA-based legal challenges.\(^ {474}\)

In *Northern Cheyenne Tribe v. Norton*, an Indian Tribe and environmentalists challenged an EIS prepared by the BLM to allow coalbed methane development in the Powder River Basin in Montana and Wyoming.\(^ {475}\) The district court generally upheld the EIS but issued a partial injunction until the BLM prepared a revised EIS that considered an additional alternative.\(^ {476}\) The Ninth Circuit affirmed the district court in a decision that evaluated NEPA’s requirement to consider alternatives, and provided guidance concerning the level of effort required to prepare an adequate EIS.\(^ {477}\)

CBM production involves pumping groundwater that contains natural gas generated by coal deposits.\(^ {478}\) Industrial CBM operations create environmental problems on land surfaces belonging to farmers and ranchers because the pumped ground water pollutes rivers and streams, and lowers the water table.\(^ {479}\) The DEIS in this case analyzed five alternatives: “(A) No Action (Existing Management); (B) Emphasize Soil, Water, Air, Vegetation, Wildlife, and Cultural Resources; (C) Emphasize CBM Development; (D) Encourage Exploration and Development While Maintaining Existing Land Uses; [and] (E) Preferred Alternative that would facilitate CBM exploration and development while sustaining resource and social values, and existing land uses.”\(^ {480}\) The BLM’s preferred alternative would limit drilling to one well per 640 acres unless the party produced “a project plan developed in con-

\(^{472}\) See id. at 21–22; see also Legal Envtl. Assistance Found., Inc. v. EPA, 118 F.3d 1467, 1471 (11th Cir. 1997) (explaining the potential for contamination caused by hydraulic fracturing of coal beds).

\(^{473}\) Ingelson & Mitchell, supra note 470, at 22.

\(^{474}\) See, e.g., infra notes 475–525 and accompanying text.

\(^{475}\) 503 F.3d 836, 839–41 (9th Cir. 2007). The BLM was involved because the federal government owns most of the subsurface in the Powder River Basin and manages the resource using management plans developed under FLPMA. 43 U.S.C. §§ 1701–1785 (2006); Norton, 503 F.3d at 839–40.

\(^{476}\) Norton, 503 F.3d at 841.

\(^{477}\) Id. at 841, 846.

\(^{478}\) Id. at 839.

\(^{479}\) Id. at 839–40.

\(^{480}\) Id. at 840 (internal quotation marks omitted).
sultation with the affected surface owners and permitting agencies.” 481

An additional NEPA analysis would be required for a drilling permit. 482

The Ninth Circuit generally upheld the EIS but granted a partial in-
junction allowing phased development to proceed in tandem with the
BLM’s preparation of a SEIS. 483

In Pennaco Energy, Inc. v. U.S. Department of the Interior, the Tenth
Circuit instructed a district court to reinstate an Interior Board of Land
Appeals (IBLA) decision that BLM-issued oil and gas leases violated
NEPA. 484 This case raised the question of whether the BLM satisfied
NEPA requirements prior to auctioning three oil and gas leases for ex-
tracting CBM in the Powder River Basin in Wyoming. 485 The issue was
whether the environmental impacts created by CBM varied substantially
from conventional oil and gas development such that the Agency
should have prepared a new EIS before issuing the leases. 486 The IBLA
found that the BLM had neither made an adequate site-specific envi-
ronmental review nor addressed the quantity of water production from
CBM extraction and critical air quality issues. 487 The district court, after
reviewing the record, reversed the IBLA decision and reinstated the
BLM’s issuance of the leases. 488 The Tenth Circuit found that the ad-
niministrative record contained evidence to support the “IBLA’s conclu-
sion that water production associated with CBM extraction is signifi-
cantly greater than the water production associated with non-CBM oil
and gas development.” 489 The court also found that the record con-
tained substantial evidence that CBM development poses unique air
quality concerns not addressed in the EIS. 490 The Tenth Circuit con-
curred that the IBLA’s determination was not arbitrary or capricious
and reinstated its decision. 491

481 Id.
482 Norton, 503 F.3d at 842.
483 Id. at 841, 846.
484 377 F.3d 1147, 1150, 1162 (10th Cir. 2004).
485 Id. at 1152.
486 Id. at 1152–53.
487 Id. at 1153.
(D. Wyo. 2003).
489 Pennaco Energy, 377 F.3d. at 1158.
490 Id. at 1159.
491 Id. at 1162.
In January 2011, the Forest Service released a final SEIS which nullified thirty-five existing oil and gas leases. The Forest Service selected the “No Action” alternative in its SEIS even though the thirty-five leases had been the subject of a successful bid. The Forest Service subsequently withdrew its decision barring the BLM from leasing the land, however, and decided to conduct further analysis to prepare another SEIS.

In *Wyoming Outdoor Council v. U.S. Army Corps of Engineers*, a district court ruled on environmental groups’ challenge of a CWA permit allowing release of CBM water into above-ground reservoirs as dredge and fill material. The district court held that the U.S. Army Corps of Engineers’ (Corps) failure to sufficiently consider cumulative impacts violated NEPA, because it only considered the cumulative impacts in relation to wetlands. Additionally, the Corps failed to consider effects on privately-owned ranchlands with no mineral rights. The court refused to defer to the Corps because of their reliance on mitigation measures without evidentiary support. The Corps was not required to undertake statewide analysis of cumulative impacts of all CBM development, but it should have assessed cumulative impacts likely related to the permit.

The Corps is not responsible for CBM development on public lands that other federal agencies manage. It is also not responsible for drilling on private lands so long as the drilling does not involve the

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496 Id. at 1238.
497 Id.
498 Id.
499 Id.
500 Id. at 1242.
discharge of dredge and fill material into U.S. waters. The Supreme Court, in *Department of Transportation v. Public Citizen*, held that when an agency “has no ability to prevent a certain effect,” the agency does not cause the impact. Still, the Corps must assess the cumulative impacts of CBM development projects in order to determine whether there will be significant environmental impacts. The court remanded the case to the Corps for further analysis of impacts on ranchlands, efficacy of mitigation measures, and cumulative impacts.

In *Biodiversity Conservation Alliance v. Bureau of Land Management*, the Tenth Circuit considered NEPA-based challenges to resource management plans required pursuant to FLPMA. In the 1990s, federal lessees proposed drilling approximately 24,000 new CBM gas wells over a ten-year period in the Powder River Basin. Environmental plaintiffs asked the BLM to consider the alternative of phased development, clustering drilling and draining coal seams one at a time. Reclamation would be required before drilling at a new site, delaying drilling at most potential sites for ten years or longer.

The BLM’s FEIS contained detailed analysis of several alternative development plans, including “No Action,” but the Agency declined to study phased development in detail. The BLM cited six reasons for rejecting phased development, including its inability to meet the project’s purposes. In 2003, the BLM approved a resource management plan, although it allowed for no site-specific activities. A site-specific NEPA analysis and compliance with approved mitigation requirements are needed to commence operations. The issue on appeal was whether the BLM abused its discretion by rejecting phased development as an alternative management plan. The court held that the BLM’s rejection of phased development was reasonable, in part be-

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502 Id.
505 Id. at 1238.
507 *Biodiversity Conservation Alliance*, 608 F.3d at 712.
508 Id. at 713.
509 Id.
510 Id.
511 Id.
512 Id.
513 *Biodiversity Conservation Alliance*, 608 F.3d at 712.
514 Id.
cause it would not meet “the Purpose of and Need for the Proposed Action” included in the FEIS.\textsuperscript{515}

Although an appropriate management plan was required to help prevent drainage, the BLM reasonably believed that its regulatory tools were incapable of doing so effectively.\textsuperscript{516} Additionally, the Agency does not have the power to compel compensation from owners of state and private wells.\textsuperscript{517} Moreover, “the [BLM] cannot order a lessee to drill a protective well if environmental concerns caused the [BLM] to close the leasehold to drilling.”\textsuperscript{518} Rather, it can only demand a protective well if it can approve the well under a plan delaying development.\textsuperscript{519} Furthermore, the BLM can only collect compensatory royalties if the lessee refuses to drill the protective well.\textsuperscript{520} Because phased development would cause drainage and change reservoir pressure—resulting in a significant loss of gas—the BLM reasonably concluded that it would not effectively meet the project’s purpose of helping national energy needs.\textsuperscript{521} The Agency was justified in questioning whether development could be delayed for decades.\textsuperscript{522} Its lessees’ right to drill is subject only to reasonable delays, and a decades-long wait is not reasonable.\textsuperscript{523} The BLM’s decision rested on the adequate basis that phased development would not meet the project’s purposes and was not practical.\textsuperscript{524} The Tenth Circuit therefore declined to review other reasons for excluding phased development from detailed study and affirmed the lower court decision.\textsuperscript{525}

C. NEPA-Based Litigation Concerning Pipeline Construction

In \textit{Hammond v. Norton}, Sinclair Oil, environmental groups, and individual landowners sued the Secretary of the Interior, the BLM, and other federal defendants to enjoin the construction of a 480 mile pipeline from Bloomfield, New Mexico to Salt Lake City, Utah, pending the

\textsuperscript{515} \textit{Id.}
\textsuperscript{516} \textit{Id.} at 715.
\textsuperscript{517} \textit{Id.}
\textsuperscript{518} \textit{Id.}
\textsuperscript{519} \textit{Biodiversity Conservation Alliance}, 608 F.3d at 715.
\textsuperscript{520} \textit{Id.}
\textsuperscript{521} \textit{Id.}
\textsuperscript{522} \textit{Id.} at 716.
\textsuperscript{523} \textit{Id.}
\textsuperscript{524} \textit{Id.} at 716–17.
\textsuperscript{525} \textit{Biodiversity Conservation Alliance}, 608 F.3d at 717.
preparation of a SEIS. Plaintiffs asserted claims under NEPA, the Mineral Leasing Act, the ESA, and the National Forest Management Act (NFMA). The plaintiffs had partial success at the summary judgment phase because the BLM’s determination that the northern and southern pipelines had independent utility and were not “connected action[s]” was arbitrary and capricious. Connected actions are those without an independent utility. As a result, the court required the BLM to prepare a SEIS. The project involved converting 220 miles of natural gas pipeline to carry refined petroleum and constructing 260 miles of new pipeline, of which 96.95 miles would span federal lands. Another proposed pipeline would run from Odessa, Texas to Bloomfield, New Mexico; the two pipelines would allow transport of petroleum products to Salt Lake City from West Texas and shipping terminals on the Texas Gulf Coast. The BLM is responsible for processing grants of rights-of-way across federal lands and did not consider the Texas to New Mexico pipeline to be a separate project in its NEPA review.

BLM had initially decided to treat the Texas to Salt Lake City pipeline as one project, requiring one cumulative EIS. To avoid this, Williams Pipeline Company and the Equilon Pipeline LLC terminated their joint venture and treated the two projects separately. Shell Pipeline Company, the successor to Equilon, then planned to build the southern pipeline segment, while Williams would build the northern segment. Williams independently filed an amended application for a northern pipeline originating in Bloomfield, and requested that the application be considered independently of Equilon’s application. BLM then submitted to the Federal Register a notice of intent to assess the Williams and Equilon pipelines separately—a decision based pri-

527 Id. at 232.
528 Id. at 245.
529 Id. at 253.
530 Id. at 267.
531 Id. at 231, 233.
532 Hammond, 370 F. Supp. 2d at 231–32.
533 Id. at 232.
534 Id. at 248–49.
535 Id. at 234.
536 Id. at 234 n.3.
537 Id. at 249.
arily on the dissolution of the two companies’ partnership and Williams’ assurance that it would not depend on Equilon to supply the northern pipeline. The separation of the projects elicited negative comments from numerous parties, including the EPA. The DEIS released by the BLM in March 2001 relied on Williams’s statements. The court recognized the dubiuousness of agencies simply trusting the “self-serving statements or assumptions” of involved parties when preparing an EIS. The court noted that “the history of the [] project as a single connected pipeline, and the proponents’ manifest intention to circumvent the NEPA review process by segmenting the project, should have given BLM cause to question whether the dissolution of the [pipeline] partnership was of real or only formal significance.”

The EPA’s position was that the CEQ did not demand a formal partnership in order for two actions to be treated as a joint project. Plaintiffs asserted that the FEIS should include the environmental effects of the Equilon project because both it and the Williams pipeline represented “similar actions.” The court stated, “actions that are ‘similar’ or ‘connected’ or that have cumulative effects must be considered together in one EIS.” Furthermore, the court asserted that “an agency preparing an EIS may not ‘segment’ its analysis so as to conceal the environmental significance of the project or projects.”

The court found that Williams and Equilon intentionally attempted to segment the analysis of the environmental impacts of the project in order to avoid NEPA requirements. The court, however, also concluded that the plaintiffs failed to prove that the two projects produced cumulative effects or were so similar as to require a combined EIS. The BLM, however, acted arbitrarily in deciding, based on

538 Hammond, 370 F. Supp. 2d at 249.
539 Id. at 235.
540 Id. at 249–50.
541 Id. at 251.
542 Id. at 252.
543 Id. at 235–36.
544 Hammond, 370 F. Supp. 2d at 246.
545 Id. at 243–44 (citing 40 C.F.R. § 1508.25(a) (2011)).
546 Id. at 244 (citations omitted).
547 Id.
548 Id. at 245.
its interpretation of the administrative record, that the Equilon and Williams pipelines were not “connected” actions.\footnote{Id.}

The BLM failed to independently confirm Williams’s “self-serving and unreliable statements about its petroleum supply arrangements in Bloomfield.”\footnote{Hammond, 370 F. Supp. 2d at 253.} The BLM also failed to respond sufficiently to the EPA’s criticism of the DEIS or FEIS based on the history of the two projects.\footnote{Id. at 252–53.} As a result, the court declared that the Agency violated NEPA and CEQ requirements by improperly segmenting its analysis of the Williams pipeline.\footnote{Id. at 253.} Thus, the court remanded the case with instruction to prepare a SEIS regarding whether the Williams and Equilon projects constituted connected actions.\footnote{Id.}

The plaintiffs further alleged that after the release of the FEIS and the October 12, 2001 Record of Decision (ROD), Williams’ parent company, the Williams Companies, deteriorated financially.\footnote{Id. at 254.} The company’s resulting financial weakness cast doubt on its ability to complete the project and fully remedy any adverse environmental impacts caused by the potential failure of the project.\footnote{Hammond, 370 F. Supp. 2d at 266.}

Thus, plaintiffs achieved success on the merits with respect to only one of their claims.\footnote{Id.} The court agreed that the BLM acted arbitrarily and capriciously in finding the Williams pipeline segment to have independent utility, and therefore the Agency improperly segmented its analysis in violation of NEPA and CEQ regulations.\footnote{Id.} Despite the plaintiffs’ insistence that the BLM produce a SEIS reflecting the combined environmental effects of the two pipelines, the court held that the Agency need only offer concrete evidence that the projects were not connected actions.\footnote{Id. at 266.}


\footnote{Id.} \footnote{Id. at 253.} \footnote{Id. at 252–53.} \footnote{Id. at 253.} \footnote{Id. at 254.} \footnote{Id.} \footnote{Id. at 266.} \footnote{Id.} \footnote{Id. at 267.}
through southwest Virginia and North Carolina. An environmental organization challenged the Agency decision claiming that its DEIS was inadequate, its FEIS failed to adequately identify alternative routes for the pipeline, and asserted that in evaluating alternative routes the tap locations should not have been considered. In the alternative, if the locations were considered, the plaintiffs argued, the environmental impacts of the taps should have been considered in addition to those of the two proposed power plants to be connected to the pipeline. The D.C. Circuit held that the FERC’s approval of the project was not arbitrary or capricious. The environmental impacts of the project received the requisite hard look, and any deficiencies in the draft were cured by the FEIS. This case demonstrates how difficult it is to overturn an agency’s NEPA review if the agency thoroughly covers the elements of an EIS as set forth in CEQ regulations.

In South Coast Air Quality Management District v. Federal Energy Regulatory Commission, the Ninth Circuit upheld a 2007 EIS produced by the FERC. The case involved a challenge by the South Coast Air Quality Management District (South Coast) to a FERC certificate that authorized the expansion and modification of the North Baja pipeline system, which would allow foreign-sourced natural gas to be shipped from Mexico to the Los Angeles area. The NEPA-based issue involved gas specifications based on the Wobbe Index. South Coast urged the FERC to consider the impact of emissions resulting from the use of the pipeline’s gas and to adopt mitigation measures.

The Ninth Circuit evaluated the NEPA claims in the context of the FERC’s regulatory authority, which is shared with California’s Public

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559 373 F.3d 1323, 1334 (D.C. Cir. 2004).
560 Id. at 1324–25.
561 Id.
562 Id. at 1325.
563 Id.
565 621 F.3d 1085 (9th Cir. 2010).
566 Id. at 1089. The Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Id.
567 Id. at 1090. This index is derived from the heating value and specific gravity of gas. Id. at 1089. A higher Wobbe Index number means more heat is produced, along with more nitrous oxide emissions. Id.
568 Id.
Utility Commission.\(^\text{569}\) NEPA cannot be used to expand an agency’s jurisdiction or expand its substantive powers.\(^\text{570}\) The court did not decide whether the FERC has an obligation to consider the environmental impacts caused by end users burning gas in the Basin because it had considered the issue in its 250-page EIS.\(^\text{571}\) The FERC’s FEIS required North Baja to only deliver gas that met the State of California’s strictest applicable quality standards.\(^\text{572}\) This means that the gas transported by the North Baja pipeline would not materially increase air pollution.\(^\text{573}\) As the court noted, “FERC explicitly considered the environmental impact of down-stream emissions and imposed what it reasonably believed to be effective measures to mitigate the impact.”\(^\text{574}\) This requirement also satisfied the FERC’s obligation to consider input from other agencies, particularly the EPA’s suggestions.\(^\text{575}\) The court concluded that the “FERC’s EIS contains a reasonably thorough discussion of the environmental impact of its actions, based on information then available to it. Consequently, NEPA’s goal of ‘informed agency action’ has been met.”\(^\text{576}\) After discussing other claims made by petitioners, the court denied the petition for review.\(^\text{577}\)

An ongoing controversy that is likely to lead to litigation involves a plan to build the seven billion dollar Keystone XL pipeline, which would move high-carbon tar sands oil from Alberta, Canada to refineries near Houston, Texas.\(^\text{578}\) The State Department released a DEIS in April 2010, that concluded the project would have a minimal environmental impact.\(^\text{579}\) Environmentalists oppose the project because the life cycle carbon emissions of oil produced from tar sands is about eighty-two per-
cent greater than crude oil refined in the United States. The State
Department agreed to expand its NEPA review of the permit application
to construct the pipeline, and in April 2011, it released a supplemental
review. A coalition of members of Congress, mostly liberal Democrats,
however, is pressing the Department to perform a more complete analy-
sis of the GHG impacts. At the same time, the Department of Defense
and conservative members of Congress are working to ensure that Ca-
nadian tar sands oil can be sold to federal agencies regardless of its
GHG impacts. The EPA objects to the State Department’s draft SEIS,
claiming that it does not contain the information required to fully assess
the effects of the project. The EPA is concerned about the impacts to
groundwater from spills, the effect on emission levels at Gulf Coast re-
fineries, GHG emissions and appropriate mitigation plans, the impacts
on low-income communities near the refineries, and lifecycle GHG
emission estimates that the EPA believes are underestimated by twenty
percent. This project is now the target of the House Energy and
Commerce Subcommittee on Energy and Power, which is pressuring the
Obama Administration to approve the project.

This controversy has international relations ramifications based on
the reasoning found in Hirt v. Richardson. In that case, environmental
groups brought a NEPA-based action against the DOE to enjoin a
weapons-grade plutonium shipment from New Mexico to Canada for
disposal in Canadian reactors. The court had previously declined to
grant a preliminary injunction, allowing the defendants to complete
the shipment to Canada. The court held the case was moot because

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582 Id.
585 Id.
586 Alan Kovski, House Subcommittee Passes Bill to Move Up Decision on Canadian Oil Sands Pipeline, 42 Env’t Rep. (BNA) 1339 (June 17, 2011).
there was no longer an adequate remedy. The court was critical of DOE’s failure to properly deal with the environmental issues in its EA, but the court decided that the foreign policy and executive branch implications of this case made the remedy of stopping the shipment beyond the equitable power of the court.

III. NEPA-Based Litigation Concerning Mining, Including Oil Shale and Oil Sand Development

In *South Fork Band v. U.S. Department of the Interior*, the South Fork Band Council of Western Shoshone of Nevada sued Interior and the BLM in an effort to stop a gold mining project on Mt. Tenabo in Nevada, after the BLM issued a FEIS and approved the project. The plaintiffs in the lower court unsuccessfully argued for a preliminary injunction under the Religious Freedom Restoration Act. On appeal, the Ninth Circuit remanded the case to the district court after reversing the denial of injunctive relief on the NEPA claims. The court granted injunctive relief “pending preparation of an EIS that adequately considered the environmental impact of the extraction of millions of tons of refractory ore, mitigation of the adverse impact on local springs and streams, and the extent of fine particulate emissions.”

The project would impact 6571 acres of public land and 221 acres of land belonging to the project’s proponent. Petitioners argued that the project violated the Federal Land Policy Management Act (FLPMA), which imposes a duty on the BLM to take action to prevent “unnecessary and undue degradation of the lands.” Although the Ninth Circuit ruled that the Tribes failed to demonstrate the likelihood of success in establishing that the BLM acted in an arbitrary or capricious manner, it ruled for the Tribes on the NEPA issues. The court also criticized the BLM’s failure to consider the environmental impact of transporting

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589 *Hirt II*, 127 F. Supp. 2d at 854.
590 *Id.*
591 588 F.3d 718, 721 (9th Cir. 2009).
593 *S. Fork Band*, 588 F.3d at 722.
594 *Id.*
595 *Id.*
597 *S. Fork Band*, 588 F.3d at 721–22.
and processing the ore: “The air quality impacts associated with transport and off-site processing of the five million tons of refractory ore are prime examples of indirect effects that NEPA requires be considered.”

The fact that the facility operates with a state permit issued under the CAA does not satisfy the federal agency’s obligations under NEPA. The BLM may delegate its permitting authority to the states, but federal agencies must nevertheless comply with NEPA. Moreover, NEPA requires that the EIS discuss mitigation measures with “sufficient detail to ensure that environmental consequences have been fairly evaluated.” The mitigation discussion must include an assessment of the effectiveness of any proposed mitigation measures. Before an agency carries out an action, NEPA requires that it take a hard look at the potential environmental impacts. The agency’s limited understanding of the science applicable to the project does not relieve it of its NEPA obligation to consider mitigations to the project’s potential impacts. Finally, the court required the BLM modeling and analysis for fine particulates to reflect recent changes in the law.

The issues concerning gold mining in the Mount Tenabo area returned to the Ninth Circuit after the BLM approved an amendment to a plan of operations for an existing mineral exploration project in Nevada. The Te-Moak Tribe and environmental organizations brought an action in the district court seeking summary judgment and alleging that the project violated NEPA, FLPMA, and the National Historic Preservation Act (NHPA). The court denied the motion and the plaintiffs appealed.

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598 Id. at 725.
599 Id. at 726 (citing Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt., 387 F.3d 989, 998 (9th Cir. 2004)).
601 S. Fork Band, 588 F.3d at 727 (quoting Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 352 (1989)).
602 Id.
603 Id.
604 Id.
605 Id. at 728.
606 Te-Moak Tribe v. U.S. Dep’t of the Interior, 608 F.3d 592, 595–96, 598 (9th Cir. 2010).
607 Id. at 598.
608 Id.
holding that the BLM complied with the NHPA and FLPMA. The court reversed and remanded the case to the BLM, however, because the Agency failed to sufficiently analyze the cumulative impacts of the amended plan of operation as required by NEPA. The court allowed the BLM to make an assessment of exploration projects involving uncertain locations of drill sites and other project activities by analyzing the impact of drilling, and imposing effective measures for avoidance and mitigation to account for unknown impacts in all parts of the project area.

The court noted that the BLM’s avoidance and mitigation measures for the protection of the cultural resources of the Western Shoshone tribes controlled the potential impacts of exploratory activities. If new cultural resources are discovered, miners must cease activities within 100 meters until the BLM determines whether the site can be included on the National Register of Historic Places and therefore should be protected by an exclusion zone. This provision would compensate for the mining company’s inability to identify the drill sites’ precise locations. The court then concluded that the BLM did not violate NEPA when it approved the amended plan of operation, though the exact locations of access roads, drill sites, and other project activities were as yet unknown.

Plaintiffs argued that the BLM violated NEPA because of the inadequate discussion of reasonable alternatives in its EA. As the court noted, “[t]he purpose of NEPA is to require disclosure of relevant environmental considerations that were given a ‘hard look’ by the agency, and thereby to permit informed public comment on proposed action and any choices or alternatives that might be pursued with less environmental harm.” The court stated that agencies must consider alternatives in an EIS as well as an EA, and are required to “give full and meaningful consideration to all reasonable alternatives.”

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609 Id. at 611, 614.
610 Id. at 607, 614.
611 Id. at 600.
612 Te-Moak Tribe, 608 F.3d at 600–01.
613 Id. at 601.
614 Id.
615 Id.
616 Id.
617 Id. (quoting Lands Council v. Powell, 395 F.3d 1019, 1027 (9th Cir. 2005)).
618 Te-Moak Tribe, 608 F.3d at 601–02; see 40 C.F.R. § 1508.9(b) (2011).
established that “[t]he existence of a viable but unexamined alternative renders an [EIS] inadequate.”619 “NEPA does not require a separate analysis of alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences.”620 Moreover, there is no requirement that more than two alternatives, the preferred alternative and the “No Action” alternative, be considered.621

An EA must include a cumulative impact analysis.622 Federal regulations define a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”623 An agency must take a hard look at all actions when preparing a cumulative impact analysis,624 which “must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment.”625 Furthermore, “[g]eneral statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.”626

The court found that the coverage of the cultural resources and Native American religious concerns was inadequate because “the EA does not, in fact, discuss the existence of any cumulative impacts on these resources.”627 The Ninth Circuit considered Klamath-Siskiyou Wildlands Center v. Bureau of Land Management, where the court deemed EAs inadequate because they listed various environmental concerns (air and water quality, for example) next to checkboxes marked “No” to

619 Te-Moak Tribe, 608 F.3d at 602 (quoting Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992)).
620 Id. at 602 (quoting Headwaters, Inc. v. Bureau of Land Mgmt., 914 F.2d 1174, 1181 (9th Cir. 1990)).
621 See id. at 602 n.11.
622 See 40 C.F.R. § 1508.7.
623 Id.
624 Te-Moak Tribe, 608 F.3d at 603.
625 Id. (quoting Landa Council v. Powell, 395 F.3d 1019, 1028 (9th Cir. 2005)).
626 Id. (quoting Neighbors of Cuddy Mountain v. U.S. Forest Serv., 137 F.3d 1372, 1380 (9th Cir. 1998)).
627 Id. at 604.
indicate that none of these factors would suffer any cumulative effects.\textsuperscript{628} The court found this insufficient because “[t]he EA[s] are silent as to the degree that each factor will be impacted and how the project design will reduce or eliminate the identified impacts.”\textsuperscript{629} The court then observed that the EA failed to explain the unmitigated impacts of expanded exploration and other existing proposed or foreseeable activities in the Amendment, as required of the agency.\textsuperscript{630} The plaintiffs only needed to show a potential cumulative impact to meet their burden, which they did.\textsuperscript{631}

The Ninth Circuit concluded that the BLM’s cumulative impact analysis was insufficient, and therefore violated NEPA.\textsuperscript{632} The BLM failed to take a hard look at the cumulative impacts of both the amended plan of operation and other projects in the area, which NEPA requires.\textsuperscript{633} On this issue, the court reversed the grant of summary judgment to the defendants and required the BLM to conduct further analysis.\textsuperscript{634} Although the BLM took a hard look at the direct impacts of the amended plan the court concluded that the entirety of the BLM’s actions were arbitrary and capricious.\textsuperscript{635}

More recently, the Ninth Circuit decided \textit{Greater Yellowstone Coalition v. Lewis}\textsuperscript{636}—a case involving a challenge to a phosphate ore mining operation in the Caribou National Forest located in Idaho.\textsuperscript{637} A coalition of environmental organizations challenged a proposed expansion of the mine because of concern over high levels of selenium created by mining operations, which are subject to a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).\textsuperscript{638} Plaintiffs claimed the expansion would violate NEPA, the CWA, and the NFMA.\textsuperscript{639} J.R. Simplot Company (Simplot) operated

\textsuperscript{628} 387 F.3d 989, 995 (9th Cir. 2004).
\textsuperscript{629} \textit{Id.} at 995.
\textsuperscript{630} \textit{Te-Moak Tribe}, 608 F.3d at 605.
\textsuperscript{631} \textit{Id.}
\textsuperscript{632} \textit{Id.} at 606.
\textsuperscript{633} \textit{Id.}
\textsuperscript{634} \textit{Id.}
\textsuperscript{635} \textit{Id.} at 606–07.
\textsuperscript{636} 628 F.3d 1143 (9th Cir. 2010).
\textsuperscript{637} \textit{Id.} at 1146, 1148.
\textsuperscript{638} \textit{Id.} at 1146. CERCLA is located at 42 U.S.C. §§ 9601–9675 (2006).
the mine pursuant to two federal mineral leases, and sought approval from the BLM, which has jurisdiction over phosphate leases on public land, and the Forest Service, which has the authority to issue a special use permit for mining on forest system lands. The district court granted summary judgment to the defendants and denied the motion for a preliminary injunction, which the Ninth Circuit affirmed.

The agencies released a FEIS in October 2007, which concluded that the mine expansion would not adversely impact water quality because Simplot was working to reduce pollution from its existing operations, and the company proposed a “store and release cover system” designed to reduce percolation. The company hired an independent consultant that used models to show that the total water percolating through the ground cover was within acceptable limits. The government’s expert expressed doubt about the modeling, and additional review of the studies failed to remove the uncertainty. However, concluded that further study was unnecessary because Simplot agreed to monitor the ground cover to ensure that it continued to perform as predicted. The Idaho Department of Environmental Quality agreed with this conclusion.

The Ninth Circuit based its review on the APA’s “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law” standard. As stated by the court, “[a]gencies have discretion to rely on their own experts’ reasonable opinions to resolve a conflict between or among specialists, even if we find contrary views more persuasive.” The Ninth Circuit noted that the Caribou National Forest Plan required the implementation of state-of-the-art protocols to prevent hazardous materials from being released at a level beyond those permitted

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640 Lewis, 628 F.3d at 1146.
642 Lewis, 628 F.3d at 1148, 1153.
643 Id. at 1146–47.
644 Id. at 1147.
645 Id. at 1147–48.
646 Id. at 1148.
647 Id.
648 Lewis, 628 F.3d at 1148 (quoting the APA standard of review, which can be found at 5 U.S.C. § 706(2)(A) (2006)).
649 Id. (citing Marsh v. Or. Natural Res. Council, 490 U.S. 360, 378 (1989)).
by state and federal regulations.\textsuperscript{650} The agencies determined that remediation could sufficiently offset additional released selenium.\textsuperscript{651} Although this determination was based on modeling that did not remove short-term uncertainty, the agency did not necessarily fail to consider the relevant elements of the problem.\textsuperscript{652} The court noted that “[t]he fact that the agencies relied on future testing to verify the model’s predictions does not invalidate the previous, rigorous evaluation the agencies conducted.”\textsuperscript{653} As a result, NEPA’s hard look requirement was satisfied.\textsuperscript{654} The court was satisfied that, “[s]hould the testing reveal significant inadequacies or miscalculations in the modeling, the agencies presumably are authorized to, and will require Simplot to, take corrective action.”\textsuperscript{655} NEPA only requires an evaluation of future environmental impacts, and the agencies’ conclusion that remediation efforts would offset future pollution was reasonable.\textsuperscript{656}

The dissenting opinion expressed the view that both “the letter and the spirit of the applicable federal environmental standards” were violated by the agencies’ actions because they failed to account for vital information and postponed necessary assessments until a later date.\textsuperscript{657} Simplot was subject to a CERCLA-based removal order to clean up selenium pollution, and there was no evidence that it had complied.\textsuperscript{658} Simplot, however, is “at the helm of an industry that contributes millions of dollars annually to the economy of southeastern Idaho and western Wyoming.”\textsuperscript{659} Thus, substantial local economic interests support the company.\textsuperscript{660} The dissent identified three violations of federal law: (1) authorizing the expansion of the project on incomplete information concerning the sources of extant selenium pollution, and failing to determine whether such information could be obtained; (2) relying on

\begin{itemize}
\item \textsuperscript{650} Id. at 1149.
\item \textsuperscript{651} Id.
\item \textsuperscript{652} Id. at 1150.
\item \textsuperscript{653} Id.
\item \textsuperscript{654} Lewis, 628 F.3d at 1150.
\item \textsuperscript{655} Id. at 1151. The court noted that it will take years for any effects of selenium pollution to materialize fully. Id. at 1151 n.3.
\item \textsuperscript{656} Id.
\item \textsuperscript{657} Id. at 1153 (Fletcher, J., dissenting).
\item \textsuperscript{658} Id.
\item \textsuperscript{659} Id.
\item \textsuperscript{660} Lewis, 628 F.3d at 1154.
\end{itemize}
insufficient modeling to predict impacts on water quality; and (3) adopting post-decisional modeling rather than additional modeling.661

The dissent objected to the majority’s conclusion that only future impacts need to be considered because Simplot’s prior mining activities polluted the area so significantly that a comprehensive evaluation of existing pollution would be necessary to inform any decision regarding remediation.662 The dissent stated that the agencies’ belief that remediation of only two sources of selenium was necessary was irrational.663 Moreover, the modeling method proposed by Simplot led the government’s expert to notice that its conclusions were based on a limited understanding of the predicted effect of the cover system.664 Additionally, the approval of the expansion allows another fourteen to sixteen years of operation, which is a time period in which the full extent of new pollution will not be evident.665 Simplot may be “long gone” when the destructive consequences of its operation are realized.666 The dissent submitted that “[t]he majority’s willingness to accept the flawed and incomplete assessments of the agencies in this case amounts to an abdication of the judicial function.”667

In Center for Biological Diversity v. U.S. Department of the Interior, the Ninth Circuit ruled on environmental groups’ challenge to a land exchange in Arizona between the BLM and Asarco, a mining company.668 The appellants contended the exchange violated NEPA, FLPMA, and the Mining Law of 1872.669 Asarco wanted an exchange of land enabling it to mine without complying with the Mining Law of 1872, thereby avoiding the need to prepare a Mining Plan of Operations (MPO) that would need to be approved by the BLM.670 The BLM prepared an EIS that assumed that the MPO process would not affect Asarco’s manner of operation on the newly-exchanged land.671 The BLM behaved

661 Id.
662 Id.
663 See id. at 1155–56.
664 Id. at 1156.
665 Id. at 1158.
666 Lewis, 628 F.3d at 1158.
667 Id.
668 623 F.3d 633, 636 (9th Cir. 2010).
670 Ctr. for Biological Diversity, 623 F.3d at 636.
671 Id.
under the presumption that the mining operations would be the same whether or not the land was federally owned.\textsuperscript{672}

The Ninth Circuit held that the BLM had not taken a hard look at the environmental impact of its proposed action, and therefore its actions concerning the EIS were arbitrary and capricious.\textsuperscript{673} The site already is the third most productive copper mine in the United States, but Asarco continued to seek more land (10,976 acres) in order to expand its operations.\textsuperscript{674} The land selected by Asarco provides important plant and wildlife habitat, including habitat for endangered species.\textsuperscript{675} Additionally, the land has archaeological sites eligible for nomination to the National Register of Historic Places, and some of the land is adjacent or in close proximity to the White Canyon Area of Critical Environmental Concern.\textsuperscript{676} The EIS recognized that the mining operation would have serious environmental impacts.\textsuperscript{677} The land to be acquired by the government would also have wildlife habitat values, but would be subject to mining claims even though most of the land would have only a “moderate potential for locatable mineral resources.”\textsuperscript{678} In response, the EPA published thirteen pages of single-spaced comments strongly opposing the proposed land exchange.\textsuperscript{679} The EPA stated that reasonable alternatives were not evaluated and the detailed information necessary for an analysis was not provided,\textsuperscript{680} and therefore rated the “DEIS as EO-2—Environmental Objections-Insufficient Information.”\textsuperscript{681}

The BLM repeatedly stated that mining was the foreseeable use under all alternatives and the environmental impacts would occur with or without MPO requirements.\textsuperscript{682} The FEIS also contained no analysis of the environmental impacts of a “No Action” alternative.\textsuperscript{683} The EPA, the Bureau of Indian Affairs, and the Sierra Club raised objections that were not addressed by the BLM in its FEIS.\textsuperscript{684} The BLM issued a Re-
cord of Decision (ROD) that changed existing Resource Management Plans (RMPs) to remove the protective designation of the White Canyon Resource Conservation Area, which would remove the need to manage the lands under FLPMA.\footnote{685} The appellants appealed to the Interior Board of Land Appeals (IBLA), which denied relief.\footnote{686} The district court granted summary judgment to Asarco and the BLM on June 6, 2007.\footnote{687}

The environmental groups appealed to the Ninth Circuit, which held “that the BLM’s assumption that mining would occur on the selected lands in the same manner regardless of the land exchange was arbitrary and capricious, and a violation of NEPA.”\footnote{688} In addition, the BLM’s acceptance of the ROD’s assumption in concluding that the exchange was in the public interest was arbitrary and capricious, and therefore violated FLPMA.\footnote{689} Moreover, the “BLM’s assumption in the FEIS that the environmental consequences of the land exchange alternative and the no action alternative would be the same was arbitrary and capricious.”\footnote{690} But if the selected lands remain in public ownership, Asarco’s mining operations would be subject to the Mining Law of 1872, including the MPO requirements that provide significant regulatory control over the mining operation, and require consultation with other agencies pursuant to the NHPA and the ESA.\footnote{691} The MPO process also mandates compliance with NEPA and FLPMA’s proscription of unnecessary or undue degradation, which is distinct from requirements under NEPA.\footnote{692} Finally, MPO compliance can require satisfaction of state environmental protection laws.\footnote{693} Therefore, “the BLM must make a meaningful comparison of the environmental consequences of Asarco’s likely mining operations with and without the requirement that MPOs be prepared by Asarco and approved by the BLM . . . .”\footnote{694} The Ninth Cir-

\footnote{685} Id. at 640–41.  
\footnote{686} Id. at 641.  
\footnote{687} Id.  
\footnote{688} Ctr. for Biological Diversity, 623 F.3d at 641–42.  
\footnote{689} Id. at 642.  
\footnote{690} Id.  
\footnote{692} See Ctr. for Biological Diversity, 623 F.3d at 644 (citing 43 U.S.C. § 1732(b)).  
\footnote{693} See id.  
\footnote{694} Id. at 646.
cuit then reversed the decision of the district court and remanded the case.\footnote{695 Id. at 650. The case includes a dissent, which argues that the BLM’s actions were not arbitrary or capricious and posits that BLM should be allowed to manage public lands under FLPMA standards in light of Asarco’s substantial preexisting mining rights. Id. at 650–66.}

In the Sierra Club v. U.S. Department of Energy, environmental organizations challenged the grant of an easement for a road across the federally-owned Rocky Flats, a location previously used to process plutonium and produce nuclear weapon triggers.\footnote{696 255 F. Supp. 2d 1177, 1180 (D. Colo. 2002).} The road would have made it possible for owners of the subsurface to mine sand and gravel.\footnote{Id. at 1182–83; see 10 C.F.R. § 1021, Subpt. D app. B ¶ 1.24 (2011).} The DOE did not perform a NEPA review because it relied on the use of a categorical exclusion exempting transfers of property where the use of the property is unchanged and the impacts remain essentially unchanged.\footnote{698 Id. (citing 10 C.F.R. § 1021.410(b)(3)).} The court held that “[t]here is no rational basis to conclude that constructing a private mining road on this land is the same land use as researching wind energy.”\footnote{699 Sierra Club, 255 F. Supp. 2d at 1183.} Moreover, when an action is proposed in connection with other actions with potentially significant impacts, the agency may not use a categorical exclusion.\footnote{700 Id. at 1185.} In this case, the DOE should have considered the mine expansion as well as the impacts of the changed use of the road in determining whether an EA or EIS was required under NEPA.\footnote{701 Id. at 1189.} The court concluded that the Agency abused its discretion when it declined to prepare an EA or EIS, and it failed to take a hard look at the mine and easement’s significant impact on the environment.\footnote{702 Id. at 1190.} Therefore, the court directed the DOE to void the easement.\footnote{703 Id. at 1190. In a recent development in 2008, the BLM prepared a PEIS for commercial development of oil shale resources on public lands. Tripp Baltz, Industry Says New EIS Unnecessary for Oil Shale Development in Mountain West, 42 Env’t Rep. (BNA) 1069 (May 13, 2011). In 2011, the Secretary of the Interior announced that it may be necessary to update oil shale plans in an effort to make about “1.9 million acres of public lands potentially available for commercial oil shale development and 431,224 acres for tar sands leasing and development.” Id.}
IV. NEPA-BASED LITIGATION CONCERNING ELECTRIC POWER DEVELOPMENT

Traditionally there have been a limited number of NEPA-based claims against fossil-fueled electric power plants, however, the prominence of climate change has brought more of these cases to the forefront.\textsuperscript{704} The D.C. Circuit Court explained why there are so few NEPA cases in \textit{National Committee for the New River v. Federal Energy Regulatory Commission}.\textsuperscript{705} In this case, the court refused to require consideration of non-jurisdictional activities merely because they were connected to a pipeline.\textsuperscript{706} In upholding the Federal Energy Regulatory Commission’s (FERC’s) decision not to evaluate the environmental impact of the electric power plant, the court said “[t]he Commission reasoned that not only would construction, operation, and location of the plant be regulated by the Commonwealth of Virginia, but the federal government had no financial involvement in the project and no federal lands were at stake.”\textsuperscript{707} The applicability of NEPA in this realm is limited because federal regulation or direct federal financial support of fossil fuel electric power plants is minimal.\textsuperscript{708}

In \textit{Nuclear Energy Institute, Inc. v. Environmental Protection Agency}, the D.C. Circuit ruled on challenges, including those based on NEPA, to the nuclear waste repository at Nevada’s Yucca Mountain.\textsuperscript{709} The case primarily involved the Nuclear Waste Policy Act (NWPA) of 1982, as amended in 1987 and 1992, and its implementation by the Nuclear Regulatory Commission (NRC).\textsuperscript{710} The Yucca Mountain site is subject to

\textsuperscript{704} See, e.g., Border Power Plant Working Group v. DOE, 260 F. Supp. 2d 997 (S.D. Cal. 2003); see infra notes 817–879 and accompanying text.

\textsuperscript{705} See 373 F.3d 1323, 1327 (D.C. Cir. 2004) (explaining the degree of deference given to agencies in drafting EISs)

\textsuperscript{706} Id. at 1334.

\textsuperscript{707} Id.


\textsuperscript{709} 373 F.3d 1251, 1257, 1285 (D.C. Cir. 2004).

the Waste Isolation Pilot Plant Land Withdrawal Act of 1992, which exempts the site from EPA’s generally applicable environmental regulations.\textsuperscript{711} Nevada, Clark County, and the City of Las Vegas brought the NEPA claims in the case.\textsuperscript{712} NWPA section 114(f)(4) provides that the Department of Energy’s (DOE’s) FEIS shall, to the extent practicable, be adopted by the NRC in connection with the issuance of a construction authorization and license for the Yucca Mountain repository.\textsuperscript{713} Adopting DOE’s EIS satisfies NRC’s responsibilities under NEPA and “no further consideration shall be required.”\textsuperscript{714} This statutory provision, however, does not permit NRC to utilize an EIS that does not meet NEPA’s statutory and regulatory requirements.\textsuperscript{715} Also, DOE is expected to support one or more future decisions related to Yucca Mountain with its FEIS, including the selection of an alternative method of waste transportation to the site.\textsuperscript{716} The D.C. Circuit then rejected the NEPA-based challenges, primarily on the grounds that they were not ripe.\textsuperscript{717} The statutory bar to NEPA review for the Yucca Mountain repository makes it unlikely that NEPA will play much of a role going forward.\textsuperscript{718}

A. NEPA-Based Litigation Concerning Alternative Energy Development

Interior has a significant management task to comply with its obligations under NEPA and fulfill its renewable energy goal. These goals include increasing the megawatts of renewable energy production permitted on public lands.\textsuperscript{719} The Agency produced a PEIS for wind projects on western public lands.\textsuperscript{720} On December 17, 2010, the BLM and DOE published a joint draft PEIS regarding solar energy development on public lands in six southwestern states—attempting to estab-

\begin{itemize}
\item \textsuperscript{712} Nuclear Energy Inst., Inc., 373 F.3d at 1285.
\item \textsuperscript{713} 42 U.S.C. § 10,134(f)(4).
\item \textsuperscript{714} Id.
\item \textsuperscript{715} Nuclear Energy Inst., Inc., 373 F.3d at 1314.
\item \textsuperscript{716} Id. at 1312.
\item \textsuperscript{717} See id. at 1313.
\item \textsuperscript{718} See 42 U.S.C. § 10,134(f)(4) (2006); Nuclear Energy Inst., Inc., 373 F.3d at 1313–14.
\item \textsuperscript{719} Andrew Childers, Interior Department Plans to Double Permits for Renewable Generation by End of 2011, 42 Env’t Rep. (BNA) 796 (Apr. 15, 2011).
\item \textsuperscript{720} Robert Miller & Miles Imwalle, Energy Independence Achievable with New Environmental Regulatory Approach, ABA TRENDS (Nov./Dec. 2009), at 5, 5.
\end{itemize}
lish 677,000 acres of solar zones in Arizona, California, Colorado, Nevada, New Mexico, and Utah.\footnote{721} Establishing solar zones would streamline and standardize the process for developing solar projects on 214,000 acres of these lands.\footnote{722} On October 25, 2010, Interior approved the Blythe Solar Power Project in California, which was the sixth solar energy project approved by the Department on public lands in the fall of 2010.\footnote{723} On April 26, 2011, the BLM announced it was placing renewable energy development areas off-limits to mining claims for two years in order to provide time for an environmental review and a grant of a right-of-way for solar and wind projects.\footnote{724}

Six months later, Interior issued its first commercial lease to Cape Wind Associates, LLC for development of a wind farm on the Outer Continental Shelf.\footnote{725} The wind farm will be located in Nantucket Sound off the coast of Massachusetts.\footnote{726} In addition, the Department is seeking to grant one or more leases for a second wind project about twelve nautical miles south of Martha’s Vineyard and Nantucket.\footnote{727} It plans to prepare an EA and, if necessary, an EIS.\footnote{728} On February 7, 2011, Interior announced the first of four Wind Energy Areas where permitting will be expedited—off the coasts of Delaware, Maryland, New Jersey, and Virginia.\footnote{729} The Department expects to identify additional wind energy sites for expedited development in areas off the coasts of Massachusetts, Rhode Island, and North Carolina.\footnote{730} It also released a strategic plan for offshore wind energy development in 2011.\footnote{731}

\footnote{721} 75 Fed. Reg. 78,992 (Dec. 17, 2010).
\footnote{723} Ari Natter, \textit{Sixth Solar Project on Public Land to Gain Interior Approval Is Largest at 7,000 Acres}, 41 Env’t Rep. (BNA) 2408 (Oct. 29, 2010).
\footnote{726} Id.
\footnote{727} Id.
\footnote{728} Id.
\footnote{730} Id.
In *Western Watersheds Project v. Bureau of Land Management*, the district court denied a request for a preliminary injunction to stop a 150-megawatt wind-generating facility utilizing seventy-five wind turbines.\(^{732}\) The court ruled the BLM had considered all relevant factors in its EA.\(^{733}\) After finding no significant impact and requiring no important mitigation measures, BLM was not required to produce an EIS.\(^{734}\) In *Pit River Tribe v. U.S. Forest Service*, the Forest Service produced an EIS for a geothermal development project.\(^{735}\) The Forest Service did not discuss the no-action alternative, which resulted in the Ninth Circuit determining that the EIS did not meet NEPA’s requirement to take a hard look at the no-action alternative including total abandonment of the project.\(^{736}\)

**B. NEPA-Based Litigation Concerning Transmission Lines**

*Piedmont Environmental Council v. Federal Energy Regulatory Commission* is a consolidated case where two community organizations and two state agencies challenged FERC regulations implementing portions of the Federal Power Act.\(^{737}\) The Fourth Circuit clarified that NEPA applies to every proposed transmission project subject to FERC jurisdiction and also requires a PEIS when federal actions are connected or cumulative.\(^{738}\) Petitioners challenged the regulations concerning permits for the modification or construction of electric transmission lines in areas designated as national interest corridors.\(^{739}\) Petitioners used both the Energy Policy Act of 2005 and NEPA as the basis for their claims.\(^{740}\)

Petitioners were successful on some of the NEPA-based challenges,\(^{741}\) but lost on their claim that an EA or EIS was required be-

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\(^{733}\) Id. at 1100–01.

\(^{734}\) Id. at 1101; William H. Carlile, *Judge Lets Nevada Wind Project Proceed, Says BLM Considered All Relevant Factors*, 42 Env’t Rep. (BNA) 741 (Apr. 8, 2011).

\(^{735}\) 469 F.3d 768, 773, 777 (9th Cir. 2006).

\(^{736}\) Id. at 772, 785.


\(^{738}\) See *Piedmont Envtl. Council*, 558 F.3d at 316, 318.

\(^{739}\) Id. at 309.

\(^{740}\) Id. at 309–10.

\(^{741}\) Id. at 319–20.
cause the court held that procedural rules do not require a full environmental analysis.\textsuperscript{742} The court also held that the issuance of procedural regulations specifying the content of permit applications does not require preparation of either an EA or an EIS.\textsuperscript{743} In reaching this conclusion, the court evaluated the claim that NEPA required a PEIS,\textsuperscript{744} which is needed when one agency action triggers other actions.\textsuperscript{745} The court found that the issuance of the contested regulations was an independent action, not part of a larger FERC action that required an EIS.\textsuperscript{746} Moreover, there were no cumulative actions with significant environmental effects because the issuance of regulations was not interdependent with any other FERC action requiring an EIS.\textsuperscript{747} Petitioners also alleged that FERC’s revision of its NEPA-implementing regulations, before consulting with the CEQ, was a violation of CEQ regulations.\textsuperscript{748} The court found for the petitioners and vacated FERC’s amended NEPA regulations.\textsuperscript{749}

The DOE lost another NEPA case in \textit{California Wilderness v. U.S. Department of Energy}.\textsuperscript{750} In this case, state and environmental petitioners challenged the DOE’s Congestion Study and designation of national interest electric transmission corridors (NIETCs) because the Department failed to consult with the affected states as required by the Energy Policy Act of 2005 (EPAct).\textsuperscript{751} The petitioners additionally claimed that the DOE neglected to undertake an environmental study for its NIETC designation as required by NEPA.\textsuperscript{752} The Ninth Circuit held that the DOE failed to properly consult with the affected states before it completed its study and failed to prepare an environmental analysis prior to

\textsuperscript{742} \textit{Id.} at 310, 316, 320 (citing 18 C.F.R. § 380.4(a) (2)(ii)).
\textsuperscript{743} \textit{Id.} at 310.
\textsuperscript{744} \textit{Piedmont Envtl. Council}, 558 F.3d at 316.
\textsuperscript{745} \textit{Id.}
\textsuperscript{746} \textit{Id.} at 317.
\textsuperscript{747} \textit{Id.}; see 40 C.F.R. § 1508.25(a)(1)(ii)–(iii) (2011).
\textsuperscript{748} \textit{Piedmont Envtl. Council}, 558 F.3d at 317–18; see 40 C.F.R. § 1507.3(a). FERC’s NEPA implementing regulations are found at 18 C.F.R. pt. 380.
\textsuperscript{750} 631 F.3d 1072 (9th Cir. 2011).
\textsuperscript{751} 16 U.S.C. § 824p (2006); \textit{California Wilderness}, 631 F.3d at 1079.
\textsuperscript{752} National Environmental Policy Act of 1969 § 102(2)(C), 42 U.S.C. § 4332(2)(C); \textit{California Wilderness}, 631 F.3d at 1079.
The court vacated both the Congestion Study and NIETC designation, remanding the matter to the DOE. The EPAct provides a federal permit approval process for a transmission line within the NIETC. FERC may grant a permit for a power line within the national corridor if a state agency fails to approve a permit application within a year. The EPAct, however, specifically requires compliance with applicable federal environmental laws, including NEPA.

The DOE issued its Congestion Study in August 2006, and issued a request for comments in a Federal Register notice. On May 7, 2007, the DOE responded to comments already submitted, and asked for additional comments on two Critical Congestion Areas identified in the Congestion Study. In response to comments calling for a PEIS, the DOE claimed that NEPA did not apply because the designation of a NIETC is not a major federal action significantly affecting the human environment.

In its review of the DOE’s actions, the Ninth Circuit evaluated the responses of the Department in relation to its statutory duty to consult with the affected states. The court noted that consultation meant more than providing notice and an opportunity to comment. The DOE did not distribute a draft to the affected states, create a committee consisting of representatives of those states, or provide those states with relevant data. The court stated that an agency has an affirmative duty to meet its consultation obligation, and “by failing to provide the affected States with the modeling data on which it based the Congestion Study, the DOE prevented the affected States from providing informed decision making.”

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753 California Wilderness, 631 F.3d at 1079.
754 Id.
756 Id. § 824p(b)(l)(C)(i).
757 Id. § 824p(h)(6)(D).
760 Id. at 25,850–51.
761 See California Wilderness, 631 F.3d at 1085–87.
762 Id. at 1087.
763 Id. at 1088.
764 Id. (citing Confederated Tribe & Bands of Yakima Indian Nation v. FERC, 746 F.2d 466, 475 (9th Cir. 1984)).
criticism and comments.” An agency has a duty to provide access to all technical studies and data it relied on to make a decision. Releasing data after a study does not fulfill the duty to consult with the affected states. The Ninth Circuit discussed Shinseki v. Sanders, where the Supreme Court noted that a party contesting an agency’s determination bears the burden of proving harmful error. The consultation requirement mandates an exchange of information before the agency makes a decision; failure to provide such an opportunity is not harmless error.

The court also found that the DOE’s failure to prepare an EIS or an EA contemplating the environmental consequences of the NIETCs contravened NEPA. An agency may not avoid its NEPA obligations by simply stating that an action’s effect on the environment will be insignificant. The DOE’s conclusory statement did not demonstrate to the court that it took a hard look at the possible effects on the environment. The court concluded “the fact that the NIETCs do not approve the actual sitings of specific transmission facilities does not excuse the DOE from considering the NIETCs’ environmental impacts.” These NIETCs are major federal actions because they cover over 100 million acres in ten states and create new federal rights, including the power of eminent domain, which curtails rights traditionally held by state and local governments.

The DOE argued that the NIETCs did not have substantial environmental consequences because they did not approve actual sites. The court, however, held that a decision to incentivize transmission facility siting in one municipality instead of another impacts both municipalities because it affects the proposed and potential uses of land.

765 Id. at 1089.
766 Id.
767 California Wilderness, 631 F.3d at 1089.
768 Id. at 1091 (citing 556 U.S. 396, 409–10 (2009)).
769 Id. at 1090, 1093.
770 Id. at 1096.
771 Id. at 1097 (citing Alaska Ctr. for the Env’t v. U.S. Forest Serv., 189 F.3d 851, 859 (9th Cir. 1999) and Steamboaters v. FERC, 759 F.2d 1382, 1393 (9th Cir. 1985)).
772 Id. at 1098.
773 California Wilderness, 631 F.3d at 1098.
774 Id. at 1100–01 (citing 16 U.S.C. § 824p(b), (e) (2006) and Northcoast Envl. Ctr. v. Glickman, 136 F.3d 660, 668 (9th Cir. 1998) for the elements of major federal action).
775 Id. at 1103.
and its value.\textsuperscript{776} The court explained that “[t]he effects may be difficult to measure and may be determined ultimately to be too imprecise to influence the Designation, but this is precisely the type of determination that can be intelligently made only after the preparation of at least an EA.”\textsuperscript{777} The DOE’s claim that it was not possible to consider the environmental impacts of the NIETCs was undercut by its prior preparation of a PEIS before designating the West-wide Corridors for federal lands.\textsuperscript{778} This PEIS demonstrates the feasibility of determining the environmental impacts of a proposed energy corridor and that such a study may prompt modification of a corridor’s boundaries.\textsuperscript{779} The court explained the “DOE’s ability to undertake a PEIS for West-wide Corridors, and to modify the boundaries based on the PEIS, undermines its assertion that it is not possible to evaluate the environmental impacts of a NIETC.”\textsuperscript{780} The court concluded that because the DOE deemed the smaller West-wide Corridors deserving of a PEIS, the NIETCs should also be evaluated in an EA or EIS.\textsuperscript{781}

The American Reinvestment and Recovery Act of 2009 encourages improving transmission line capacity in order to develop large-scale renewable energy projects.\textsuperscript{782} In December 2010, San Diego Gas & Electric commenced the construction of its 117-mile, 500-kilovolt transmission line known as the Sunrise Powerlink.\textsuperscript{783} The line is designed to carry renewable energy from the Imperial Valley to San Diego, California.\textsuperscript{784} The line will traverse about forty-nine miles of BLM

\textsuperscript{776} Id.
\textsuperscript{777} Id.
\textsuperscript{778} Id.; see \textsuperscript{779} U.S. Dep’t of Energy, DOE/EIS-0386, Programmatic Environmental Impact Statement, Designation of Energy Corridors on Federal Land in the 11 Western States (2007).
\textsuperscript{779} \textit{California Wilderness}, 631 F.3d at 1104.
\textsuperscript{780} Id. at 1105.
\textsuperscript{781} Id.
\textsuperscript{784} \textit{Sunrise Powerlink Record of Decision}, supra note 783, at 3.
land and nineteen miles of National Forest land.\footnote{Id.} A non-profit organization, Backcountry Against Dumps, challenged the Sunrise Powerlink project before Interior’s Board of Land Appeals (IBLA) based on alleged violations of NEPA, FLPMA, ESA, and the National Historic Preservation Act.\footnote{Id. at 168.} The IBLA found that the petitioners failed to show the transmission line would be used by fossil-fueled generated electric power and rejected the challenge.\footnote{Id. at 168.} The Forest Service approved the Sunrise Powerlink and issued a permit in December 2010.\footnote{Id. at 168.}

V. Council on Environmental Quality Regulations Concerning Climate Change

On February 18, 2010, the CEQ released draft guidance concerning the application of NEPA to climate change and greenhouse gas (GHG) emissions.\footnote{Memorandum Issuing Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions, at 1 (Feb. 18, 2010), http://www.whitehouse.gov/sites/default/files/microsites/ceq/20100218-nepa-consideration-effects-ghg-draft-guidance.pdf [hereinafter Draft NEPA Guidance].} The policies and procedures outlined in the draft guidance will only become effective when issued in final form.\footnote{See id. at 11.} The draft guidance affirms the applicability of NEPA to GHG emissions and climate change, identifies applicable sections of the Code of Federal Regulations, and urges federal agencies to mitigate adverse impacts through GHG emission reduction efforts and adaptation measures.\footnote{Id. at 1.} Specifically, the draft guidance requires agencies to both analyze the impacts of GHG emissions and climate change for proposed actions, and consider alternative actions including carbon capture and sequestration.\footnote{Id. at 1, 6.} The draft guidance recommends that agencies prepare quantitative and qualitative assessments when the direct annual release of carbon dioxide equivalent (CO$_2$ e) emissions is 25,000 metric tons per year (tpy) or more.\footnote{Id. at 1, 3.} Although this baseline does not apply for long-
term actions with less than 25,000 tpy of CO$_2$e emissions, the CEQ advises agencies to conduct similar assessments.\footnote{Id. at 1; see 40 C.F.R. § 51.166(b)(48)(b)(iv) (2011). Permits for sources in attainment areas and for other pollutants regulated under the major source program are referred to as PSD permits. 40 C.F.R. § 51.166(b)(48)(b)(iv).} Similarly, the EPA’s tailoring rule designates 75,000 tpy of CO$_2$e emissions as the threshold at which new stationary sources must seek Prevention of Significant Deterioration (PSD) permits. Projects that do not require a permit may not need to comply with NEPA.

The NEPA analysis serves two principal goals. First, it can “reduce vulnerability to climate change impacts, adapt to changes in our environment, and mitigate the impacts of Federal agency actions that are exacerbated by climate change.”\footnote{Draft NEPA Guidance, \textit{supra} note 789, at 2.} Second, it can aid in achieving reductions in GHG emissions through conservation of energy, reductions in energy use, and by promoting the use of renewable energy technologies.\footnote{Id. at 5.} Additionally, it encourages quantification of cumulative emissions over the life of a project and actions to reduce GHG emissions, including the consideration of reasonable alternatives.\footnote{Id.} It is expected that an EIS, however, will be necessary for significant national policy decisions but not individual projects.\footnote{Id. at 3.} The guidance also suggests using techniques specified in the Mandatory Reporting of Greenhouse Gases Final Rule to quantify GHG emissions.\footnote{Id. at 3–4 (referencing Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 56,260 (Oct. 30, 2009)).} The guidance concludes that it is not creating a new component of NEPA analysis, but climate change is a “potentially important factor to be considered within the existing NEPA framework.”\footnote{Id. at 11.}

This guidance is not necessarily applicable to federal land and resource management, but the CEQ “seeks public comment on the appropriate means of assessing the GHG emissions and sequestration that are affected by federal land and resource management decisions.”\footnote{Draft NEPA Guidance, \textit{supra} note 789, at 11.} Although the draft guidance was issued in February 2010, it was not finalized as of April 2012.\footnote{Avery Fellow, \textit{Federal Agencies Vary Greatly in Considering Greenhouse Gas Emissions from Projects}, 43 Env’t. Rep. (BNA) 130 (Jan. 20, 2012); see Council on Envtl. Quality, \textit{Draft
In addition to NEPA obligations, federal agencies must comply with applicable executive orders. In Executive Order 13,514, President Obama declared “that Federal Agencies shall increase energy efficiency; measure, report, and reduce their greenhouse gas emissions from direct and indirect activities.” To implement this policy, a “Strategic Sustainability Performance Plan” must include GHG reduction targets. The Order requires agency heads to report their agency-wide GHG emission reduction targets, but does not explicitly mandate carbon sequestration. It also requires the creation of targets for GHG emissions from sources controlled by a federal agency, as well as GHG emissions from the generation of electricity purchased by a federal agency. On January 29, 2010, President Obama announced that the federal government will reduce its GHG emissions by twenty-eight percent by 2020. The federal target is based on the aggregate of thirty-five federal agencies’ self-reported targets.

Section 16 of the Executive Order requires the Interagency Climate Change Adaptation Task Force to develop recommendations to guide federal agencies in developing climate adaptation plans. The Task Force provided its recommendations to the CEQ, which the CEQ later adopted and, as a result, issued instructions on how to implement those plans as well as target dates for stages of implementation. By April 15, 2011, each federal agency was to identify a “senior


804 Id.
805 Id.
806 Id. at 52,117, 52,126.
808 Id.
811 COUNCIL ON ENSVL. QUALITY, FEDERAL AGENCY CLIMATE CHANGE ADAPTATION PLANNING: IMPLEMENTING INSTRUCTIONS 2–3 (Mar. 4, 2011), available at http://www. white-
agency official responsible for carrying out climate change adaptation planning actions.”812 By June 3, 2011, each agency was to make publicly available a climate change adaptation policy statement that describes how the agency will coordinate its adaptation planning implementation process and designate programs and resources within the agency that will support the planning process.813 By September 30, 2011, each agency was to submit to the CEQ a preliminary analysis of the agency’s vulnerability to climate change, and complete its analysis by March 2012.814 By September 30, 2011, each agency was to submit to the CEQ “three to five priority climate change adaptation actions that the agency will implement in fiscal year 2012.”815 By June 4, 2012, each agency was to submit to the CEQ and to the Office of Management and Budget (OMB) its climate adaptation plan for fiscal year 2013, which, after approval by OMB, will be made publicly available.816

VI. NEPA Litigation Involving Climate Change Issues

Courts are increasingly using NEPA as a tool to force federal agencies to consider global climate change related to actions within the agency’s jurisdiction.817 Over the past decade, courts have decided several cases concerning whether consideration of climate change implications is a necessary part of NEPA analysis.818 Moreover, the CEQ has determined that reasonably foreseeable trans-boundary impacts of proposed agency actions must be included in NEPA-based reviews.819 In Border Power Plant Working Group v. Department of Energy, the court held that an EA for a federal action contravened NEPA because it failed to disclose and analyze potential environmental impacts

812 Id. at 3.
813 Id.
814 Id. at 4.
815 Id. at 4–5.
816 Id. at 5.
818 See infra notes 820–879 and accompanying text.
incident to construction of a power line carrying electricity from new power plants in Mexico to Southern California.\footnote{360 F. Supp. 2d 997, 1029 (S.D. Cal. 2003).}

The first federal appellate decision to impose the need to consider greenhouse gas (GHG) emissions and the resulting air pollution in a NEPA case was \emph{Mid States Coalition for Progress v. Surface Transportation Board}.\footnote{345 F.3d 520, 548–50 (8th Cir. 2003).} In 2003, the Eighth Circuit held that the Surface Transportation Board (Board) did not fully comply with NEPA because it failed to consider potential increases in emissions resulting from the creation of a new rail line.\footnote{Id. at 549–50.} The petitioners challenged the Board’s approval of a proposal to construct 280 miles of new rail line, and to improve 600 miles of existing rail line in Minnesota and South Dakota for transporting coal from Wyoming’s Powder River Basin.\footnote{Id. at 532.} Petitioners were concerned about the substantial increase in train traffic and the corresponding increase in noise levels in the city of Rochester, Minnesota.\footnote{Id. at 534–39.} The Eighth Circuit conducted an extensive review of the NEPA methodology and analysis of the environmental impacts and other effects of the related mitigation efforts on Rochester residents.\footnote{Id. at 533–50.}

The court next addressed the Sierra Club’s argument that the Board failed to consider the effects on air quality from an increase in the supply of low-sulfur coal.\footnote{Id. at 548.} The Sierra Club argued there would be a significant increase in air pollutants, including carbon dioxide, that are not subject to the National Ambient Air Quality Standards limits that are applicable to other criteria pollutants such as sulfur dioxide.\footnote{Mid States, 345 F.3d at 548.} The court reasoned that the direct and indirect environmental effects of a federal action causing degradation in air quality must be addressed in an EIS if the effect is reasonably foreseeable.\footnote{Id. at 549 (citing Sierra Club v. Marsh, 976 F.2d 763, 767 (1st Cir. 1992) (finding that an effect is reasonably foreseeable when it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision”).} The court found the Board “completely ignored” the effects of increased coal consumption and did not fulfill the requirements within the CEQ regulations.\footnote{Id. at 550.}
court held “it would be irresponsible for the Board to approve a project of this scope without first examining the effects that may occur as a result of the reasonably foreseeable increase in coal consumption.”

The court found “the Board did a highly commendable and professional job in evaluating an enormously complex proposal” but remanded the case to the Board. The Board then prepared a SEIS, which the Eighth Circuit found to be adequate.

In South Fork Band v. U.S. Department of the Interior, the Ninth Circuit expressed a view similar to that of the Eighth Circuit. The court held that indirect effects that impact air quality must be considered under NEPA. The CEQ “regulations define indirect effects as those ‘caused by the action, [and] later in time or further removed in distance, [but] still reasonably foreseeable.’” In addition, impacts must be evaluated because the Supreme Court recently decided that carbon dioxide should be considered an air pollutant under the CAA.

In Center for Biological Diversity v. National Highway Traffic Safety Administration, eleven states, the District of Columbia, and city and public interest organizations petitioned for review of the National Highway Traffic Safety Administration (NHTSA) rule that imposed corporate average fuel economy (CAFE) standards for light trucks. Commentators on the rule reported that about thirty-one percent of U.S. emissions of carbon dioxide (CO₂) are produced by the transportation sector, and overall, U.S. light-duty vehicles produce about five percent of the world’s GHGs.

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830 Id.
831 Id. at 556.
833 588 F.3d 718 (9th Cir. 2009).
834 S. Fork Band, 588 F.3d at 725.
835 Id. at 725 (citing 40 C.F.R. § 1508.8(b) (2011)).
838 Id. at 1190. The NHTSA had imposed fuel economy standards for light trucks that were less stringent than the requirements imposed on cars. Id. at 1208. Consequently, manufacturers began producing sport utility vehicles, minivans, and pickup trucks rather than large cars and station wagons that would be subject to more restrictive fuel economy standards. Id. As light trucks became more popular, the overall average fuel economy for the light-duty vehicle fleet declined from 25.9 miles per gallon (MPG) in 1987 to 24.0 MPG in 2000. Id. at 1184. In addition, vehicle miles traveled by light trucks increased at a faster pace than passenger automobile travel. Id.
Petitioners challenged the CAFE rule, alleging violations of NEPA and the Energy Policy and Conservation Act of 1975 based on the APA’s arbitrary, capricious, and abuse of discretion standard. The Ninth Circuit remanded the case because of deficiencies in NHTSA’s compliance with both statutes. Additionally, the court reviewed NEPA’s requirements and found numerous failures in complying with the statute, including a failure to adequately assess the cumulative impacts of GHG emissions on climate change and the environment.

The Ninth Circuit held that the EA was “markedly deficient in its attempt to justify the refusal to prepare a complete EIS” and remanded the case to NHTSA to prepare either a revised EA or, if necessary, an EIS. The court found the final rule arbitrary and capricious for a number of reasons, including NHTSA’s failure to monetize the value of carbon emissions. The court also noted that NHTSA—in its cost-benefit analysis—“excluded weight reduction for vehicles between 4,000 and 5,000 lbs. curb weight as a potential measure that manufacturers could use to increase fuel economy.” It also failed to set a backstop that would prevent manufacturers from producing larger vehicles to avoid compliance with the stringent fuel economy standards. It failed to close the SUV loopholes created by a lack of fuel economy standards for all vehicles in the 8,500 to 10,000 gross vehicle weight rating class.

Relying on precedent, the court noted that it must find that the Agency’s interpretation represented a “reasonable accommodation of conflicting policies that were committed to the agency’s care by the statute.” The NHTSA had the “discretion to balance the oft-conflicting factors” within the Energy Policy and Conservation Act of 1975, but it could not set standards without adequately considering energy conser-
The court was also critical of the EA’s cumulative analysis because the new CAFE standards did not consider the effects of emissions on climate change, nor would the standards offset the emissions from an increase in the number of light trucks on the road. The cumulative impacts regulation requires the agency to review the current action in conjunction with “other past, present, and reasonably foreseeable future [government] actions.” Moreover, the court reasoned that “[t]he impact of [GHG] emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”

The court next discussed the circumstances where the preparation of an EIS or new EA is required. When a court determines that an agency did not prepare an adequate initial EA, it will not necessarily require the preparation of an EIS on remand. For instance, when a court is not capable of determining whether a project will have a significant environmental impact, it may remand for a new EA. Likewise, if an agency does not prepare an EA prior to its determination that a proposed action will have no significant impact, the court may remand for preparation of an EA. In addition, if an agency does not make its determination based on a complete record, a court may remand for the creation of a new EA on a complete record. If a court determines that an agency’s “proffered reasons for its FONSI are arbitrary and capricious,” however, a court may remand for a full EIS.

This case illustrates that the NEPA review process must be used to determine whether GHG emissions from agency projects will have a significant impact on climate change.

In 2005, Interior expanded the leasing areas within the Outer Continental Shelf (OCS) for offshore oil and gas development.

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849 Ctr. for Biological Diversity, 538 F.3d at 1197.
850 Id. at 1216.
851 Id. at 1217 (citing CEQ Terminology & Index, 40 C.F.R. § 1508.7 (2007)).
852 Id.
853 Id. at 1225.
854 Id.
855 Ctr. for Biological Diversity, 538 F.3d at 1225.
856 Id.
857 Id.
858 Id.
859 Ctr. for Biological Diversity v. U.S. Dep’t of Interior, 563 F.3d 466, 471 (D.C. Cir. 2009).
Center for Biological Diversity v. U.S. Department of the Interior, petitioners challenged the approval of Interior’s leasing program for the waters off Alaska’s coast. The D.C. Circuit ruled that the petitioners’ challenges rising from the Outer Continental Shelf Lands Act (OCSLA) were justiciable, but the NEPA-based and ESA claims were not ripe for review. Petitioners claimed that Interior violated both OCSLA and NEPA because it “failed to consider both the economic and environmental costs of the greenhouse gas emissions associated with the Program and the effects of climate change on OCS areas.” The court held that the petitioners lacked standing to pursue their substantive climate change theory, but they did have standing to bring their climate change claims under a procedural theory of standing.

The court, in denying a substantive right to standing, distinguished Massachusetts v. EPA by finding that it was limited to a sovereign (Massachusetts) suing to protect its own interests. The D.C. Circuit found that petitioners’ substantive theory that climate change in the Arctic environment may occur as a result of Interior’s leasing program did not meet the injury-in-fact requirement of Article III standing analysis. The court found that the claimed injury was insufficient because it was not actual or imminent as required by the law of standing. In addition, because “climate change is a harm that is shared by humanity at large . . . [p]etitioners’ alleged injury is too generalized to establish standing.” Thus, the court did allow the case to move forward on the petitioners’ claims that Interior did not adhere to the procedural requirements of OCSLA and NEPA, which were both “designed to protect some threatened concrete interest.” The organizations had a demonstrated interest in Alaskan wildlife, meeting the Article III standing requirements. The NEPA-based claims, however, were not ripe.

860 Id. at 471–72.
861 Id. at 472. In Center for Biological Diversity v. Kempthorne, the Ninth Circuit allowed claims based on the ESA to go forward, but held that an EIS was not required. 588 F.3d 701, 708–09, 712 (9th Cir. 2009).
862 Ctr. for Biological Diversity v. U.S. Dep’t of Interior, 563 F.3d at 475.
863 Id. at 479.
864 Id. at 476–77 (discussing Massachusetts v. EPA, 549 U.S. 497).
865 Id. at 478.
866 Id. (quoting Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992)).
867 Id.
868 Ctr. for Biological Diversity v. U.S. Dep’t of Interior, 563 F.3d at 476 (quoting Lujan, 504 U.S. at 573 n.8).
869 Id. at 479.
because the obligation to comply with NEPA cannot arise until the agency issues the leases.  

The first state agency to reject a coal-fired power plant permit application due to concerns about GHG emissions involved the Sunflower Electric Power Corporation in Kansas. The Kansas Department of Health and Environment approved the permit just days before EPA’s GHG permit rules became effective in early 2011. The district court ruled that the Department of Agriculture’s Rural Utilities Service’s involvement in the project qualified as a major federal action subject to NEPA. The time necessary to prepare the NEPA-based response could require the project to be subject to the EPA’s new GHG permit rules.

In *Friends of the Earth, Inc. v. Mosbacher*, two environmental organizations and several cities sued the Overseas Private Investment Corporation (OPIC) and the Export-Import Bank of the United States (Ex-Im) claiming that those organizations did not conduct the necessary NEPA-based reviews. The plaintiffs argued that NEPA should apply to OPIC and Ex-Im-backed projects overseas because funding qualified as a major federal action that contributed to the degradation of the domestic environment due to global warming. The district court denied the defendants’ motion for summary judgment and allowed the case to proceed.

After the British Petroleum oil spill in the Gulf of Mexico, the White House announced that the CEQ and Interior would review the Mineral Management Service’s (MMS) NEPA procedures. Such a

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870 Id. at 482.
872 NEPA Ruling Opens Door, supra note 871.
874 NEPA Ruling Opens Door, supra note 871.
875 488 F. Supp. 2d 889, 891–92 (N.D. Cal. 2007).
876 Id. at 892.
877 Id. at 920.
review could impact other Interior leasing programs, including its carbon capture and sequestration leasing efforts. In February 2010, the CEQ proposed to reinvigorate NEPA to deal with climate change. Federal agencies, such as the DOE, should consider project alternatives including on-site carbon sequestration potential, alternative gasification technologies, renewable or efficiency-related projects, and mandated carbon capture and sequestration.

VII. The Department of Energy’s NEPA Regulations

NEPA requires all federal agencies to review their statutory authority, administrative regulations, procedures, and policies to determine if they need to address environmental deficiencies. The CEQ provides guidance for how agencies can adopt procedures to comply with NEPA. The DOE promulgated regulations to implement NEPA’s requirements.

Subpart A of the DOE regulations covers the general applicability of NEPA to the DOE. DOE regulations supplement the CEQ regulations—for example, the regulations provide additional definitions to the CEQ regulations. The DOE’s General Counsel must oversee NEPA compliance.

Subpart B, which guides the DOE’s planning for NEPA compliance, largely follows the CEQ regulations. The DOE regulations cover the level of review required for a project or action, including research and development activities, rulemaking, adjudicatory proceedings, applications for permits and licenses, and government procurement and financial assistance.

879 MMS NEPA Procedures Press Release, supra note 878.
881 CEQ Purpose, Policy, & Mandate, 10 C.F.R. § 1500.3 (2011); CEQ Agency Compliance, 10 C.F.R. § 1507.3 (2010).
882 NEPA Implementing Procedures, 10 C.F.R. § 1021.100 (2011).
883 Id. § 1021.102(a). NEPA applies to the entire DOE with the exception of the Federal Energy Regulatory Commission. Id.
884 Id. § 1021.100.
885 Id. § 1021.104(b).
886 Id. § 1021.105.
887 Id. § 1021.200.
888 10 C.F.R. § 1021.200(c).
889 Id. §§ 1021.212–.216.
Subpart C regulates the procedures that implement NEPA. It dictates how the DOE should handle the preparation of EISs and EAs, and when categorical exclusions apply. Subpart C includes the process for public review of an EIS. Thirty days must pass after the release of a FEIS before the DOE decides on a proposal covered in the EIS. The DOE must first publish a Record of Decision (ROD) in the Federal Register before it takes action on an EIS proposal. Subpart C also covers the use of an EA, a finding of no significant impact (FONSI), a programmatic EA or EIS, and mitigation action plans.

Subpart D discusses the actions typically addressed by the DOE and the level of review for each action. Appendix A of this section identifies categorical exclusions applicable to general agency actions and Appendix B identifies the categorical exclusions applicable to specific agency actions. Categorical exclusions must not violate applicable laws or adversely affect environmentally sensitive resources. Appendix C covers classes of actions that normally require an EA but not necessarily an EIS. Lastly, Appendix D deals with classes of actions that usually require an EIS.

Federal agencies must comply with NEPA when funding or overseeing projects and programs producing substantial carbon dioxide equivalent emissions. NEPA compliance is required if the federal funding involves significant federal control or influence over the use of funds. Consequently, if the DOE partly “finance[s], assist[s], conduct[s], regulate[s], or approve[s]” a project, it must comply with NEPA.

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890 Id. § 1021.300.
891 Id. §§ 1021.300–.311.
892 Id. § 1021.313.
893 Id. § 1021.315(a).
894 10 C.F.R. § 1021.315(b)–(d).
895 Id. §§ 1021.321–.331.
896 Id. § 1021.400.
897 Id. § 1021, subpt. D, apps. A, B.
898 Id. § 1021, subpt. D, app. B.B(4).
899 Id. § 1021, subpt. D, app. C.
901 See CEQ Terminology & Index, 40 C.F.R. § 1508.18(a) (2011).
902 Id.
903 Id.
In January 2011, the DOE proposed to exclude twenty new industrial activities from NEPA compliance review.904 The DOE also proposed removing two exclusion categories, one EA and two EIS categories.905 The proposed modifications would account for innovations in energy efficient and renewable energy technology.906 Additionally, the DOE proposed omitting categorical exclusions for main transmission system additions and modifying the treatment of transmission line projects.907

The Department also proposed revisions to its implementing procedures given its growth and development over time.908 For example, the DOE received many financial assistance applications for energy independence and energy efficiency projects from private parties when federal legislation—including the Energy Policy Act of 2005, the Energy Independence and Security Act of 2007, and the American Recovery and Reinvestment Act of 2009—created grant and loan programs.909 Moreover, many of these proposed actions would be located on private property or land managed by other agencies, rather than on its own sites.910 Eliminating allusions to “DOE site,” “onsite,” or “employee” from its NEPA rule would better align the regulations to the increased activities.911 Other suggested modifications explicated the DOE’s existing regulatory provisions.912

The Department set forth several revisions to the regulations about the application of categorical exclusions.913 It proposed removing the reference to section 102(2)(E) of NEPA to clarify it would not analyze alternatives in an EA for unresolved conflicts concerning alternative uses of available resources.914 Additionally, the DOE recommended

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905 Id. at 216.

906 Id. at 215.

907 Id. at 234.

908 Id. at 214–15.

909 Id. at 218.


911 Id.

912 Id. at 236.

913 Id. at 219.

914 Id.
specifically referencing “the requirement that a categorically excludable project has not been segmented.”915 Likewise, modifying references to the CEQ regulations could better explain consideration of potential cumulative impacts.916 It also advised including examples of activities foreseeably necessary to implement proposals that the CEQ’s class of actions comprise, such as purchase and installation of equipment, and site preparation.917 Lastly, the DOE recommended codifying its Internet policy and electronically publishing categorical exclusion decisions.918

The Department also sought to revise regulations of categorical exclusions for specific site characterization, monitoring, and general research in several ways.919 For example, the regulations should limit categorical exclusions to actions with no potential to cause substantial effects from ground disturbance.920 The DOE also suggested excluding large-scale reflection or refraction testing with regard to seismic techniques from the list of categorical exclusions.921 However, geological, geophysical, and geochemical surveying and mapping, and seismic surveying as actions would remain qualified for a categorical exclusion.922 Temperature gradient surveying could provide an example of a geophysical surveying activity within the scope of the categorical exclusion.923 The DOE additionally advised expanding the categorical exclusion list to include underground reservoir response testing—potential impacts of aquifer and reservoir response testing are widely understood and usually nominal—and it could help determine if the reservoir should be examined for carbon sequestration purposes.924 Finally, minor drilling projects, such as drilling using mobile-scale equipment and modification or use and plugging of boreholes, should be categorical exclusions because these activities cannot cause substantial environmental impacts.925

915 Id.
917 Id.
918 Id. at 224.
919 Id.
920 Id.
921 Id.
923 Id.
924 Id.
925 Id.
The DOE recommended expanding the breadth of the categorical exclusion by listing resources for which exploratory or experimental wells may be drilled including brine, carbon dioxide, coalbed methane, and gas hydrate.\footnote{Id. at 225.} Similarly, the Department suggested noting proper uses for carbon sequestration wells, such as the study of saline formations, enhanced oil recovery, and enhanced coalbed methane extraction.\footnote{Id.} The DOE urged designating fields with properly abandoned wells or unminable coal seams as locations where infill wells may be drilled.\footnote{76 Fed. Reg. at 225. Currently, infill wells may only be drilled in fields with operating wells. Id.}

To encourage development in biomass and biofuel production, the regulations should clarify the existing categorical exclusion for small-scale research projects covering “small test plots for energy-related biomass or biofuels research.”\footnote{Id.} Terrestrial environment research need not receive an additional exclusion because the Department of Agriculture analyzes the environmental impacts of the experimental and commercial growth of genetically-engineered plants and biotechnology crops as part of its regulatory scheme.\footnote{Id.}

The existing categorical exclusion should be broadened for demonstration actions under its Clean Coal Technology Demonstration Program to encompass initiatives to reduce waste and emissions at alternative fuel and fossil fuel facilities.\footnote{Id.} Specifically, DOE advised replacing the term “coal” with “fuel” throughout the categorical exclusion and defining fuel as “coal, oil, natural gas, hydrogen, syngas [synthesis gas], and biomass.”\footnote{Id.} Projects demonstrating ways to reduce emissions and waste generation at existing alternative or fossil fuel facilities are unlikely to have significant environmental impacts.\footnote{Id. In addition, test treatment of throughput products generated at fuel combustion should not be subject to a twenty percent limitation because of the importance of test treatment of the entire throughput product.}

\footnote{Id. The DOE explicitly recommended excluding nuclear fuels from the definition of fuel. Id.}
stream for confirming the marketability of technologies. In addition, the Department suggested including “the addition or modification of equipment for capture and control of carbon dioxide or other regulated substances” in the list of categorical exclusions because such processes cannot cause substantial impacts.

The DOE also proposed a new categorical exclusion for research projects in aquatic environments. The categorical exclusion would permit “small-scale, temporary surveying, site characterization, and research actions” in both fresh and saltwater environments. However, the proposed exclusion should only apply to:

- the acquisition of rights-of-way, easements, and temporary use permits; data collection, environmental monitoring, and non-destructive research programs; resource evaluation activities; collection of various types of data and samples; installation of monitoring and recording devices; installation of equipment for flow testing of existing wells; and ecological and environmental research in a small area.

The categorical exclusion would not apply to building or installing permanent facilities or devices, or drilling resource exploration or extraction wells. Likewise, the Department recommended adjustments to the categorical exclusions pertaining to power resources. The DOE proposed using the word “interconnection” instead of “integration” where its exclusions refer to electric power generation from sources such as wind farms.

Currently, “previously developed or disturbed transmission line rights-of-way” are categorically excluded as locations where actions can occur. The DOE suggested adding pipeline rights-of-way to this list because the environmental effects of siting, constructing, operating, or decommissioning actions in transmission line and pipeline rights of way are alike. Moreover, electric power contracts, policies and plans

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934 76 Fed. Reg. at 225. Historically, such testing does not cause significant impacts. Id.
935 Id. at 225–26.
936 Id. at 226.
937 Id.
938 Id.
939 Id. at 227.
941 Id.
not involving a new generation source, and modifications in the usual operating limits of current generation resources would remain categorically excluded.\textsuperscript{942} Removing substation actions, such as constructing, upgrading, or rebuilding transmission lines, from the list of categorical exclusions was also proposed because such projects do not always entail transmission line actions.\textsuperscript{943} The regulations should not cap facilities’ voltage because voltage of a substation or interconnection facility is irrelevant to the environmental impact.\textsuperscript{944}

The DOE advised expanding the categorical exclusion for modifications to pumps and piping by listing materials that could be conveyed by pumps and piping, such as air, brine, carbon dioxide, produced water, steam, and water instead of restricting the exclusion to oil, gas, and geothermal facilities.\textsuperscript{945} Modifying pump and piping configurations for any of the listed materials does not cause significant impacts.\textsuperscript{946}

Likewise, the Department recommended broadening the categorical exclusion for oil, brine, geothermal, and gas storage and injection wells by including carbon dioxide, coalbed methane, and gas hydrate wells in the exclusion.\textsuperscript{947} Modifying, plugging, or abandoning such wells does not have the potential to cause substantial environmental impacts.\textsuperscript{948} Additionally, the regulations could expand the categorical exclusion for the repair or replacement of pipelines by adding materials akin to those currently listed (oil, produced water, brine, and geothermal water), such as air, carbon dioxide, hydrogen gas, natural gas, nitrogen gas, steam, and water.\textsuperscript{949} The DOE suggested extending the categorical exclusion for work on existing wells by adding brine, carbon dioxide, coalbed methane, and gas hydrate wells to the existing list of wells that may be repaired or replaced.\textsuperscript{950} Only situations with a low possibility of seismicity, subsidence, and contamination of freshwater aquifers as part of projects otherwise complying with “best practices and DOE protocols” should receive a categorical exclusion.\textsuperscript{951}

\textsuperscript{942} Id.
\textsuperscript{943} Id. at 228.
\textsuperscript{944} Id.
\textsuperscript{945} Id. at 228.
\textsuperscript{946} Id. at 228.
\textsuperscript{947} Id. at 228.
\textsuperscript{948} Id. at 228.
\textsuperscript{949} Id. at 229.
\textsuperscript{950} Id. at 229.
\textsuperscript{951} Id. at 228, 229.
The DOE proposed a new categorical exclusion for “experimental wells for the injection of small quantities of carbon dioxide in locally characterized geologically secure storage formations at or near existing carbon dioxide sources.”952 The exclusion will help determine the suitability of geological formations for large-scale sequestration because small-scale projects are often accurate predictors of the environmental impacts of commercial-scale projects.953 Research projects spearheaded by the DOE’s National Energy Technology Laboratory support this exclusion because small-scale carbon sequestration projects can be conducted safely and with few environmental impacts.954 FONSIs issued for three Department EAs for projects with scales ranging up to one million tons of carbon dioxide over the lifetime of the project—typically one to four years—further support creating a new exclusion.955 The DOE recommended limiting the injection of carbon dioxide under this exclusion to less than 500,000 tons over the duration of a project.956

Creation of a categorical exclusion for the conversion to, and replacement or modification of, combined heat and power or cogeneration systems at existing facilities was proposed—assuming the action does not have the potential to cause a significant impact to water resources or significant increases in the quantity or rate of air emissions.957 These two conditions are likely satisfied in most cases for two reasons.958 First, most modifications will involve minor construction, and thus changes to facility footprints will be minimal; second, modifications will improve operating efficiency and thus will reduce the environmental impact.959

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952 76 Fed. Reg. at 228.
953 Id.
954 Id.
955 Id.
956 Id. at 230. Again, the DOE advised further limiting the exclusion by requiring that actions have a low potential for seismicity, subsidence, and contamination of freshwater aquifers. Id.
957 Id.
959 Id. The proposed regulation includes many other modifications, mostly minor, to DOE activities unrelated to fossil fuel. See generally id. at 214–34.
VIII. THE DEPARTMENT OF THE INTERIOR’S AND THE BUREAU OF LAND MANAGEMENT’S NEPA POLICIES

Interior’s NEPA policy is found in its departmental manual. Chapter eleven of the manual covers the BLM oversight of the NEPA process. Interior’s Office of Environmental Policy and Compliance (OEPC) updates its NEPA requirements through environmental statement, review, and compliance memoranda that interpret the manual. BLM incorporates the CEQ and Interior requirements into the BLM NEPA Handbook (BLM Handbook), which is the focus of this discussion. The BLM Handbook includes within its NEPA process an evaluation of whether a project complies with any applicable land use plan (LUP). If a project does not conform to the LUP it may be modified in order to conform, or the LUP may be modified to allow the proposed action. If neither of these approaches satisfies the LUP, the proposal must be abandoned.

The BLM Handbook recognizes that NEPA applies to proposals for use or development of resources on lands administered by BLM. Therefore, proposals for projects funded by BLM or located on lands managed by BLM require NEPA analysis. Projects on land not managed by BLM require NEPA compliance only if BLM exercises sufficient control over the action such that the effects can be evaluated. Likewise, proposals involving mineral estates where BLM manages the surface and subsurface trigger NEPA analysis.

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961 Id. ch. 11.
962 See generally id. ch. 1.
964 Id. at 6.
965 Id.
966 Id.
967 Id. at 15.
968 Id.
969 BLM Handbook, supra note 963, at 15.
970 Id. at 16.
other federal agency. When BLM manages the subsurface but a non-federal agency manages the surface estate, BLM must ensure NEPA compliance. Nevertheless, when BLM manages the surface and a non-federal entity manages the subsurface, NEPA analysis is prompted by a request for BLM to authorize surface disturbance.

A categorical exclusion allows a federal action to comply with NEPA without obtaining an EA or an EIS. However, the action may need to meet other procedural requirements such as tribal consultation, or compliance with the ESA or the National Historic Preservation Act. Some projects may be ineligible for a categorical exclusion because of extraordinary circumstances. Appendix five of the BLM Handbook lists twelve extraordinary circumstances, including actions with controversial or unknown environmental effects, that mandate preparation of an EA or EIS. Categorical exclusions may be created by statute or by agency rules and regulations. The Energy Policy Act of 2005, for example, provides a rebuttable presumption that specified activities involving oil and gas exploration and development activities are categorically excluded. Appendix four of the BLM Handbook lists categorical exclusions under subject headings such as: (1) oil, gas, and geothermal energy; (2) realty; (3) solid minerals; and (4) transportation.

The BLM Handbook encourages using existing environmental analyses, including work prepared by other agencies, and provides guidance on using such information. Prior to using an existing environmental analysis, the BLM Handbook recommends reviewing relevant documents, including EISs for BLM Resource Management Plans and EISs or EAs for BLM programmatic actions. The BLM Handbook advocates summarizing environmental analyses by incorporating

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971 Id.
972 Id.
973 Id.
974 Id. at 17.
975 BLM HANDBOOK, supra note 963, at 17.
976 Id. at 19 (defining extraordinary circumstances as “circumstances for which the Department has determined that further environmental analysis is required for an action”).
977 Id. app. 5 at 155.
978 Id. at 17–18.
979 Id. (citing 42 U.S.C. § 15942(a) (2006)).
980 Id. app. 4 at 147–53.
981 BLM HANDBOOK, supra note 963, at 21.
982 Id. at 21–22.
by reference to summarize rather than repeating pertinent sections of existing environmental analyses.\footnote{Id. at 25.} Similarly, it advises tiering to limit the extent of subsequent analysis.\footnote{Id.} The BLM Handbook also provides guidance on supplementing an EIS.\footnote{Id. at 33–68.}

Chapter six of the BLM Handbook examines the NEPA analysis process.\footnote{BLM Handbook, supra note 963, at 40.} The material largely follows CEQ regulations, but explains terms such as “issues” in greater detail.\footnote{Id. at 43–49.} Additionally, the BLM Handbook provides specific guidance on describing a proposed action and discussing connected and cumulative actions.\footnote{Id. at 51.} It covers the development of alternatives, including the no action alternative.\footnote{Id. at 55–56.} The BLM Handbook also identifies and explains the standards of the “hard look” test for analyzing the effects of a proposal.\footnote{Id. at 69.}

Chapter seven explains how to determine whether an EA or an EIS is appropriate.\footnote{Id.} It explains that the standard rule requires the preparation of an EA unless the actions are categorically excluded.\footnote{Id. at 29–31.} If the EA concludes the action will have no significant effects, a finding of no significant impact should be drafted.\footnote{Id. at 43–49.} If, however, the action will have a substantial impact, an EIS is required.\footnote{Id. at 51.} The BLM Handbook furnishes a list of actions that normally require an EIS, such as coal-lease sales, siting of industrial facilities, rights-of-way for major highways and railroads, and mining operations that disturb 640 acres or more.\footnote{Id. at 55–56.} Chapters eight and nine explain the procedures for preparing EAs and EISs.\footnote{Id. at 69.} The final chapters of the BLM Handbook discuss monitoring requirements, agency review of an EIS, cooperating and joint-lead agencies and advisory committees, and administrative procedures.\footnote{Id. at 105, 109, 111, 117.}
On June 24, 2011, Interior (on behalf of the BLM, the Fish and Wildlife Service, and the National Park Service), the Department of Agriculture (on behalf of the Forest Service), and the EPA disseminated a memorandum of understanding (MOU) concerning air quality analyses and mitigation for federal oil and gas decisions through NEPA. The MOU provides agencies with a common NEPA process for analyzing air quality impacts and air quality related values (AQRVs), such as visibility for onshore federal oil and gas planning, leasing, or field development. If a federal land management agency follows the best practices established by the MOU in its NEPA-based air quality and AQRVs analyses, the EPA will rate the analyses “adequate” and no further NEPA-based procedure is required.

Conclusion

The purpose of NEPA is to develop better information for federal agency decision-makers that will lead to better decisions. NEPA generally accomplishes this goal, but at a substantial cost in time and money. A 2003 federal report estimated that a typical EIS required six years to complete at a cost of $250,000 to $2,000,000. A typical EA required nine to eighteen months to prepare at a cost of $50,000 to $200,000. Often, the applicant for a federal benefit pays these costs because the agencies shift the financial burden of compliance. If NEPA compliance requires an analysis of climate change impacts, especially if the analysis includes dealing with indirect effects as well as cumulative impacts, costs could increase substantially. An issue to be considered is whether the increased costs and other challenges of NEPA compliance would produce information that results in better
On December 7, 2011, the CEQ released draft guidance aimed at fostering efficiency and timeliness in the NEPA process, but it is unknown whether this will be effective in modifying how agencies approach their NEPA responsibilities.

Both DOE and Interior are vulnerable to NEPA-based attacks concerning their energy development projects in the western United States. It does not appear that either agency gives priority to full NEPA compliance. Since 1990 federal agencies have usually filed approximately 450 to 600 EISs each year. The EPA reports that over 4200 EIS documents have been filed since 2004. Annual FEIS document production ranged from a low of 203 in 1989 to a high of 688 in 1979, but since 2000 the number has ranged from 218 to 298 a year.

Since its first FEIS in 1977, the DOE has filed 294 FEISs. Many of these EISs were prepared in partnership with other agencies, such as the EPA, the BLM, and more recently, the Department of State for the Keystone pipeline project. From the year 2000 through 2007, the DOE’s EIS filings have fluctuated from a low of twenty in 2000 to a high of fifty-three in 2007. EISs drafted by the Federal Energy Regulatory Commission (FERC) made up just over half of the total DOE EISs during that time. On average, Interior and its agencies file more EISs

1007 See McAliley, supra note 298, at 10,197.
1009 See supra notes 789–816 and accompanying text.
1010 See supra notes 789–816 and accompanying text.
1015 Id. at 1, 8.
1017 Id.
annually than the DOE, with fifty-three being filed in the first nine months of 2011.\textsuperscript{1018}

The DOE has classified its NEPA activity into six general categories, two of which, Electricity Delivery & Energy Reliability and Fossil Energy, directly involve fossil fuel energy.\textsuperscript{1019} A third category, Energy Efficiency & Renewable Energy, also involves issues relevant to fossil fuel.\textsuperscript{1020} Since 2005, three EISs in the fossil fuel category, each in various stages of processing by the DOE, concerned carbon capture and storage.\textsuperscript{1021} Most recent fossil fuel EISs evaluate projects that received funding through the Recovery and Reinvestment Act of 2009.\textsuperscript{1022} Five of six recent EISs were produced to support loan programs that involve fossil fuel energy; four of the six involve either integrated gasification combined cycle and coal or coal-to-liquid power production.\textsuperscript{1023}

Beginning in 2004, the DOE filed thirty-three FEISs (excluding FERC EISs)\textsuperscript{1024}—of which nine concerned nuclear issues, ten involved fossil fuel projects, and five were evaluations of transmission line proposals.\textsuperscript{1025} In Utah, a state rich in energy resources, there has been one FEIS since 2007, and one PEIS that evaluated pipeline and electricity transmission energy corridors.\textsuperscript{1026}

The BLM has produced 327 NEPA documents from January 2004 to July 2011, 136 of which were FEISs.\textsuperscript{1027} Most of the FEISs were part of the BLM’s obligation to prepare resource management plans. About sixty FEISs were related to activities concerning energy development.\textsuperscript{1028} Oil and gas operations accounted for about fifteen FEIS documents, solar development accounted for twelve, and coal leases ac-
counted for seven.\textsuperscript{1029} Approximately half the energy related FEISs
dealt with electric power transmission lines, wind and geothermal de-
velopment, mining, and oil shale.\textsuperscript{1030} The number of FEISs is surpris-
ingly small. In Utah the BLM controls over 43\% of the land in the state
and has the mineral rights to over 67\% of the state.\textsuperscript{1031} However, from
2004 through mid-2011, the BLM produced eleven FEIS documents
covering its actions in Utah, seven of which were part of its resource
management plans.\textsuperscript{1032} In addition, Utah was covered by four PEISs.\textsuperscript{1033}

The federal government does not produce EISs and EAs in the
quantity that would appear to be required by the judicial interpreta-
tions defining a major federal action. Nevertheless, the EISs that are
prepared are frequently remanded for failing to comply with the stat-
ute’s requirements. Parts II, III, and IV of this Article discusses sixteen
Court of Appeals decisions involving NEPA compliance in cases involv-
ing energy issues. The federal government lost nine of these cases.\textsuperscript{1034}

\begin{footnotes}
\item 1029 Id.
\item 1030 \textit{National Environmental Policy Act: Environmental Impact Statement Database, supra} note 1024.
\item 1032 Id.
\item 1033 \textit{National Environmental Policy Act: Environmental Impact Statement Database, supra} note 1024.
\item 1034 Cal. Wilderness v. U.S. Dep’t of Energy, 631 F.3d 1072 (9th Cir. 2011) \textit{(holding that the DOE did not meet its NEPA obligation to consult with the States, and improperly failed to prepare an EIS or EA)}; Greater Yellowstone Coal. v. Lewis, 628 F.3d 1145 (9th Cir. 2010) \textit{(finding in favor of the Forest Service and BLM)}; Ctr. for Biological Diversity v. U.S. Dept. of the Interior, 623 F.3d 633 (9th Cir. 2010) \textit{(finding against BLM because no hard look was taken in preparing the EIS)}; S. Coast Air Quality Mgmt. District v. FERC, 621 F.3d 1085 (9th Cir. 2010) \textit{(upholding FERC’s 250 page EIS as meeting NEPA’s requirements)}; Biodiversity Conservation Alliance v. Bureau of Land Mgmt., 608 F.3d 709 (10th Cir. 2010) \textit{(ruling in favor of the government and holding that phased development was not required to be analyzed by the BLM under NEPA because it is impractical and would not meet the project’s purpose of the statute)}; Te-Moak Tribe of Nev. v. U.S. Dept. of the Interior, 608 F.3d 592 (9th Cir. 2010) \textit{(ruling against BLM because the cumulative impact analysis and the avoidance and mitigation requirements were inadequate)}; S. Fork Band v. U.S. Dept. of the Interior, 588 F.3d 718 (9th Cir. 2009) \textit{(ruling against BLM because the cumulative impacts analysis, as well as other aspects of NEPA’s requirements, were inadequate)}; New Mexico v. Bureau of Land Mgmt., 565 F.3d 683 (10th Cir. 2009) \textit{(holding that BLM loses because it did not prepare a site-specific EIS based on an arbitrary and capricious standard)}; Piedmont Envtl. Council v. FERC, 558 F.3d 304 (4th Cir. 2009); Alaska Wilderness League v. Kempthorne, 548 F.3d 815 (9th Cir. 2008) \textit{(finding against the DOI (MMS) because they did not take a hard look at the impact on whales, fish, or impact of spills, and provided inadequate mitigation measures)}; N. Cheyenne Tribe v. Norton, 503 F.3d 836
\end{footnotes}
If environmentalists target energy development with the same litigation strategy that is being used to target fossil fuel projects based on alleged CAA violations, both the DOE and Interior will be vulnerable.\footnote{See generally Arnold W. Reitze, Jr., Federal Control of Greenhouse Gas Emissions, 40 ENVT. L. 1261 (2010); Reitze, supra note 871.}
PUTTING THE PIECES TOGETHER:
HOW USING COOPERATIVE FEDERALISM
CAN HELP SOLVE THE CLIMATE
CHANGE PUZZLE

JOHN A.T. CANALE*

Abstract: Comprehensive land-use development and planning at the state or national level is necessary to curb greenhouse gas emissions. A comprehensive federal approach that employs a cooperative federalism structure would be the ideal solution to the current threat posed by global climate change. In order to best implement such a system, legislators should consider the smart-growth projects in California and Georgia to ultimately decrease the emissions of greenhouse gases that result from the over-reliance on automobile transport in the United States.

INTRODUCTION

Climate change threatens human health and the environment on which we depend.1 Greenhouse gas (GHG) emissions, which cause climate change, result in incremental environmental changes that affect our daily lives and may cause catastrophic weather events.2 All nations produce these emissions, but the United States contributes an exorbitant percentage of worldwide emissions in relation to its population,3 due in large part to the nation’s reliance on automobile travel.4 Although the international community needs to make a concerted ef-

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fort, the U.S. government, in particular, must act decisively and swiftly to abate future effects of climate change due to its emission contributions. Currently, the federal government is taking small steps to whittle away at the problem. Recently, the Environmental Protection Agency (EPA) set limits on new vehicle emissions to combat climate change.

Comprehensive land-use development planning at the state or national level is necessary to curb GHG emissions. Land-use plans can decrease pollution and GHG emissions from automobiles by decreasing the distances that people travel in their cars. A comprehensive federal approach to smarter development should be adopted to avoid the catastrophic consequences of climate change. The federal government should use a cooperative federalism framework to implement statewide or regional programs based on programs in California and Georgia.

Part I of this Note provides a background on climate change, land-use planning, zoning, sprawl, and the negative effects of sprawl on GHG emissions.
emissions.\textsuperscript{12} Part II discusses the regulation of GHGs through the Clean Air Act (CAA), California’s Senate Bill 375 (SB 375), and Atlanta’s Regional Transportation Act.\textsuperscript{13} Part III discusses how cooperative federalism—as exemplified in the CAA and the Coastal Zone Management Act—and smart growth can reduce GHG emissions.\textsuperscript{14} Finally, Part IV argues the federal government should lower GHG emissions and slow climate change by implementing a cooperative federalism framework for smarter growth based on the California and Georgia models.\textsuperscript{15}

\section*{I. The Climate Change Problem}

Climate change is one of the most pressing negative effects associated with increased GHG emissions.\textsuperscript{16} The greenhouse effect regulates the Earth’s temperature.\textsuperscript{17} The Sun sends energy to Earth, which is then radiated back to space as heat.\textsuperscript{18} Some of this heat gets trapped in the Earth’s atmosphere by gases such as carbon dioxide.\textsuperscript{19} The combustion of fossil fuels releases GHGs, which then accumulate in the atmosphere causing an enhanced greenhouse effect\textsuperscript{20} and increases global temperatures.\textsuperscript{21} Climate change threatens to increase sea levels, cause irreversible damage to ecosystems, significantly reduce winter snowpack, increase the ferocity of weather events such as hurricanes, and increase the spread of disease.\textsuperscript{22}

In 2007, the United States Public Interest Research Group Education Fund (U.S. PIRG) released a report concerning global tempera-

\begin{footnotesize}
\begin{itemize}
  \item See infra notes 16–86 and accompanying text.
  \item See infra notes 87–160 and accompanying text.
  \item See infra notes 161–194 and accompanying text.
  \item See infra notes 195–267 and accompanying text.
  \item See infra notes 16–86 and accompanying text.
  \item Id., supra note 1, at 580–84.
  \item Id. at 578.
  \item See Wood, supra note 1, at 579; IPCC Fourth Assessment Report, supra note 18.
  \item See Owen, supra note 1, at 64–65; Joshua K. Westmoreland, Note, Global Warming and Originalism: The Role of the EPA in the Obama Administration, 37 B.C. Envtl. Aff. L. Rev. 225, 228 (2010).
  \item Massachusetts v. EPA, 549 U.S. at 521–22; Intergovernmental Panel on Climate Change, supra note 2, at 30; Westmoreland, supra note 21, at 228–30.
\end{itemize}
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ture changes.\textsuperscript{23} According to U.S. PIRG, temperatures have hit a record high, with the previous nine years ranking among the twenty-five warmest for the contiguous United States.\textsuperscript{24} Changing temperatures have also increased the number and severity of extreme weather events and shifted the growing seasons for many crops.\textsuperscript{25} Furthermore, rising sea levels have begun to consume coastal lands in states such as Massachusetts and California, and could cause hundreds of millions of dollars in remediation costs for property damage.\textsuperscript{26}

Carbon dioxide levels are significantly higher than in the pre-industrial era, in part because of the widespread use of automobiles.\textsuperscript{27} GHG emissions will likely continue to rise due to increased travel and a growing population.\textsuperscript{28} The United States produces a disproportionate, and exorbitantly large, amount of GHG emissions—representing only five percent of the world population, but twenty-five percent of GHG emissions.\textsuperscript{29}

Much of America’s disproportionate contribution to global GHG emissions is due to increasing automobile use, which does not appear to be slowing.\textsuperscript{30} When the EPA started regulating air pollution with the CAA in 1970, there were approximately 200 million Americans, who owned 98 million vehicles that travelled an average of 5440 miles annually.\textsuperscript{31} In 1996, there were over 265 million Americans, who owned over 198 million vehicles that drove 9357 miles annually.\textsuperscript{32} On average, Americans drive their cars about one hour each day on over four million miles of public roadways.\textsuperscript{33} Each increase in vehicle miles traveled (VMT) increases GHG emissions, which ultimately contribute to climate change.\textsuperscript{34} VMTs vary depending on how far people have to travel.
for daily activities, and could be counteracted by land-use regulations that minimize the distance individuals must travel for daily activities.

A. Land-Use Regulation

Governments enact land-use regulations to divide the uses of land for various purposes. Local governments, rather than the federal government, primarily regulate land use in the United States. Within metropolitan areas, many small communities have land-use powers. Local governments have no legal obligation to coordinate land development with their neighbors. Therefore, lack of regional planning can cause disjointed and uncoordinated growth.

Local governments have land-use responsibilities as a result of their local police power, and the Tenth Amendment’s limits on federal authority. The police power is an inherent government authority to make regulations that interfere with private activity to protect the general welfare, health, and safety of the jurisdiction. Because of this tradition in local land-use regulation, any federal intervention into this realm could be attacked as an encroachment upon the local police power.

Federal funding that is contingent on specific state behavior is constitutionally permissible, if that behavior is voluntary. The federal government violates the Tenth Amendment, however, if it coerces the states. Therefore, the federal government may influence state decisions on land use through the spending power.

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36 See Rawlings & Paterson, supra note 3, at 362; Malaczynski & Duane, supra note 35, at 80–81.
38 LaCroix, supra note 4, at 125.
39 Id.
40 Id.
41 See id.
42 See U.S. Const. amend. X; William A. Fischel, Zoning and Land Use Regulation, in ENCYCLOPEDIA OF LAW AND ECONOMICS 403, 404–05 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000); Buzbee, supra note 8, at 98–100.
43 Rohan & Kelly, supra note 37, § 1.03[2][a].
44 Buzbee, supra note 8, at 99–100.
45 See id.
46 Id. at 99–101; see U.S. Const. amend. X.
47 Buzbee, supra note 8, at 99–101.
currently use a rational cohesive land-use plan.\textsuperscript{48} Moreover, states often do not venture into the realm of local land-use planning.\textsuperscript{49}

B. Zoning

The implementation of zoning plans is a central aspect of local land use.\textsuperscript{50} Zoning law developed in response to public awareness about city life during the Industrial Age and its detrimental effects on public health and the environment.\textsuperscript{51} Typically, a locality designates zones for different uses and identifies them on a zoning map.\textsuperscript{52} These constraints limit what a property owner can and cannot do with their property.\textsuperscript{53} Zoning laws separated uses between properties and therefore prevented certain uses on abutting properties.\textsuperscript{54} For instance, a locality would designate the potential uses for properties as residential, commercial, or industrial.\textsuperscript{55} Residential zones are generally grouped together and separated from commercial and industrial zones, although mixed uses are occasionally allowed.\textsuperscript{56} A central tenet of zoning law is that residences are generally protected from the harmful effects of industrial usage.\textsuperscript{57}

The Supreme Court decided zoning was within the state’s police powers in \textit{Village of Euclid v. Ambler Realty}.\textsuperscript{58} The village’s zoning plan prohibited the plaintiff from developing the property for industrial purposes.\textsuperscript{59} The plaintiff argued that the zoning plan amounted to an unconstitutional taking.\textsuperscript{60} The Court held, however, that this was a valid

\textsuperscript{48} See U.S. Const. amend. X; Buzbee, \textit{supra} note 8, at 99–101 (explaining the lack of federal intervention in land-use planning); LaCroix, \textit{supra} note 4, at 125 (explaining how local land-planning results in irrational land uses).

\textsuperscript{49} See LaCroix, \textit{supra} note 4, at 125 (noting that very few states have attempted to implement land-use controls). The Coastal Zone Management Act is one of the few statutes that uses land-use measures to achieve an environmental end. 16 U.S.C. §§ 1451–1466 (2006); see LaCroix, \textit{supra} note 4, at 125–26 & n.9.

\textsuperscript{50} Fischel, \textit{supra} note 42, at 403.

\textsuperscript{51} \textsc{Anthony Flint, This Land: The Battle over Sprawl and the Future of America} 28–30 (2006); Rog, \textit{supra} note 8, at 708–09.

\textsuperscript{52} See Fischel, \textit{supra} note 42, at 403–04; Rohan & Kelly, \textit{supra} note 37, § 1.03[2][c].

\textsuperscript{53} See Fischel, \textit{supra} note 42, at 403.

\textsuperscript{54} See id. at 403–04, 409.

\textsuperscript{55} Rohan & Kelly, \textit{supra} note 37, § 1.03[2][d].

\textsuperscript{56} See \textit{id.} § 1.03[2][a]; see e.g., \textit{Somerville, Mass., Ordinances} art. 6, § 6.4 (2009), available at http://www.cp-dr.com/node/2140 (providing an example of mixed-use zoning).

\textsuperscript{57} Rohan & Kelly, \textit{supra} note 37, § 1.03[2].

\textsuperscript{58} 272 U.S. 365, 396–97 (1926).

\textsuperscript{59} \textit{Id.} at 384–85.

\textsuperscript{60} \textit{Id.} at 384.
exercise of the village’s police power. After *Euclid*, all fifty states enacted zoning laws that led to the disjointed land-use patterns prevalent in the United States today.

C. Urban Sprawl

1. What Is Urban Sprawl?

Anthony Flint defined urban sprawl as “low-density development that disperses the population over the widest possible area, with rigidly separated functions—homes, shops, and workplaces—connected by limited-access roadways.” Another scholar, Janice C. Griffith, described sprawl as uncoordinated single-use development requiring automobiles because of its low density and lack of integrated land use.

This development, however, was intentional. Influential Americans, such as Henry Ford and Frank Lloyd Wright, supported an exodus from cities to the suburbs, fueled by cars and suburban development. “[S]uburbia has become the quintessential physical achievement of the United States.” By 1990, the majority of Americans lived in low-density suburbs.

2. What Caused Sprawl?

A confluence of the desire to escape the dirty, morally corrupt inner city, the widespread use of Euclidian zoning, and federal housing and transportation policies popularized sprawl development in the United States. Post-World War II federal policies encouraged sprawl development by both increasing demand for single-family homes and

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61 Id. at 396–97.
62 See id. at 391; Jesse Dukeminier et al., Property 838 (6th ed. 2006); LaCroix, supra note 4, at 125.
63 Flint, supra note 51, at 47; Rog, supra note 8, at 711. Anthony Flint is an author and Director of Public Affairs at the Lincoln Institute of Land Policy, a Cambridge, Massachusetts-based think tank. Faculty, Fellows and Staff, Lincoln Inst. of Land Policy, http://www.lincolninst.edu/aboutlincoln/faculty_staff.asp (last visited Feb. 27, 2012).
65 David Owen, Green Metropolis: Why Living Smaller, Living Closer, and Driving Less Are the Keys to Sustainability 36, 107–09 (2009); Rog, supra note 8, at 709.
67 Oren, supra note 33, at 166–67.
68 Flint, supra note 51, at 28–30, 34; Rog, supra note 8, at 709–12.
developing a federal interstate highway system. The federal government also made the use of automobiles, and thus the ability to develop away from urban cores, easier by allowing drivers to externalize the costs of using roadways. One of these externalized costs is air pollution due to GHG emissions.

Areas that were previously inaccessible became available for residential and economic development. For middle class Americans, the automobile provided a means of escape from the grime of the city to the open spaces and clean air of the suburbs. It offered the ability for Americans to travel to work without the constraints of public transportation schedules. Sprawl development, however, is part of a reinforcing cycle. As people move out of the city and into the suburbs, an impoverished urban center is left behind, which in turn spawns more flight from urban areas.

Southern, southwestern, and western cities developed in the 1950s were designed around the assumption that people would commute via automobile. In the Northeast, by contrast, older cities, developed prior to the automobile, were designed to accommodate travel by foot or public transit. Vehicle trips and VMTs increased almost 3% annually from 1969 to 1990. Car ownership also increased since the signing of the CAA in 1970, with only 0.88 vehicles per licensed driver in 1969 compared to 1.21 vehicles per licensed driver in 2007. Both VMTs and au-

69 Andres Duany et al., Suburban Nation; The Rise of Sprawl and the Decline of the American Dream 7–8 (2000); Flint, supra note 51, at 34; Rog, supra note 8, at 711–12.
70 See Buzbee, supra note 8, at 84–85.
71 See id. at 84–86; Donnellan, supra note 5, at 711.
72 See Buzbee, supra note 8, at 64.
74 Id.
75 See Flint, supra note 51, at 35; Buzbee, supra note 8, at 65.
76 See Buzbee, supra note 8, at 65.
77 See id.
78 See id. at 60; McGarity, supra note 73, at 1535.
79 Oren, supra note 33, at 160.
tomobile ownership contribute to climate change through the emission of GHGs.\textsuperscript{81}

3. Sprawl’s Detrimental Effects

Sprawl development and suburban living creates a lifestyle where citizens must use automobiles to accomplish daily tasks that they previously accomplished on foot.\textsuperscript{82} Spreading development and dependency on automobiles contributes to GHG emissions.\textsuperscript{83} The American transportation sector comprises 33% of all carbon dioxide emissions, and this number is expected to rise to 36% in the next 10 years.\textsuperscript{84} Transportation accounts for approximately 50% of the net increase in total U.S. GHG emissions since 1990, making the transportation industry the fastest growing source of GHG emissions.\textsuperscript{85} Approximately 80% of total current transportation emissions result from vehicle travel on roadways.\textsuperscript{86}

II. EXISTING LAWS REGULATING CLIMATE CHANGE AND LAND USE

A. Federal Law

1. The Clean Air Act

The federal government currently regulates greenhouse gas (GHG) emissions from automotive vehicles through the CAA.\textsuperscript{87} Prior to the CAA, there was no serious federal involvement in the field of air quality.\textsuperscript{88} Congress enacted federal legislation in response to a 1963 episode of smog-like air pollution that killed 200 people in New York City.\textsuperscript{89} At the same time, Southern California developed a chronic air pollution problem.\textsuperscript{90} Ultimately, the CAA arose from Congressional findings “that the growth in the amount and complexity of air pollution

\textsuperscript{81} See Donnellan, supra note 5, at 711; supra notes 30–36 and accompanying text.
\textsuperscript{82} See LaCroix, supra note 4, at 125.
\textsuperscript{83} Buzbee, supra note 8, at 59, 73.
\textsuperscript{84} Rawlings & Paterson, supra note 3, at 361.
\textsuperscript{85} Id.
\textsuperscript{86} Id. Additionally, researchers analyzed surveys on travel data from California households and found that households located in denser residential areas drove approximately 1200 miles less each year than households in less dense areas. Id. at 363. This research shows how vehicle miles traveled in denser areas are lower and might contribute fewer GHGs to the atmosphere. See id.
\textsuperscript{88} Reitze, supra note 30, at 696.
\textsuperscript{89} See id. at 698.
\textsuperscript{90} See id. at 696.
brought about by . . . the increasing use of motor vehicles, has resulted in mounting dangers to the public health and welfare.”

By targeting different sources and types of air pollution, the CAA grants the EPA broad discretion in implementing a variety of air pollution programs. Implementation is based on a cooperative federalism framework, giving some regulatory power to the states and retaining some for the federal government. The CAA primarily regulates the emission of air pollution through two titles: Title I predominantly governs stationary sources, and Title II governs mobile sources. Stationary sources are pollution-emitting entities that stay in one place, such as factories.Mobile sources include motor vehicles, which are pollution-emitting entities that travel.

Title I strives for better air quality by setting nationwide pollution limits that states can achieve through their own regulatory measures. It also regulates ambient air quality by having the EPA set the National Ambient Air Quality Standards (NAAQS) to ensure safe levels of criteria pollutants for public health. The states must then develop State Implementation Plans (SIPs) to achieve or maintain the NAAQS. EPA-approved SIPs have the force of federal law. The cooperative federalism framework allows states to address local problems in individualized ways while meeting a federal minimum safety standard.

Title II regulates mobile sources, including cars, light-duty trucks, and diesel trucks. The Title allows the EPA to set federal emission standards for new vehicles. Title II requires the EPA to regulate any

94 See generally id. §§ 7401–7415 (providing the provisions for Title I of the CAA).
95 See generally id. §§ 7521–7590 (providing the provisions for Title II of the CAA).
96 See id. § 7411(a)(3).
97 See id. § 7550(2).
98 Id. §§ 7408–7410.
99 42 U.S.C. § 7409. Though Title I is predominantly geared toward stationary sources, it allows states to reduce criteria pollutants in the ambient air by limiting mobile source emissions. Id. § 7408(a)(1)(B); see Donnellan, *supra* note 5, at 727.
100 42 U.S.C. § 7410.
101 Safe Air for Everyone v. EPA, 488 F.3d 1088, 1097 (9th Cir. 2007) (quoting Trs. for Alaska v. Fink, 17 F.3d 1209, 1210 n.3 (9th Cir. 1994)); Natural Res. Def. Council v. S. Coast Air Quality Mgmt. Dist., 694 F. Supp. 2d 1092, 1096 (C.D. Cal. 2010); see 42 U.S.C. § 7416.
103 Id. §§ 7521–7554.
104 Id. § 7521. Title II’s “technology forcing” requirements motivated automobile manufacturers to develop cleaner technologies that were not invented at the time Congress
2. Massachusetts v. EPA and Endangerment Finding

Until recently, the EPA did not use the CAA to regulate GHGs emitted from new vehicles as air pollutants.\(^{107}\) In 2007, the Supreme Court held GHGs from new motor vehicles could be regulated under the CAA.\(^{108}\) In that case, Massachusetts and a number of environmental organizations sued the EPA to compel the EPA Administrator to regulate GHGs as an air pollutant under Title II of the CAA.\(^{109}\) The Court, contrary to arguments by the EPA, identified GHGs as air pollutants, not just in Title II, but throughout the CAA.\(^{110}\) The Court, however, did not require that the EPA automatically and immediately regulate GHGs under the CAA.\(^{111}\) The decision required the EPA to make an endangerment finding, which meant that the EPA must either find that GHGs endanger the public, that GHGs do not endanger the public, or that the Agency must explain why they could not make an endangerment finding.\(^{112}\) According to the Court, if GHGs endanger the public health and welfare, the CAA requires the EPA to regulate them.\(^{113}\)

In December 2009, the EPA issued a final endangerment finding stating that the Administrator found “six greenhouse gases taken in combination endanger both the public health and the public welfare of current and future generations” and “the combined emissions of these greenhouse gases from new motor vehicles and new motor vehicle en-

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\(^{105}\) 42 U.S.C. § 7521(a)(1).

\(^{106}\) Id.; see Massachusetts v. EPA, 549 U.S. 497, 533 (2007).


\(^{108}\) Massachusetts v. EPA, 549 U.S. at 528. The Court held that the CAA could regulate GHG emissions from new motor vehicles despite the EPA’s contentions that this piecemeal approach to climate change would conflict with the President’s attempts to address the problem. Id. at 513, 533. This included the President’s ability to persuade nations like China and India to reduce their GHG emissions. Id. at 513.

\(^{109}\) Id. at 505. The EPA argued that GHGs were not air pollutants under the CAA. Id. at 513.

\(^{110}\) Id. at 532; Richardson, supra note 92, at 292.

\(^{111}\) Massachusetts v. EPA, 549 U.S. at 532–33; Richardson, supra note 92, at 292.

\(^{112}\) Massachusetts v. EPA, 549 U.S. at 533–35; Richardson, supra note 92, at 292.

\(^{113}\) See Massachusetts v. EPA, 549 U.S. at 533.
gines contribute” to that potential harm.\textsuperscript{114} The endangerment finding requires the EPA to regulate mobile source emissions.\textsuperscript{115}

3. EPA Regulations in Response to the Endangerment Finding

On May 7, 2010, the EPA and the National Highway Traffic Safety Administration issued a final rule that established standards for cars and trucks in the 2012 to 2016 model years.\textsuperscript{116}

The EPA GHG standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO\textsubscript{2}) per mile in model year 2016, equivalent to 35.5 miles per gallon (mpg) if the automotive industry were to meet this CO\textsubscript{2} level all through fuel economy improvements.\textsuperscript{117} The EPA projects that by 2030 this rulemaking will reduce U.S. light-duty GHG emissions by twenty-one percent over what would have occurred in the absence of regulation.\textsuperscript{118}

B. State Law Examples

1. California Sustainable Communities Strategy and Climate Protection Act—Senate Bill 375

Recently, California enacted legislation to combat climate change by curbing GHG emissions, in part by attempting to promote smarter growth.\textsuperscript{119} California is the most populous U.S. state, with a population

\textsuperscript{114} Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009).

\textsuperscript{115} See Massachusetts v. EPA, 549 U.S. at 530; Richardson, supra note 92, at 293.


\textsuperscript{118} Id. at 2. The estimated benefits of the ruling are that “over the lifetime of the vehicles sold during 2012–2016, this national program is projected to reduce U.S. greenhouse gas emissions by 960 million metric tons and save 1.8 billion barrels of oil.” Id.

\textsuperscript{119} See SB 375, supra note 11. As this section is an overview of SB 375, it does not discuss other legal or regulatory mechanisms in California that work to combat climate change. See generally Nichols, Lessons, supra note 11 (discussing SB 375 and California’s other climate change laws and regulations); Mary D. Nichols, Sustainable Communities for a Sustainable State: California’s Efforts to Curb Sprawl and Cut Global Warming Emissions, 12 VT. J. ENVTL. L. 185 (2010) [hereinafter Nichols, Sustainable Communities] (discussing SB 375’s context and background). Mary D. Nichols is the current chairman of the California Air Resources Board, the air pollution agency for California, and was instrumental in the passing of AB 32. See Mary D.
of approximately thirty-seven million.\textsuperscript{120} The battle for cleaner air in California, and especially in Southern California, began in the 1940s when Los Angeles had its first major smog episodes.\textsuperscript{121} Southern California notoriously has some of the worst air quality in the nation.\textsuperscript{122}

The Global Warming Solutions Act of 2006 (AB 32), set out greenhouse gas reduction goals for California that the California Sustainable Communities Strategy and Climate Protection Act (SB 375) intends to achieve.\textsuperscript{123} AB 32 set the goal of reducing carbon emissions in California to 1990 levels by 2020.\textsuperscript{124} The emissions reduction represents an approximately decrease in GHG levels by thirty percent compared to levels if AB 32 never passed.\textsuperscript{125} The bill also put the California Air Resource Board (CARB) in charge of developing plans to reduce GHG emissions from automobile transport.\textsuperscript{126}

Governor Schwarzenegger approved SB 375, a transportation planning and anti-sprawl statute, on September 30, 2008.\textsuperscript{127} Senator Steinberg, the Senate leader at the time of passage, stated that the bill “will be used as the national framework for fighting sprawl and transforming inevitable growth to smart growth.”\textsuperscript{128}


\textsuperscript{121} Ann E. Carlson, Iterative Federalism and Climate Change, 103 NW. U. L. REV. 1097, 1110 (2009).

\textsuperscript{122} Id.


\textsuperscript{124} CAL. HEALTH & SAFETY CODE § 38,550.

\textsuperscript{125} Nichols, Lessons, supra note 11, at 199–200; see Alyssa Sherman, Linking Transportation to Air Quality in California, TECH TRANSFER, Summer 2010, at 10, 10, available at http://www.techtransfer.berkeley.edu/newsletter/10-3/10-3.pdf.

\textsuperscript{126} See CAL. HEALTH & SAFETY CODE § 38,501(f); Nichols, Lessons, supra note 11, at 199.

\textsuperscript{127} SB 375, supra note 11.

\textsuperscript{128} Press Release, Senate President pro Tem Darrell Steinberg, Governor Signs Steinberg’s Landmark Climate Change/Land Use Bill (Sept. 30, 2008), http://sd06.senate.ca.gov/news/2008-09-30-governor-signs-steinberg-s-landmark-climate-changeland-use-bill; Bill
SB 375 governs the eighteen California Metropolitan Planning Organizations (MPOs), which include thirty-seven of fifty-eight California counties and a majority of the state’s population. MPOs are transportation policy-making organizations tasked with coordinating land use, housing, and transportation. Once CARB sets emissions reduction targets for the period of 2020 to 2035, MPOs then design plans to meet those goals. In this way, SB 375 does not take power away from the local level for land-use planning, over which the cities and counties continue to retain authority.

On September 23, 2010, CARB adopted greenhouse gas emissions targets for each metropolitan region in California covered by the law. After CARB designates regional greenhouse gas emissions targets, MPOs must create a “Sustainable Communities Strategy” that describes how these goals will be achieved. If the Sustainable Communities Strategy will not meet the reduction targets, an MPO must put forth an “Alternative Planning Strategy” to achieve the goals. These strategies become part of the Regional Transportation Plan, which relates this strategy to federal transportation law by reducing GHG emissions from automobile travel.

SB 375 contains potentially powerful exemptions from the California Environmental Quality Act (CEQA) and also allows for streamlined projects. SB 375 exempts certain projects from CEQA if they conform to the Sustainable Communities Strategy. “Transit-priority


129 See Nichols, Sustainable Communities, supra note 119, at 186; Sherman, supra note 125.

130 See CAL. GOV’T CODE § 14,522.1 (West Supp. 2012); see Nichols, Sustainable Communities, supra note 119, at 186; Sherman, supra note 125.

131 SB 375, supra note 11; CAL. GOV’T CODE § 65,080(a), (b)(2)(A); see Fulton, supra note 128.

132 CAL. GOV’T CODE § 65,080(b)(2)(K); Nichols, Sustainable Communities, supra note 119, at 188.


134 See CAL. GOV’T CODE § 65,080(b)(2)(B); Prum & Catz, supra note 11, at 955–56.

135 CAL. GOV’T CODE § 65,080 (b)(2)(I); Prum & Catz, supra note 11, at 955–56.

136 CAL. GOV’T CODE § 65,080 (b)(2)(B). The Regional Transportation Plan must be consistent with these strategies. See Fulton, supra note 128.


138 CAL. PUB. RES. CODE § 21,151.1.
projects” are also eligible for CEQA streamlining and exemptions.\textsuperscript{139} “Transit-priority projects” must contain at least fifty percent residential use, have a minimum density of twenty units per acre, and be located within a half-mile of a major transit stop.\textsuperscript{140} These types of projects would produce less sprawl and GHG emissions.\textsuperscript{141}

SB 375 does not alter the current structure of California transportation policy because it keeps the decision-making authority with local officials on MPO boards.\textsuperscript{142} Instead, it uses transportation funding as an incentive for cities that comply with the Sustainable Communities Strategy.\textsuperscript{143}

2. Atlanta, Georgia’s Regional Transportation Authority

The Greater Atlanta region in Georgia instituted a regional growth plan to curb air pollution emitted from automobiles.\textsuperscript{144} Metropolitan Atlanta has approximately 5.5 million people, and in the recent past, has added new residents at a rate faster than almost every other U.S. metropolitan area.\textsuperscript{145} Atlanta has no geographical boundaries to limit urban growth, and the resulting sprawl from the population explosion has led some to refer to it as the “New Los Angeles.”\textsuperscript{146} The metropolitan region, which in 1999 was 110 miles across, is one of the largest areas in the country and has been referred to as “the fastest-spreading human settlement in history.”\textsuperscript{147} The primary mode of transportation in metropolitan Atlanta is the automobile.\textsuperscript{148}

\textsuperscript{139} Id. § 21,155–21,155.1.
\textsuperscript{140} Id. § 21,155(b).
\textsuperscript{141} SB 375, supra note 11, § 1(c) (development near public transit sources allows people to use automobiles less frequently, which discourages sprawling development); see Nichols, Sustainable Communities, supra note 119, at 186.
\textsuperscript{143} See Leerssen, supra note 137, at 307–08.
\textsuperscript{146} Lockard, supra note 145, at 172; see Keith Aoki, All the King’s Horses and All the King’s Men: Hurdles to Putting the Fragmented Metropolis Back Together Again? Statewide Land Use Planning, Portland Metro and Oregon’s Measure 37, 21 J. L. & Pol. 397, 422–23 (2005).
\textsuperscript{147} Lockard, supra note 145, at 173–74 (internal quotations omitted) (quoting Richard Lacayo, The Brawl over Sprawl, Time, Mar. 22, 1999, at 44, 45); see also Nelson, supra note 145, at 626 (describing Atlanta’s rapid growth).
In addition to the many benefits associated with decreasing VMTs, Georgia stood to lose 900 million dollars in federal funding if the state did not come into attainment with CAA standards.\textsuperscript{149} The Georgia legislature enacted Senate Bill 57 to avoid losing this funding, to decrease pollution, and to relieve traffic congestion.\textsuperscript{150} Senate Bill 57 established the Georgia Regional Transportation Authority (GRTA) to manage transportation and air quality within certain areas of the state.\textsuperscript{151} The legislature gave GRTA wide authority to combat Georgia’s transportation-related pollution problems.\textsuperscript{152} These powers include the ability to plan and construct public transportation systems, to coordinate planning for land transportation and air quality purposes among state, regional, and local authorities, and to receive federal money for transit, air quality, and other purposes for the alleviation of air congestion and air pollution.\textsuperscript{153} The Governor can give GRTA the power to review, improve, modify, and implement plans for improving Atlanta’s transportation and air quality.\textsuperscript{154} Furthermore, GRTA wields the power to withhold “any state grant of any kind whatsoever except such grants as may be related directly to the physical and mental health, education, and police protection of its residents” if a local government “fails or refuses to plan, coordinate, and implement” regional transportation projects and plans.\textsuperscript{155}

GRTA has jurisdiction over non-attainment areas, which are areas that do not meet the NAAQS for a specific criteria pollutant.\textsuperscript{156} GRTA also has jurisdiction over attainment areas that become non-attainment for a particular pollutant.\textsuperscript{157} Furthermore, after an area achieves attainment, GRTA retains jurisdiction for twenty years ensuring long term compliance.\textsuperscript{158} Because jurisdiction only arises after non-attainment in

\begin{enumerate}
\item \footnotesize{Lockard, supra note 145, at 182–83, 192; see Frank S. Alexander, Inherent Tensions Between Home Rule and Regional Planning, 35 Wake Forest L. Rev. 539, 555 (2000); Donald Lee Biola, State Government Georgia Regional Transportation Authority Act: Provide for a Regional Transportation Authority, 16 Ga. St. U. L. Rev. 233, 234 (1999).}
\item \footnotesize{Lockard, supra note 145, at 182–83, 192; see Alexander, supra note 149, at 555; Robert D. Bullard et al., The Costs and Consequences of Suburban Sprawl: The Case of Metro Atlanta, 17 Ga. St. U. L. Rev. 935, 998 (2001); Nelson, supra note 145, at 633–34.}
\item \footnotesize{Ga. Code Ann. § 50-32-3(a) (2009).}
\item \footnotesize{Id. §§ 50-32-10(c) to -11.}
\item \footnotesize{Id.}
\item \footnotesize{Id. § 50-32-13.}
\item \footnotesize{Id. § 50-32-53(a).}
\item \footnotesize{42 U.S.C. § 7408 (2006); Ga. Code Ann. § 50-32-10(b)(3) (including non-attainment for ozone, carbon monoxide, or particulate matter).}
\item \footnotesize{See Ga. Code Ann. § 50-32-10(b)(3).}
\item \footnotesize{Id. § 50-32-10(c).}
\end{enumerate}
specific areas, GRTA is neither a comprehensive land-use approach nor a preventative measure.\textsuperscript{159} Though not aimed at GHGs specifically, GRTA addresses air pollution with its regional transportation planning measures.\textsuperscript{160}

\textbf{III. Land-Use Planning’ s Potential to Slow Global Climate Change}

\textbf{A. Smart Growth}

Reacting to the detrimental effects of sprawl development, the smart growth movement progressed rapidly since the mid-1990s.\textsuperscript{161} Jane Jacobs, in \textit{The Death and Life of Great American Cities}, laid a foundation for what she thought were the essential elements of vibrant and healthy cities\textsuperscript{162}—high density, mixed uses, pedestrian friendly streets, and the preservation of historic buildings.\textsuperscript{163} The smart growth movement encompasses many of Jacobs’s ideas and provides models for anti-sprawl development.\textsuperscript{164}

Though not a cohesive movement, central principles of smart growth development include: (1) creating a range of housing choices and opportunities; (2) creating walkable neighborhoods (3) encouraging community collaboration; (4) fostering locations with a strong sense of place; (5) making development decisions predictable, fair, and cost-effective; (6) mixing land uses; (7) preserving open space, farmland, natural beauty, and critical environmental areas; (8) providing a variety of transportation choices; (9) strengthening and directing development into existing communities and; (10) taking advantage of compact building design.\textsuperscript{165} Proponents argue that following these principles will create mixed-use walkable communities that limit the need for automobile use.\textsuperscript{166}

\textsuperscript{159} See id. § 50-32-10(b) (3).
\textsuperscript{160} See id. §§ 50-32-10 to -11.
\textsuperscript{163} Jacobs, \textit{supra} note 162; Wickersham, \textit{supra} note 162, 549–51.
\textsuperscript{164} See Farr, \textit{supra} note 161, at 30 (listing elements of smart growth).
\textsuperscript{165} Farr, \textit{supra} note 161, at 29–30.
\textsuperscript{166} See id.
Studies show smart growth development addresses the problem of climate change due to greenhouse gas (GHG) emissions.\textsuperscript{167} Exchanging one car and opting to use public transit would reduce a family’s carbon footprint by 25\% to 30\%.\textsuperscript{168} Other research has shown that smart growth has the potential to reduce per capita Vehicle Miles Travelled (VMT) nationwide by up to 40\%.\textsuperscript{169}

States such as Oregon, Maryland, Florida, and New Jersey also implemented smart growth initiatives.\textsuperscript{170} In 2001, Portland, Oregon was the first city in the United States to adopt a GHG reduction plan using smart growth principles.\textsuperscript{171} Portland’s plan attempted to reduce VMTs by coordinating land-use and transportation planning.\textsuperscript{172} Furthermore, Oregon set city boundaries that limited the sprawling growth of urban areas.\textsuperscript{173} Under this plan, per capita VMTs decreased by approximately 10\% and GHG levels were reduced to just above 1990 levels by 2008, despite a 14\% growth in population.\textsuperscript{174}

Scholars have observed that “the only way significant VMT reduction will be accomplished is with much stronger coordination of land-use development and transportation infrastructure investments in urbanizing parts of the [United States].”\textsuperscript{175} Smart growth is one method scholars suggest for coordinating land-use development and transportation infrastructure.\textsuperscript{176}

\textbf{B. Successful Cooperative Federalism at Work}

Despite being unable to pass a comprehensive land-use statute,\textsuperscript{177} the federal government has some control over land use under various

\begin{footnotesize}
\begin{enumerate}
\item[167] Rawlings & Paterson, \textit{supra} note 3, at 364.
\item[169] Rawlings & Paterson, \textit{supra} note 3, at 364.
\item[170] \textit{Id.} at 368. These are some of the few states that have implemented statewide land-use plans. \textit{See} LaCroix, \textit{supra} note 4, at 125.
\item[171] Rawlings & Paterson, \textit{supra} note 3, at 369.
\item[172] \textit{Id.} at 368–69.
\item[173] \textit{See id.} at 369.
\item[174] \textit{Id.}
\item[175] \textit{Id.} at 362.
\item[176] \textit{See id.} at 361–62.
\item[177] Patricia E. Salkin, \textit{American Law of Zoning} \textsection 3:2 (5th ed. 2010). In 1970 the National Land Use Policy Act (NLUPA) was introduced as a way to federalize land-use planning by incentivizing the production of state land-use plans. \textit{Id.} NLUPA would have also established a national data system in sound land-use planning for the benefit and use
\end{enumerate}
\end{footnotesize}
The federal government controls land use through legislation like the Coastal Zone Management Act (CZMA). The CZMA is an example of a federal statute regulating land use. The Act identifies a national interest in protection of the coastal zone, and encourages states to develop and implement coastal zone management plans, in part to mitigate the additional pollution of coastal waters from land-use activities. Participation under the CZMA is voluntary for states. The federal government funds states that submit plans that meet CZMA requirements.

Once approved, the federal government must comply with a state’s plan. When a federal agency plans a project within a coastal zone, the agency must determine if the project would be consistent with the state’s plan. After the federal agency sends the state its consistency determination, the state responds by either agreeing or disagreeing. The CZMA provides several approaches to resolve conflicts between the states and the federal agency, including mediation. The federal administrator must “conduct a continuing review of the performance of coastal states with respect to coastal management.” This structure influences land-use decisions for an environmental purpose by dividing power between state and federal governments. Under the CZMA, the federal government incentivizes state action through grants and has the ability to deny applications, while states can address local problems using individualized methods.

Some scholars argue that a cooperative federalism framework similar to Title I of the CAA may be used to coerce the states to form com-

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179 See id.
182 Id. § 1451; see Malone, supra note 180, at 712–14.
184 Id. §§ 1455, 1455a, 1461(e).
185 Id. § 1456.
186 Id.
187 Id. § 1456(c).
188 Id. § 1456(h).
190 See id. §§ 1451, 1456. States create the coastal management plans yet the federal government maintains the power to approve them. Id.
191 See id. §§ 1451–1455.
prehensive land-use plans.\textsuperscript{192} The State Implementation Plan framework, with each state tailoring individualized solutions, provides an example of a successful cooperative federalism structure for air pollution.\textsuperscript{193} This framework enables states to address their problems in a local manner while taking national environmental concerns into consideration.\textsuperscript{194}

IV. THE LAND-USE ADVANTAGE TO SOLVING GHG EMISSIONS

To curb greenhouse gas (GHG) emissions and reduce them to safe levels, the underlying causes of the problem need to be addressed.\textsuperscript{195} To combat the emissions of GHGs by the transportation industry, the number of Vehicle Miles Travelled (VMT) must be reduced.\textsuperscript{196} Reduction can be achieved through smart growth strategies that coordinate land-use development and transportation infrastructure investments in urbanizing areas—thus reducing VMTs by enabling and encouraging non-automobile trips and decreasing automobile trip distances.\textsuperscript{197} The EPA’s regulations on new vehicle emissions represent progress toward this end, but they are not comprehensive or substantial enough to abate climate change.\textsuperscript{198} The Georgia Regional Transportation Authority (GRTA) and California Sustainable Communities Strategy and Climate Protection Act (SB 375) use the correct approach by addressing land-use patterns as contributing to GHG emissions and air pollution, but they are not comprehensive.\textsuperscript{199} The federal government should use a framework that implements cooperative federalism by borrowing the strengths of both GRTA and SB 375.\textsuperscript{200} A cooperative federalism framework would allow states and regional governments to consider local is-

\textsuperscript{192} See, e.g., LaCroix, supra note 4, at 127; Rog, supra note 8, at 726–27.
\textsuperscript{194} See id.
\textsuperscript{195} See LaCroix, supra note 4, at 124–27; Rawlings & Paterson, supra note 3, at 361–63.
\textsuperscript{196} See Rawlings & Paterson, supra note 3, at 361.
\textsuperscript{197} See Buzbee, supra note 8, at 75–77 (noting that use of smart growth principles would reduce sprawl, which is a major contributor of GHGs); LaCroix, supra note 4, at 124–27; Rawlings & Paterson, supra note 3, at 361–63.
\textsuperscript{199} See LaCroix, supra note 4, at 125 (indicating that very few states have implemented statewide land-use controls); supra notes 132, 158–159 and accompanying text.
\textsuperscript{200} See Ga. Code Ann. § 50-32 (2009); SB 375, supra note 11; LaCroix, supra note 4, at 127; Nichols, Lessons, supra note 11, at 212; Rog, supra note 8, at 726–27 (discussing the potential for using a cooperative federalism framework like the CAA for land use).
sues and devise individualized approaches to meet the federal government’s standards.201

A. EPA Emissions Requirements Represent Progress, but Additional Action Is Necessary

The EPA’s recognition that GHGs are pollutants under the CAA and that they endanger the public will enable the EPA to slow climate change through GHG regulation.202 These regulations, however, do not address the underlying source of GHG emissions.203

The EPA regulations contain no provision for capping VMTs.204 Capping emissions of GHGs on new vehicles will limit the amount of GHGs each vehicle can emit,205 but there is no authority in the CAA to limit the number of vehicles on the road or the amount of miles that they travel.206 The lack of regulation for VMTs sets no ceiling on pollutants.207 Therefore, the EPA’s GHG limits might slow GHG emissions, but will not reverse the trend of increasing emissions overall.208 Despite buying new cars that emit less GHGs per mile travelled, people may be travelling further distances to get to their destinations due to the continuing expansion of cities.209 Furthermore, in addition to sprawling development, more people are becoming car owners.210 Therefore, GHG emissions will ultimately rise and the CAA will not abate climate change.211

201 See Clean Air Act, 42 U.S.C. §§ 7408–7410 (2006) (giving states the ability to create their own plans); LaCroix, supra note 4, at 127; Nichols, Lessons, supra note 11, at 112; Rog, supra note 8, at 726–27 (suggesting that the CAA model would be useful for land use).


203 See 49 C.F.R. §§ 531.1–.5, 533.1–.6 (2010) (not restricting VMTs); Rawlings & Paterson, supra note 3, at 361 (describing the need for smarter growth to reduce GHG emissions).

204 See 49 C.F.R. §§ 531.1–.5, 533.1–.6.

205 See id.


207 See id. §§ 7521–7554. There is only an indirect ceiling on GHG emissions through SIPs, which regulate criteria pollutants that might reach mobile source GHG emissions. See id. §§ 7401–7415.

208 See 49 C.F.R. §§ 531.1–.5, 533.1–.6; Rawlings & Paterson, supra note 3, at 361 (as the fastest growing GHG emitting sector, transportation accounts for forty-seven percent of the net increase in U.S. GHG emissions since 1990).

209 See 49 C.F.R. §§ 531.1–.5, 533.1–.6; Buzbee, supra note 8, at 67.


211 See supra notes 195–210 and accompanying text.
Thus, the EPA’s GHG limits on new model year cars neglect the important issue with emissions—sprawling urban development patterns.\textsuperscript{212} Even though these new limits do not fully address the underlying issue of GHG emissions, they add to the CAA’s arsenal of regulatory schemes.\textsuperscript{213} These limitations can be a first step for the federal government in regulating GHGs, by pressuring states to regulate in other ways, and starting a public discussion on how to address global climate change.\textsuperscript{214}

\textbf{B. Land-Use Regulation Is the Central Issue with Climate Change}

The state and regional approaches seen in California and Atlanta are preferable to the CAA approach because they address land use’s impact on GHG emissions and air pollution.\textsuperscript{215}

1. California Curbs GHGs by Incentivizing Smarter Growth

Despite having unknown long-term effects on GHG emissions, SB 375 provides a cohesive approach to limiting sprawl development and slowing climate change.\textsuperscript{216} SB 375’s smart growth plan attempts to reduce VMTs,\textsuperscript{217} and incentivizes smarter development plans by streamlining and providing exemptions for projects that conform to the Sustainable Communities Strategy (SCS).\textsuperscript{218} It does not halt inevitable development in the state.\textsuperscript{219} Instead, it allows for speedy building of smart-growth developments that meet the SCS or are located within a close distance to preexisting mass transit service, and satisfy minimum densities and mixed uses.\textsuperscript{220} Thus, SB 375 prioritizes smarter develop-

\begin{itemize}
\item \textsuperscript{213}See Richardson, \textit{supra} note 92, at 287.
\item \textsuperscript{214}See Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. at 25,324; Lockard, \textit{supra} note 145, at 185 (discussing public consensus and political action in Georgia contributing to the creation of the GRTA).
\item \textsuperscript{215}See Ga. Code Ann. § 50-32 (2009); SB 375, \textit{supra} note 11; Rawlings & Paterson, \textit{supra} note 3, at 361 (describing the need for smarter growth to reduce GHG emissions).
\item \textsuperscript{216}See Nichols, \textit{Lessons, supra} note 11, at 206–07; Fulton, \textit{supra} note 128 (tying land use, transportation, and housing decisions together).
\item \textsuperscript{217}See \textit{supra} notes 119–143 and accompanying text.
\item \textsuperscript{218}CAL. PUB. RES. CODE § 21,151.1 (West Supp. 2011).
\item \textsuperscript{219}See Fulton, \textit{supra} note 128 (discussing how SB 375 was designed to create regional growth plans that are sustainable and not to halt development).
\item \textsuperscript{220}CAL. PUB. RES. CODE § 21,151.1.
\end{itemize}
ment, designed to reduce GHGs, over the status quo.\footnote{See id. (streamlining allows SB 375 to fast-track sustainable development projects).} SB 375 provides a model for region-wide smarter development that will lower GHG emissions and alleviate local air pollution and other social ills caused by sprawl.\footnote{See Buzbee, supra note 8, at 73; Sherman, supra note 125. California’s plan has an advantage over Atlanta’s GRTA in that it does not only attach to non-attainment areas and thus does not address the problem after non-compliance with the CAA arises. See Ga. Code Ann. § 50-32-10(b)(3) (2009). Unfortunately, SB 375 does not cover the entire state and only governs eighteen of California’s MPOs—which include thirty-seven of fifty-eight California counties and a majority of the state’s population. Sherman, supra note 125.}

Despite SB 375’s laudable goals, it has some shortfalls. SB 375’s approach is not comprehensive as it applies to only thirty-seven of the fifty-eight counties in California.\footnote{See supra note 129 and accompanying text. SB 375 is not the only climate change tool in California. Nichols discusses other tools in Lessons, supra note 11, at 198, 205–06.} The California Air Resources Board (CARB) does not make policy decisions regarding the methods for achieving GHG reduction goals.\footnote{See Prum & Catz, supra note 11, at 956.} Furthermore, SB 375 does not remove land-use powers from local governments, but instead local government officials make decisions through the MPOs, and therefore “the state has no authority over local land-use policy.”\footnote{Nichols, Sustainable Communities, supra note 119, at 188; see Cal. Gov’t Code § 65,080(b)(2)(K) (West Supp. 2012).} SB 375 does mandate localities to adopt land-use plans.\footnote{Nichols, Lessons, supra note 11, at 207.} California will not penalize regions for missing targets but it will deprive them of incentives.\footnote{Nichols, Sustainable Communities, supra note 119, at 188–89.}

The federal government could incentivize state action to implement plans like SB 375 by attaching funding to region or state-wide plans that use smart growth to combat GHG emissions.\footnote{See Rawlings & Paterson, supra note 3, at 361; supra notes 45–49 and accompanying text (discussing incentivizing state decisions).}

2. Atlanta’s GRTA Approach Could Potentially Be Tailored to Address GHG Emissions

Atlanta’s GRTA provides another region-wide approach to connecting land use, transportation, and air pollution.\footnote{See Lockard, supra note 145, at 181–87; Nelson, supra note 145, at 633 (providing an overview and analysis of GRTA).} Although GRTA was designed to combat criteria pollutants in non-attainment areas, the approach of regulating land uses to limit car emissions also has the an-
cillary effect of limiting GHG emissions.\textsuperscript{230} Like SB 375, GRTA’s approach could be applied in other regions as a way to combat GHG emissions.\textsuperscript{231}

The GRTA program represents significant progress in furthering the traditional role of state and local powers over land-use planning and transportation.\textsuperscript{232} The issue with local planning is that contiguous regions are not accountable to each other and planning does not consider larger environmental effects.\textsuperscript{233} Although local governments may be attuned to local problems more readily than the federal government, they do not address concerns outside of their locality.\textsuperscript{234} For land-use regulation, this is a major problem because localities sometimes externalize environmental costs.\textsuperscript{235}

One of GRTA’s major successes was transferring some decision-making authority away from local governments to a regional entity that can consider the connections and relevant variables between localities.\textsuperscript{236} Some of the stronger aspects of GRTA’s power include its ability to “plan, design, acquire, construct, add to, extend, improve, equip, operate . . . land public transportation systems,” veto transportation plans of MPOs, refuse roadway access to projects that do not align with the program’s goals, and essentially force compliance by sanctioning localities with the loss of federal and state funding for not aligning with GRTA’s programs.\textsuperscript{237} These powers could also serve as a model for other jurisdictions or agencies planning on a regional or state-wide level.

Though there are some strong aspects to the GRTA program, there were important weaknesses that would make exporting a similarly styled structure to other regions potentially ineffective. Primarily, GRTA’s powers over transportation only allow for indirect effects on land-use

\textsuperscript{230} See Ga. Code Ann. § 50-32-10(b)(3) (2009); LaCroix, \textit{supra} note 4, at 124 (establishing that significant amounts of GHGs come from automobile usage).
\textsuperscript{231} See Ga. Code Ann. § 50-32 (similarly requiring regional land use and transportation planning to combat air pollution); \textit{supra} notes 216–228 and accompanying text.
\textsuperscript{233} See LaCroix, \textit{supra} note 4, at 125.
\textsuperscript{234} See Griffith, \textit{supra} note 64, at 1026 (discussing the need for regional land-use governance); \textit{cf.} Buzbee, \textit{supra} note 8, at 84–85 (discussing the idea that sprawl allows localities to externalize the costs of their development patterns).
\textsuperscript{235} See Buzbee, \textit{supra} note 8, at 84–85.
\textsuperscript{236} See, \textit{e.g.}, Lockard, \textit{supra} note 145, at 191; Nelson, \textit{supra} note 145, at 634–35.
decision making. GRTA only applies to non-attainment areas and therefore is not comprehensive, as it does not have jurisdiction over the entire state or region. GRTA’s jurisdiction would only arise after there is non-attainment under the CAA and therefore would only address air pollutants after serious issues arise. GRTA does not act in a preventative capacity, and ultimately allows areas in Georgia to fall out of attainment. Environmentalists may have had high hopes for GRTA, but some see it as ineffective because the program did not exercise its powers to the fullest extent possible due to political considerations.

C. Smart Growth and Cooperative Federalism Offer a Partial Solution

The federal government needs to enact more comprehensive federal land-use legislation. The need is clear, considering that few regional programs address GHG emissions, and they are not comprehensive. To do this, federal policymakers must understand how local and state land-use decisions are connected. Policymakers must see suburban areas as burdening urban areas with increased traffic congestion and air pollution, which are byproducts of increased automobile use. The land-use policies of one local authority might adversely affect the surrounding localities because air pollution and externalized costs do not stop at locality lines. Furthermore, the ability to have interconnected mass transit systems relies on either cooperation between local governments or a higher governing authority that can bridge the gap between them.

239 See supra notes 156–160 and accompanying text.
240 See supra notes 156–160 and accompanying text.
241 See supra notes 156–160 and accompanying text.
242 See Janice C. Griffith, Regional Governance Reconsidered, 21 J. L. & Pol. 505, 545 (2005) (“[H]eralded upon its creation as the solution to the Atlanta region’s growth related problems, declined to exercise the broad regional powers granted to it. Sensing the lack of political consensus on such issues as a regional mass transit system, GRTA has avoided using its power to overrule decisions made by elected local officials.”).
244 See supra notes 119–160 and accompanying text.
245 See Griffith, supra note 64, at 1026.
246 See id. at 1026–27.
247 Id. at 1026.
248 Id.
Georgia and California have similar air pollution and GHG problems.249 Both of these locations provide examples of how to structure air pollutant legislation. These laws do not exist in isolation, but instead are surrounded by other climate and transportation laws.250 They can, however, provide a starting point for designing federal land use and climate change legislation. They provide examples and potential tools on regulating the underlying cause of land-use decisions on climate change.

One of the most important concerns with federal land-use policy is intrusion on state power.251 Because land use is historically a state power, interference from the federal government may initially cause resistance.252 The CAA and the CZMA, however, provide a framework to think about land use from a federal perspective.253 In accordance with Title I of the CAA, the EPA sets National Ambient Air Quality Standards (NAAQS) and delegates to the states or regions the authority to determine how to meet these standards.254 Though the current structure of the CAA does not control land use to a large extent, or provide for effective GHG emission limitations, it does at least exemplify meaningful cooperative federalism.255

Mary Nichols, a prominent scholar in the arena, recommends that the federal government use California’s programs as a model for a cooperative federalism framework for the nation.256 The federal government should start regulate the effects of land-use on GHGs and air pol-

249 See supra notes 120–122, 145–148 and accompanying text.
250 See Nichols, Lessons, supra note 11, at 203–08.
251 See Buzbee, supra note 8, at 99–101.
252 See id. at 99.
254 Clean Air Act § 108–110, 42 U.S.C. §§ 7408–7410. The CZMA sets out a floor for federal land-use requirements in coastal zones and then the states develop plans to achieve this. 16 U.S.C. §§ 1451–1466. The state then holds power because any land uses, even federal ones, need to comply with the state management plan. Id. § 1456(c).
255 See supra notes 87–106, 216–228 and accompanying text. Furthermore, because of the interrelationship of climate change and land use, the CAA might provide a mechanism to institute some form of federal land-use policy.
256 Nichols, Lessons, supra note 11, at 192, 212; see Prum & Catz, supra note 11, at 965–66 (mentioning the possibility of the federal government adopting the AB 32 and SB 375 model). Indeed this is what the legislators envisioned. See supra note 128 and accompanying text.
lutants, and thus follow the lead of Georgia and California. The government could set floors for regulation for GHG emission similar to the NAAQS in the CAA. Then the government should delegate to the states the methods of compliance with the federally mandated floor. This structure would be similar to the CAA, or could possibly become a part of the CAA. A cooperative federalism approach is best because there will be some resistance to any federal land-use planning—even to control GHG emissions—but this resistance can be softened by letting state and local governments design and implement individualized plans to meet local needs.

The federal government should mix incentives with mandates by providing funding incentives like SB 375 and working with an empowered state partner, much like the GRTA program. There should be meaningful mandates, which are missing from SB 375, to achieve the reductions necessary to abate climate change. In addition to meaningful mandates, there should be in place in each state or region an entity with the power to enforce the state or regional mandates. Some of these powers could be modeled after the powers given to GRTA. Therefore, some general land-use powers may stay with localities, but the regional or state power could have the ability to veto projects.

Legislation should be comprehensive and apply to the United States as a whole. SB 375 covers thirty-seven of California’s fifty-eight counties, and GRTA only covers areas that are non-attainment. A federal land-use law must cover all areas to prevent GHG emitting sources from moving to different locales to avoid regulation. Smart growth is a promising approach to significantly curbing GHG emissions. Incentivizing developers to align with smart growth objectives through a federally imposed land-use plan, or some form of a regional plan, would reduce VMTs, lessen the effect of GHGs, and avoid federal-

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257 See supra notes 98–106 and accompanying text; Nichols, Lessons, supra note 11, at 192, 212.
258 See supra notes 37–49, 177–194 and accompanying text (discussing the likely resistance to federal land-use regulation, but also the ability to create individualized plans under cooperative federalism).
260 See supra notes 144–150, 243–246 and accompanying text.
261 See supra notes 151–160, 238–241 and accompanying text.
263 See Nichols, Sustainable Communities, supra note 119, at 186; Sherman, supra note 125.
265 See Rawlings & Paterson, supra note 3, at 361–63 (describing the need for smarter growth to reduce GHG emissions).
ism issues. The United States needs this type of regulation to avoid the catastrophic consequences of climate change.

**Conclusion**

Because of the United States’s tremendous amount of GHG emissions relative to its population, it must take a leadership role in reducing GHGs. Although the CAA represents progress toward that goal, it is insufficient to solve the problem in its entirety because it puts no limit on GHG emissions. Local governments may also limit GHG emissions, but this might only happen when pushed by funding or threat of regulation. The United States and the international community cannot rely on states to take action like California or Georgia. Instead, the best approach would be to institute a cooperative federalism framework, set a national floor for GHG emissions, and use a combination of mandates and incentives based upon the California and Georgia examples. Only through nationally comprehensive land-use policy can the United States alleviate the pressures of climate change and reverse the planning mistakes of the past seventy years.

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266 See Buzbee, supra note 8, at 99–101; LaCroix, supra note 4, at 127; Rawlings & Paterson, supra note 3, at 361–62; supra notes 45–49 and accompanying text.

267 See Donnellan, supra note 5, at 712; LaCroix, supra note 4, at 12.
A SILENT SPRING IN DEEP WATER?:
PROPOSING FRONT-END REGULATION OF DISPERsANTS AFTER THE DEEPWATER HORIZON DISASTER

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ABSTRACT: The unprecedented use of dispersants in response to the BP Deepwater Horizon blowout and subsequent explosion revealed the weaknesses of the current U.S. oil spill emergency response apparatus. The dearth of information regarding dispersant toxicity and effectiveness at various depths highlights the need to revisit the current procedures within the National Contingency Plan for responding to oil spill emergencies. In assessing various options, the experience of pesticide regulation is informative—a front-end regulatory framework like that employed in the Federal Insecticide, Fungicide, and Rodenticide Act could address many of the shortcomings of federal emergency spill response. Such a regulatory approach would ensure that information about dispersants is made available before their listing on the National Contingency Plan, rather than after their ultimate application. Given the risk for harm to human health and the environment from oil spills and subsequent dispersant application, such an approach is necessary.

INTRODUCTION

President Obama labeled the BP Deepwater Horizon blowout and subsequent explosion on April 20, 2010 “the worst environmental disaster America has ever faced.”1 The disaster killed eleven individuals working on the oil drilling platform, and caused the discharge of an estimated four million barrels of crude oil into the Gulf of Mexico.2 Roughly 1.84 million gallons of dispersants—an unparalleled amount3—were used to

1 Remarks by the President to the Nation on the BP Oil Spill (June 15, 2010), available at http://www.whitehouse.gov/the-press-office/remarks-president-nation-bp-oil-spill.
3 Id. “Dispersants are chemicals that can be used to break up oil and speed its natural degradation.” EPA, The Federal Government Response: Dispersant Use in BP Oil Spill (July, 2010), http://www.epa.gov/bpspill/factsheets/dispersants-factsheet.pdf.
combat the released oil. Neither the government nor BP had much information concerning dispersant toxicity or the potential hazards resulting from applying this quantity of surface and subsurface dispersants.

According to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, dispersant application in response to this disaster is troubling for three reasons. First, 1.84 million gallons of dispersants were applied, exceeding the amount used in any other spill cleanup. Second, dispersant use at the wellhead began without any significant testing of either dispersant efficacy or possible environmental consequences. Third, the federal government’s pre-approved response plans allowed for dispersant application in response to an oil spill without any constraints or guidelines on their use.

This is not the first time potentially lethal poisons have been used to counter threats to society, public health, and the economy. Pesticides have been used for over two thousand years, and have been known to contain harmful metals such as arsenic, lead, and copper, as well as dangerous synthetic chemicals such as organophosphates, which were originally used as nerve gases during World War II.

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4 Nat’l Comm’n on the BP Deepwater Horizon Oil Spill & Offshore Drilling, The Use of Surface and Subsea Dispersants During the BP Deepwater Horizon Oil Spill 1 (Working Paper No. 4, 2011) [hereinafter Dispersant Working Paper]. Over one million gallons were applied on the surface, and 771,000 gallons were applied subsea. See id.


6 Dispersant Working Paper, supra note 4, at 1.

7 Id.

8 Id. Dispersants have been available as a means of spill response since the mid-1980s. Ker Than, Gulf Oil Spill Fight Turns to Chemicals: Team Hopes Oil Dispersants Will Limit Damage on Land, NAT’L GEOGRAPHIC DAILY NEWS (Apr. 30, 2010), http://news.nationalgeographic.com/news/2010/04/100430-energy-gulf-oil-spill-chemical-dispersants/. Counsel for BP, however, confirmed that surface application of dispersants was the only type of application method contemplated in the 1990s, the time of the latest revision to the National Contingency Plan (NCP). Dispersant Working Paper, supra note 4, at 1 n.3; National Oil and Hazardous Substances Pollution Contingency Plan Overview, ENVTL. PROT. AGENCY, http://www.epa.gov/oem/content/lawsregs/ncpover.htm (last updated Aug. 19, 2011) [hereinafter NCP Overview] (noting that “[t]he latest revisions to the NCP were finalized in 1994”).

9 Dispersant Working Paper, supra note 4, at 1–2.


11 Id. at 144, 146.

Consumer protection concerns originally motivated pesticide regulation. In the 1960s, social awareness of ecological threats posed by pesticides dramatically increased, due in large part to Rachel Carson’s book *Silent Spring*. As a result, Congress amended the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to address the potential impacts of pesticides on users, consumers, and the environment, thus transforming the pesticide regulatory structure in the 1970s. FIFRA created a front-end regulatory framework by requiring disclosure of information about the pesticide before its registration and subsequent introduction to the market. Ultimately, FIFRA helped transition the focus of pesticide regulation from consumer fraud to the risks posed to human health and the environment.

Although FIFRA has downsides and weaknesses, this Note argues that a FIFRA-like, front-end regulatory framework for dispersants would be socially beneficial. Specifically, this Note addresses some of the weaknesses of FIFRA while highlighting the benefits of a front-end framework for dispersant regulation. Part I summarizes the factual underpinnings of dispersant application in the wake of the BP Deepwater Horizon Oil Spill and the National Contingency Plan—the existing federal emergency response structure and framework. Part II discusses the legislative intent behind FIFRA and the framework employed to achieve those ends. Part III compares dispersants and pesticides, and argues that, given the similarities between the two, a front-end regulatory framework similar to FIFRA should be introduced for dispersants. Additionally, this Note suggests alternatives to some of FIFRA’s methods to avoid the various pitfalls of current pesticide regulation.

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17 Willson, supra note 13.
I. THE U.S. RESPONSE TO THE BP DEEPWATER HORIZON OIL EXPLOSION AND SPILL

The National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan, or NCP) "is the federal government’s blueprint for responding to both oil spills and hazardous substance releases."\(^{18}\) It is the result of efforts to improve the efficiency of a nation-wide response to these disasters by promoting coordination between responders at various levels, both state and federal.\(^{19}\) Thus, the goal of the NCP is to provide for coordinated and effective action to minimize adverse impact from oil discharges and hazardous substance releases.\(^{20}\) The NCP thus set the federal framework to manage the BP Deepwater Horizon explosion and oil spill response effort.\(^{21}\)

The NCP was originally created and implemented in 1968 as part of the response to the Torrey Canyon oil tanker spill.\(^{22}\) It established a system for reporting potential disasters, created a preventive plan for spill containment and remediation, established a response headquarters, and formed response teams on both the national and regional level.\(^{23}\) These regional and federal response teams have become the National Response Team (NRT) and Regional Response Teams (RRT) through subsequent editions of the NCP.\(^{24}\)

Although the NCP governs the federal response to an emergency oil spill or hazardous release, it also takes into account both regional and national concerns and addresses relationships between the various parties involved in the cleanup effort.\(^{25}\) While the NCP requires the Coast Guard to supervise oil spill cleanup, it does not anticipate that the Coast Guard will actually perform the cleanup or provide the nec-

\(^{18}\) NCP Overview, supra note 8.

\(^{19}\) Id.

\(^{20}\) 40 C.F.R. § 300.1 (2010).

\(^{21}\) BP Commission Report, supra note 2, at 131.

\(^{22}\) NCP Overview, supra note 8. The spill released roughly 31 million gallons of crude oil into the Atlantic Ocean and prompted the use of over 10,000 tons of dispersants in response. Torrey Canyon Disaster Revisited, BBC Cornwall, http://news.bbc.co.uk/local/cornwall/hi/people_and_places/nature/newsid_8753000/8753329.stm (last updated June 22, 2010).

\(^{23}\) NCP Overview, supra note 8.

\(^{24}\) Id. RRTs are composed of individuals from both federal and state agencies, and are charged with developing Regional Contingency Plans and pre-authorization protocols for their specific region. BP Commission Report, supra note 2, at 265. Conversely, the NRT is composed of individuals from the sixteen federal agencies whose duty is to provide a coordinated and prepared emergency response. Id. at 131.

\(^{25}\) BP Commission Report, supra note 2, at 131; NCP Overview, supra note 8.
ecessary tools. Rather, the NCP attempts to burden the responsible party—in this situation, BP—unless there is a threat to public health and safety. “Federalizing” a spill—which occurs when the Coast Guard assumes responsibility for the cleanup—is less preferable as it requires the government to carry out and fund the response, and then seek repayment at a later date. As a result, both federal policy concerns and regional issues are represented, through the Coast Guard’s involvement, the RRTs, and the responsible party, respectively.

A. National Oil Spill Response: The National Contingency Plan

The scope of the original NCP expanded over time, as Congress incorporated appropriate amendments with the passage of subsequent legislation, such as the Clean Water Act of 1972 (CWA), Superfund legislation in 1980 (CERCLA), and the Oil Pollution Act of 1990 (OPA-90). The latest modifications to the NCP were published when Congress passed OPA-90, which was enacted after the Exxon Valdez travesty exposed widespread failures in oil spill response.

The CWA, as amended by OPA-90, provides the authority for the Environmental Protection Agency (EPA) to engage in emergency response measures to oil spills. The changes to the NCP were aimed at improving spill response efficiency and increasing investment in spill prevention. The NCP was most directly affected by OPA-90’s revisions

26 BP Commission Report, supra note 2, at 132.  
27 Id. at 134–35.  
28 Id.  
29 See id. at 131.  
31 See BP Commission Report, supra note 2, at 130 n.  
to CWA section 311, in which Congress explicitly contemplated using dispersants as part of the federal emergency response to oil spills. Section 311(d)(2)(G) mandates the preparation of a schedule considering “dispersants, other chemicals, and other spill mitigating devices and substances, if any, that may be used in carrying out the [National Contingency] Plan,” and “the quantities of such dispersant, other chemicals, or other spill mitigating device or substance which can be used safely in such waters.” The President was charged with creating and publishing a NCP that established procedures and guidelines for the removal of spilled oil and other hazardous substances, a responsibility delegated to the EPA. The EPA established that its mandate was accompanied by environmental considerations:

Congress’ primary intent in regulating products under the NCP Product Schedule is to protect the environment from possible deleterious effects caused by the application or use of these products. In looking at the long- and short-term effects on the environment of all spill mitigating devices and substances, EPA has concluded that chemical and bioremediation countermeasures pose the greatest threat for causing deleterious effects on the environment.

This inclusion of an environmental focus in the NCP Product Schedule mirrors the congressional emphasis within FIFRA on human health and environmental concerns.

1. Dispersants and the Decision to Use Them: A Cost-Benefit Analysis

The decision to use dispersants involves a cost-benefit analysis. As the National Research Council notes, “[d]ispersant application . . . represents a conscious decision to increase the hydrocarbon load (resulting from a spill) on one component of the ecosystem (e.g., the wa-

34 Id. For example, § 311(d) required the development and implementation of procedures for “removing a worst case discharge of oil and for mitigating or preventing a substantial threat of such a discharge.” 33 U.S.C. § 1321(d).
36 Id.
37 Id. § 1321(d)(2)(G)(iii).
38 Id. § 1321(d)(1).
41 See infra note 143 and accompanying text.
42 See Dispersant Working Paper, supra note 4, at 3.
As a result, the decision to apply dispersants necessitates trade-offs between limiting the threats posed to shoreline and surface habitats while increasing the threats to those habitats underneath the water surface and away from the shoreline. The National Research Council also establishes that this analysis must take into account competing variables, such as “the type of oil spilled . . . sea state and weather . . . degree of turbulence . . . and relative abundance and life stages of resident organisms.”

Dispersants are analogous to dish detergent, dissipating oil into much smaller droplets. Breaking down oil into smaller particles—and thereby increasing the overall surface area of the oil—allows naturally existing microbes to break down it more effectively. It is not clear, however, that such microbes exist at the low temperatures of deepwater, such as at the Macondo wellhead. The smaller oil particles also remain suspended in the water column more easily because of their size. As a result, dispersants can mitigate the effects of an oil spill on affected animals and the shoreline.

Although there are certain benefits to dispersant application, there are also costs and uncertainties. Because of their dissipating effect, dispersants may expose organisms living well below the surface to higher concentrations of oil than would have occurred without the use of dispersants. The small size of the dispersed oil droplets may also increase the threat to organisms because smaller droplets of oil have the potential to access physical areas that a large plume of oil could

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44 See id.
45 Id.
47 Id. Agencies often reference the anticipated increase of the oil’s biodegradation as a reason for using dispersants. Dispersant Working Paper, supra note 4, at 3.
49 Id. at 3.
51 Id. at iii.
52 See Dispersant Working Paper, supra note 4, at 1.
not, such as within the larvae and shells of baby crabs.\textsuperscript{53} Additionally, there is a significant difference between the toxicity of chemically and physically dispersed oil.\textsuperscript{54} Many studies have found that the most toxic components of crude oil, polycyclic aromatic hydrocarbons (PAHs),\textsuperscript{55} are present in greater concentrations of oil subjected to chemical dispersants than physically dispersed oil.\textsuperscript{56} The increased levels of PAHs in the water column cause an increase in toxicity of chemically dispersed oil by ten to fifty times that of physically dispersed oil.\textsuperscript{57}

Additionally, not all dispersants act alike.\textsuperscript{58} Different dispersants employ different types of chemicals to break apart the oil, resulting in adverse consequences on biodegradation.\textsuperscript{59} Another issue with dispersant use is that there are many factors that influence dispersant effectiveness, “including oil composition, sea energy, state of oil weathering, the type of dispersant used and the amount applied, temperature, and salinity of the water,” which is compounded by the fact that differently scaled tests yield different results.\textsuperscript{60}

Dispersants may have a dramatic effect on public health.\textsuperscript{61} By design, dispersants break oil down into smaller drops.\textsuperscript{62} It is this characteristic that makes them dangerous to organisms—dispersants can easily move through cell walls, multiple layers of skin, and other “protective barriers” of the human body used to safeguard vital organs.\textsuperscript{63} By increasing absorption of harmful chemicals, dispersants have the effect of exacerbating exposure to toxic oil chemicals.\textsuperscript{64} Further, dispersants, in breaking down the oil, form micelles—molecules whose


\textsuperscript{54} \textsc{Fingas}, \textit{supra} note 50, at 15.

\textsuperscript{55} Kintisch, \textit{supra} note 53.

\textsuperscript{56} \textsc{Fingas}, \textit{supra} note 50, at 15.

\textsuperscript{57} \textit{Id.}

\textsuperscript{58} \textit{Dispersant Working Paper}, \textit{supra} note 4, at 4.

\textsuperscript{59} \textit{Id.} Specifically, dispersants that employ “ionic surfactants,” such as Corexit 9527 and 9500, have been found to have detrimental effects on biodegradation of the oil, whereas dispersants with “non-ionic surfactants” may have the opposite effect. \textit{Id.}

\textsuperscript{60} \textsc{Fingas}, \textit{supra} note 50, at 4–5. Dispersants do not dissolve the oil; rather, “they change the chemical and physical properties of the oil, making it more likely to mix into the water column than to contaminate the shoreline.” \textit{Than}, \textit{supra} note 8.


\textsuperscript{62} Kintisch, \textit{supra} note 46.

\textsuperscript{63} Burns & Harbut, \textit{supra} note 61, at 14.

\textsuperscript{64} \textit{Id.} at 39.
exterior consists of dispersant chemicals and interior is composed of oil.\textsuperscript{65} This combination of substances, oil and dispersant chemicals, poses a significant threat if human’s inhale the micelles.\textsuperscript{66} Micelles may coat the lungs, resulting in serious chest, head, and respiratory problems.\textsuperscript{67} The fact that the oil is dispersed, however, compounds the situation as it becomes more difficult to identify oil in water and therefore to prevent against additional exposure.\textsuperscript{68}

Although the decision to utilize dispersants addresses competing variables, little is known about their effectiveness in real-world applications.\textsuperscript{69} When dispersants are used, there is generally little documentation about the effects, and scientific testing is rarely executed.\textsuperscript{70} There have been roughly 213 recorded applications of dispersants on oil spills in the last 43 years.\textsuperscript{71} Only half of these dispersant applications were concluded to be effective, whereas the other half were found to be ineffective, inconclusive, or undocumented.\textsuperscript{72}

2. Dispersants in the NCP

Under Subpart J of the NCP—which requires the EPA to maintain a “schedule” of dispersants\textsuperscript{73}—RRTs and Area Committees (ACs) must consider the relative advantages and disadvantages of the use of dispersants and other spill mitigating agents on the NCP Product Schedule.\textsuperscript{74} These groups are then to submit Regional Contingency Plans (RCPs) and Area Contingency Plans (ACPs), respectively.\textsuperscript{75} In applying

\textsuperscript{65} Id. at 15.
\textsuperscript{66} Id.
\textsuperscript{67} Id.
\textsuperscript{68} Id. at 16.
\textsuperscript{69} See Fingas, supra note 50, at 4.
\textsuperscript{70} Id. at 27.
\textsuperscript{71} Id. at 26.
\textsuperscript{72} Id.
\textsuperscript{74} 40 C.F.R. § 300.910(a) (2010).
\textsuperscript{75} Id. pt. 300, app. E § 4.1.3(b)–(c). While there is a distinction between the RCP and ACP, they are to generally include information concerning the “useful facilities and resources in the region” from a variety of sources. Id. § 4.1.2. These are not to be confused with BP’s plans that infamously included a reference to walruses and provided a link to a Japanese entertainment site instead of the Marine Spill Response Corporation. BP Com-
to the EPA for pre-authorization of spill response plans, RRTs and ACs must include the contexts and limits of dispersant usage in their RCPs and ACPs. 76 A group consisting of the EPA’s representative on the RRT, the state representatives from those states with jurisdiction over the waters to which the plan applies, and the natural resource trustees from both the Department of Commerce (DOC) and Department of the Interior (Interior) determines whether pre-approval is appropriate. 77 Pre-approval allows for the On-Site Coordinator (OSC) to use products in the pre-authorization plan in an emergency response without obtaining “specific concurrences” from the aforementioned individuals. 78

If a hazardous substance release occurs within an area where there is no appropriate pre-approved RCP, the OSC must obtain the concurrence of the DOC and Interior natural resource trustees, the EPA, and the state representatives with jurisdiction over the waters threatened by the spill to use dispersants already listed on the NCP Product Schedule. 79 However, in extreme situations that threaten or present a substantial threat to human life, the OSC may authorize the use of any dispersant, including those not listed on the NCP Product Schedule. 80 Outside of these situations, a dispersant’s presence on the NCP Product Schedule puts it into the pool of potential oil spill mitigating agents that may be used in an oil spill response. 81

For a dispersant to be listed on the NCP Product Schedule, certain data requirements must be satisfied. 82 These requirements include identification of a dispersant’s “components” and dispersant effectiveness. 83 The EPA requires that the manufacturer of the dispersant itemize the dispersant components by their chemical name and relative concentration based on weight within the product’s final formulation. 84 The manufacturer must also identify the dominant active ingre-

mission Report, supra note 2, at 133. These oil spill response plans were a requirement from the Minerals Management Service (MMS) to facilitate oil spill cleanup. Id. at 83. MMS’s own regulations provide that the required response plan must be consistent with the appropriate ACP. 30 C.F.R. § 254.5 (2010).

76 40 C.F.R. § 300.910(a).
77 Id.
78 Id.
79 Id. § 300.910(b).
80 Id. § 300.910(d).
81 See id. § 300.910(a)–(b).
82 See 40 C.F.R. § 300.915(a).
83 Id. § 300.915(a)(7), (10).
84 Id. § 300.915(a)(10). Additionally, the regulations require that percentages “include maximum, minimum, and average weights in order to reflect quality control variations in manufacture or formulation.” Id.
dients for “surface active agents,” “solvents,” and “additives.” Manufacturers, however, may use a “confidential business information” exception to withhold certain information from these technical data submissions.

Manufacturers are also required to submit test results of dispersant effectiveness, obtained from “Swirling Flask effectiveness test methods,” which must be verified. In order to qualify for the NCP Product Schedule, a dispersant must show an effectiveness value of forty-five percent or more. For those dispersants satisfying the effectiveness requirement, dispersant toxicity information obtained from “standard toxicity test methods” identified in Subpart C of the NCP is required, along with verification of results and supporting data. This “Revised Standard Dispersant Toxicity Test” involves exposing two fish species,

85 Id.
86 Id. § 300.920(c). Similarly, Material Safety Data Sheets (MSDS)—a form required by the Occupational Safety and Health Administration that contains information about the properties of certain ingredients in chemicals—allow for companies to characterize rather than specify classes of ingredients. BURNS & HARBUt, supra note 61, at 16. For example, for the Corexit products listed on the NCP, the manufacturer identified “organic sulfonic acid salts” and “petroleum distillates, hydrotreated light” as components without any further specificity. Id. This terminology limits the feasibility of forecasting the potential long-term effects of dispersant application. Id. BP, in attempting to find alternatives to Corexit 9500, noted that it would be valuable to obtain chemical formulas for other dispersants to discern which of the dispersants would be the safest and most appropriate alternative. Dispersant Working Paper, supra note 4, at 9. BP also stated that “there may be only limited information on the constituents of the dispersants, since the dispersants typically contain proprietary substances whose identities are not publicly available.” Letter from Douglas J. Suttles, BP, to Rear Admiral Landry, Commander, Eighth Coast Guard Dist., and Samuel Coleman, Dir., Superfund Div., Envtl. Prot. Agency Region 6, attachment pt. IV.E (May 20, 2010), available at http://www.epa.gov/bpsspill/dispersants/5–21bp-response.pdf. As of October 13, 2010, fifteen of eighteen listed dispersants claimed a privilege as to at least some of the ingredients. See Lado, supra note 5, at 4.
87 40 C.F.R. § 300.915(a) (7). The “Swirling Flask” method consists of placing seawater and a surface oil layer in a modified Erlenmeyer flask, swirling it on a “shaker table” for twenty minutes, allowing it to rest for ten minutes, and then analyzing a sample of the subsurface swirled water for oil content. Id. pt. 300, app. C § 2.1.
88 Id. § 300.915(a) (7). Manufacturers of dispersants are also “encouraged to provide data on product performance under conditions other than those captured by these tests,” but such information is not required. Id.
89 See id. §§ 300.200–.220. Subpart C “summarizes emergency preparedness activities relating to discharges of oil,” discusses contingency planning, and addresses coordination between state and local responses to such releases. Id. § 300.200.
90 Id. § 300.915(a) (7).
mysis shrimp and silversides, to five combinations of varying concentrations of the test product (the dispersant) and oil.\textsuperscript{91}

The EPA makes the final determination as to whether a dispersant is published on the Product Schedule, and may refuse publication on several grounds, including significant variance from independent test verification and lack of qualification of a verifying laboratory.\textsuperscript{92} There is no additional toxicity threshold or requirement for a dispersant to be included on the Product Schedule.\textsuperscript{93} Toxicity testing data submitted to the EPA does not require “other important matters such as environmental persistence, effectiveness with multiple varieties of oil and at multiple temperatures, byproducts, and endocrine effects.”\textsuperscript{94} Barring the EPA’s refusal, once these criteria are submitted a dispersant may be listed.\textsuperscript{95}

The EPA expressly disclaims any approval or certification of the listed product on the Product Schedule.\textsuperscript{96} Additionally, the EPA includes instructions that manufacturers are not to reference the dispersant’s presence on the Product Schedule without printing a pre-written disclaimer that reemphasizes the fact that presence on the Product Schedule does not constitute any type of acceptance on behalf of the EPA.\textsuperscript{97} Rather, as the warning establishes, presence on the Product Schedule only notes the submission of the product’s technical data to the EPA.\textsuperscript{98} The purpose of this regulatory approach is to provide generic information for the various dispersants so that they may be compared against one another on a national basis.\textsuperscript{99}

\textsuperscript{91} Id. pt. 300, app. C § 3.1. This is done to identify the mortality rates of the silversides after ninety-six hours and mysis shrimp after forty-eight hours. Id. These are considered acute toxicity tests. Dispersant Working Paper, supra note 4, at 6.

\textsuperscript{92} 40 C.F.R. § 300.915(a)(12).

\textsuperscript{93} See id.

\textsuperscript{94} Dispersant Working Paper, supra note 4, at 6.

\textsuperscript{95} 40 C.F.R. § 300.915(a)(12).

\textsuperscript{96} Id. § 300.920(e).

\textsuperscript{97} Id.

\textsuperscript{98} Id. Access to the NCP Product Schedule is provided through the EPA’s website, in both web and PDF form. See NCP Product Schedule, supra note 73. Absent from both versions is data concerning appropriate or safe amounts of the dispersant to use and potential environmental or public health risks presented by that specific dispersant’s use. See id.

B. Dispersant Usage in Response to the BP Deepwater Horizon Spill

The EPA Administrator, Lisa Jackson, approved the use of dispersants in response to the BP spill. Jackson acknowledged that the decision was difficult, due in part to the challenges and trade-offs posed by dispersant usage and the minimal amount of available information. The federal response to the BP Deepwater Horizon explosion and subsequent spill began in the evening of April 20, 2010. The RCPs applicable to the well’s location were for EPA Regions 4 and 6. Both relevant RCPs for the Macondo wellhead operation pre-authorized the use of certain specified dispersants, and neither prescribed constraints concerning the overall amount or length of time for which dispersants could be used. On May 1, after roughly BP’s response crews applied roughly 140,000 gallons of dispersants to the Gulf of Mexico’s surface, they began applying dispersants to the subsurface. There was confusion as to whether subsurface application of dispersants required additional process and approval from the various federal administrators in charge of the federal response. Subsurface application of dispersants continued at the wellhead until May 20, 2010.

At that point, the Coast Guard and the EPA notified BP that it must “identify and use a less toxic and more effective dispersant than Corexit 9500 from the list of dispersants authorized by the [NCP].” If unable to do so, BP had to provide both federal entities with an in-depth account of the alternate products investigated and an explanation as to why these were not improvements over Corexit 9500, the product currently in use. BP responded that Corexit 9500A was the best alternative. Administrator Jackson, in response to BP’s reply, revealed that “federal regulators remained ‘deeply concerned about the things we don’t know’ such as the ‘long-term effect on aquatic life.’”

100 Dispersant Working Paper, supra note 4, at 8.
101 Id.
102 Id. at 6.
103 Id. The EPA is divided into ten regions. About EPA, ENVTL. PROT. AGENCY, http://www.epa.gov/aboutepa/index.html (last visited May 18, 2012). Each region is in charge of implementing the Agency’s programs and initiatives. Id.
105 Id. at 7.
106 Id.
107 See id. at 8.
108 Id. (emphasis added). By this time, 580,000 gallons of dispersant were applied on the surface, and slightly less than 45,000 gallons were applied subsurface. Id.
109 Id. at 8–9.
111 Id.
Additionally, Jackson stated that the EPA was instructing BP to reduce its use of dispersants potentially by fifty or seventy-five percent.\textsuperscript{112} Believing that BP’s own analysis of potential dispersant alternatives was too minimal,\textsuperscript{113} the EPA announced that it “would perform its own tests to verify BP’s data and to ‘determine the least toxic, most effective dispersant available in the volumes necessary for a crisis of this magnitude.’”\textsuperscript{114}

On May 26, 2010, the EPA and the Coast Guard issued a directive to BP that required the elimination of surface application of dispersants except where there might be extenuating circumstances necessitating an exemption.\textsuperscript{115} Despite this joint directive, the use of surface dispersants continued at near forty percent of the pre-directive rate for another month.\textsuperscript{116} Representative Edward J. Markey wrote a letter to the head of the U.S. Coast Guard, Admiral Thad W. Allen, concerning the use of dispersants.\textsuperscript{117} Representative Markey noted that the Coast Guard and the EPA approved seventy-four exemption requests over a span of forty-eight days.\textsuperscript{118} On June 30, sixteen days before the well was finally capped, the EPA published its conclusions from these dispersant tests.\textsuperscript{119} Eight dispersants were subjected to acute toxicity tests that only considered the toxicity of the dispersants themselves, not the combined effect of the oil and dispersant once applied.\textsuperscript{120} The EPA concluded that Corexit 9500A did not pose any greater threat than any of the other dispersants available for use on the NCP Product Schedule.\textsuperscript{121}

The Macondo well was capped on July 15, 2010, after which dispersant usage ceased.\textsuperscript{122} Over roughly three months, 1.84 million gal-

\textsuperscript{112} \textit{Id.} at 9–10.
\textsuperscript{113} \textit{Id.} at 10.
\textsuperscript{114} \textit{Id.} In a May 12, 2010 press briefing, Administrator Jackson stated that “toxicity testing and review is not something that can be done quickly and on the fly.” Lisa Jackson, Adm’r, Envtl. Prot. Agency, \textit{Remarks at Press Briefing} (May 12, 2010), \url{http://epa.gov/bpspill/dispersants/may12transcript-final.pdf}.
\textsuperscript{115} \textit{Id.}
\textsuperscript{116} \textit{Id.} at 11.
\textsuperscript{118} \textit{Id.}
\textsuperscript{119} \textit{Dispersant Working Paper, supra} note 4, at 10, 12.
\textsuperscript{120} \textit{Id.} at 10.
\textsuperscript{121} \textit{EPA’s Toxicity Testing of Dispersants, Envtl. Prot. Agency,} \url{http://www.epa.gov/bpspill/dispersants-testing.html} (last visited May 18, 2012).
\textsuperscript{122} \textit{Dispersant Working Paper, supra} note 4, at 12.
lons of dispersants were dumped in the Gulf, with just over 1 million gallons applied on the surface and 771,000 gallons to the subsurface. 123

II. Pesticides and Dispersants: Two Peas from the Same Pod

In considering the regulation of a young technology such as dispersants, it is helpful to examine the regulation of pesticides, a much older technology. 124 Like dispersants, pesticides can both provide great benefits and cause extreme harm. 125 For example, the notorious pesticide dichlorodiphenyltrichloroethane (DDT) saved thousands of lives during World War II by preventing the spread of malaria and typhus. 126 Over time, it developed into a popular, widely used general pesticide in the agricultural economy. 127 During the 1950s, DDT application reached roughly six thousand tons per year in the United States. 128

The publication of Rachel Carson’s book Silent Spring, however, addressed the threats posed by DDT use. 129 The book raised awareness of DDT’s role in killing beneficial as well as harmful insects. 130 Carson also discussed the bioaccumulation of DDT in animals and the resulting long-term effects throughout the food chain. 131 DDT’s effect on the food chain is considered largely responsible for the tremendous decline of the American bald eagle. 132

A. FIFRA’s Beginning

FIFRA is the statutory mechanism that allows the EPA to regulate the pesticide market. 133 Originally passed in 1947, FIFRA creates prod-

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123 Id. The National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling concluded that the government “was not adequately prepared for the use of dispersants to address such a large oil spill.” Id. In addition, the Commission found that the EPA did not consider “in its roles on the National Response Team and the relevant Regional Response Teams, the possibility that dispersants might have to be used in the massive volumes required,” or “the distinct possibility that massive volumes of dispersants might be needed at the subsea level.” Id. at 13.
124 See Angelo, supra note 10, at 144–47.
125 See id.
126 See id.
127 See id. at 155.
128 Id.
129 Id. See generally Carson, supra note 14.
130 Angelo, supra note 10, at 155.
131 Id.
132 Id.
uct licensing requirements that operate at the “front end” of the regulatory process, regulating the product before it is injected into the marketplace. In regulating at this juncture of the product’s lifespan, the EPA may “prohibit the introduction of new products, or the further sales of existing products, when such products might conceivably be hazardous to human health or the environment.”

Between 1972 and 1996, FIFRA underwent its first in a series of significant amendments. The 1972 changes to FIFRA created separate classifications for pesticides—restricted and general use. Additionally, the 1972 amendments altered the manner in which pesticides were registered, to include more information about the pesticide during the registration process. This change allowed for better evaluation of potential harms and hazards of pesticides to public and environmental health. The burden of providing information shifted from the government to the producer. To complement this burden-shifting, the EPA developed a system for ensuring the legitimacy of the independent institutions used by industry to produce and collect the necessary information.

As presently constructed, FIFRA expressly authorizes the EPA “to: (1) strengthen the registration process by shifting the burden of proof to the chemical manufacturer, (2) enforce compliance against banned and unregistered products, and (3) promulgate the regulatory framework missing from the original law.” The latest amendment to FIFRA—the Federal Environmental Pesticide Control Act—requires the


134 PLATER ET AL., supra note 16, at 647. This approach runs opposite to a “back-end” strategy in which products or issues are regulated after they arrive to the marketplace or come into existence. Id. Hazardous waste sites controlled under CERCLA legislation are a common example of regulations utilizing such a strategy. See id.; 42 U.S.C. §§ 9601–9626 (2006).

135 Id.
136 FIFRA Summary, supra note 133.
139 See id.
140 Willson, supra note 13.
141 Id.
142 7 U.S.C. § 136a; FIFRA Summary, supra note 133.
EPA to treat the protection of human health and preservation of the environment as its chief concerns in regulating the pesticide market.  

B. FIFRA’s Registration Process

Through the registration process, the EPA maintains control over a pesticide’s market access, and thus its potential distribution and sale in the United States. FIFRA requires that an applicant file a statement with the EPA that consists of, among other things, “a complete copy of the labeling of the pesticide, a statement of all claims to be made for it, and any directions for its use.” In addition, FIFRA requires that the producer submit “the complete formula of the pesticide” and “a full description of the tests made and the results thereof upon which the claims are based.”

Approval of an application’s registration request must be given by the Administrator if:

(A) its composition is such as to warrant the proposed claims for it;
(B) its labeling and other material required to be submitted comply with the requirements of this subchapter;
(C) it will perform its intended function without unreasonable adverse effects on the environment; and
(D) when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment.

“Unreasonable adverse effects on the environment” are defined within the Act as “any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and

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144 7 U.S.C. § 136a(a) (2006). The first paragraph of section 3 states:

[N]o person in any State may distribute or sell to any person any pesticide that is not registered under this subchapter. To the extent necessary to prevent unreasonable adverse effects on the environment, the Administrator may by regulation limit the distribution, sale, or use in any State of any pesticide that is not registered under this subchapter.

Id.

145 Id. § 136a(c) (1)(C).
146 Id. § 136a(c) (1)(D).
147 Id. § 136a(c) (1)(F).
148 Id. § 136a(c) (5)(A).
benefits of the use of any pesticide." Thus, FIFRA’s framework incorporates a cost-benefit analysis. Indeed, it was Congress’s intention to have the EPA regulate pesticides in an intelligent fashion, conscientiously weighing potential benefits against potential risks of pesticide use.

Some commentators suggest that FIFRA’s registration policies ultimately create a unique licensing statute. One commentator notes that because it is more efficient and cost-effective for manufacturers to develop toxicology information for their products than it is for the EPA to do the same, it is wise to have the manufacturer bear responsibility for toxicology information. The EPA typically establishes a licensing scheme to shift costs in this way. As it pertains to pesticides and other toxic substances, licensing requires the producer to demonstrate the safety of its product before introduction to the market. Thus, the producer or manufacturer has the burden of providing information verifying the product’s safety and revealing its toxic components and effects. As a result, the EPA has the ability to acquire all data that may be necessary to determine whether a chemical poses an unreasonable risk by simply requiring that data in the registration process. Because the data requirements apply to the pesticide, and not just to the indi-

149 Id. § 136(bb).
150 See 7 U.S.C. § 136(bb). Cost-benefit analysis can be understood as an attempt to achieve the equilibrium point between one’s willingness to spend and another’s willingness to provide at certain costs. See Angelo, supra note 10, at 121. Some commentators note the potential defects with utilizing risk analysis as it pertains to pesticide regulation. Plater et al., supra note 16, at 659–60. Problems include the EPA’s reliance “on the data generated by pesticide manufacturers—raising opportunities for various types of bias” because of EPA’s inability to independently verify and produce contesting data. Donald T. Hornstein, Lessons from Federal Pesticide Regulation on the Paradigms and Politics of Environmental Law Reform, 10 Yale J. on Reg. 369, 436 (1993). “In short, the risk assessment enterprise is so information intensive that it creates strategic incentives to avoid a serious scientific examination of ‘true’ levels of public health and environmental risk.” Id. at 437. Additionally, the risk analysis required for the EPA to take action against pesticides “effectively inoculate[s] manufacturers against timely action.” Id. at 438. Finally, “risk analysis offers the conceptual umbrella of ‘science’ under which numerous non-scientific values can take shelter from public scrutiny and yet prolong the longevity of pesticides that may be neither desirable nor needed.” Id.
152 Plater et al., supra note 16, at 657.
153 Applegate, supra note 151, at 308.
154 Id.
155 Id.
156 See id.
157 Id. at 309.
vidual chemical components, the EPA can more efficiently request additional information concerning environmental and public health effects of a product.\textsuperscript{158} Presumably, the EPA can effectively uncover all potential biases of the manufacturer by requesting information and developing accurate and meaningful data on the product.\textsuperscript{159}

Some commentators suggest that this type of approach has potential disadvantages.\textsuperscript{160} As one commentator notes, the licensing scheme only affects the product at the moment of its registration with the EPA.\textsuperscript{161} Early in a product’s lifespan, little is known about the product’s chemicals and their long-term effects.\textsuperscript{162} Further, the licensing scheme only operates proactively.\textsuperscript{163} Because FIFRA does not retroactively address existing pesticides and their chemical components, it is possible that “a major gap in an information generation system,” such as the one a licensing scheme produces, may occur.\textsuperscript{164} To address this potential information gap, FIFRA created a five-year term that, once passed, forces the EPA to reevaluate the registered pesticide.\textsuperscript{165} The Agency, overburdened, is unable to aggressively enforce this power and has not sufficiently addressed the information gap.\textsuperscript{166}

\textbf{C. FIFRA’s Recourse: Cancellation & Suspension}

The EPA may restrict a pesticide’s access to the market by canceling or suspending that pesticide’s registration.\textsuperscript{167} Until the EPA makes a final determination regarding that pesticide’s registration, there is a pendency period in which the pesticide can remain on the market.\textsuperscript{168} Cancellation turns on an analysis of whether or not the risks are reasonable.\textsuperscript{169} Suspension, however, is an immediate ban, either with notice or ex parte, on pesticides presenting an imminent hazard.\textsuperscript{170}

\textsuperscript{158} \textit{Id.} Increasing the ability of the EPA to request additional information on a pesticide is the rather “general justification” for these requests, “given the breadth of factors relevant to the unreasonable risk determination.” \textit{Id.; see} 7 U.S.C. § 136a (2006).

\textsuperscript{159} \textit{See} Applegate, \textit{supra} note 151, at 309.

\textsuperscript{160} \textit{Id.} at 310.

\textsuperscript{161} \textit{Id.} at 312; \textit{see} 7 U.S.C. § 136a.

\textsuperscript{162} Applegate, \textit{supra} note 151, at 312.

\textsuperscript{163} \textit{Id.; see} 7 U.S.C. § 136a.

\textsuperscript{164} Applegate, \textit{supra} note 151, at 312.


\textsuperscript{166} Applegate, \textit{supra} note 151, at 313.

\textsuperscript{167} 7 U.S.C. § 136d(b) –(c).

\textsuperscript{168} Miller, \textit{supra} note 165, at 299; \textit{see} 7 U.S.C. § 136a(c) (2)(B)(ii) –(iv).

\textsuperscript{169} \textit{See} Miller, \textit{supra} note 165, at 299; 7 U.S.C. § 136a(c) (3).

\textsuperscript{170} Miller, \textit{supra} note 165, at 300–01; 7 U.S.C. § 136a(c) (2)(B)(iv).
1. Cancellation

The EPA has the right to cancel a product’s registration “if it appears . . . that a pesticide or its labeling or other material required . . . does not comply with the [requirements] or . . . generally causes unreasonable adverse effects on the environment.”\(^{171}\) Cancellation is the process by which the EPA can start to review a substance that potentially presents a “substantial question of safety to man or the environment.”\(^{172}\) Cancellation hearings can extend over months or even years.\(^{173}\)

The EPA-initiated cancellation process can occur as a result of two types of risks—dietary and other,\(^{174}\) only the latter of which is relevant to a comparison with dispersants. To cancel for “other risks” the EPA must only show that the risks of pesticide use are unreasonable when compared against their benefits.\(^{175}\) There are two types of cancellation actions available to the EPA—the first simply requires notice of cancellation,\(^{176}\) while the second provides notice of intent to hold a hearing to determine whether cancellation should occur.\(^{177}\) The EPA bears the burden of producing information as to why cancellation is warranted, and must ultimately substantiate its conclusions with proof.\(^{178}\) To make this determination, the EPA Administrator uses a cost-benefit analysis that incorporates “the economic, social, and environmental costs and benefits” from that pesticide’s use.\(^{179}\)

The EPA begins the cancellation process by contacting the Secretary of Agriculture and the FIFRA Scientific Advisory Panel with a draft Notice of Intent to Cancel and an accounting of the effects of the cancellation on those using the product for agricultural purposes.\(^{180}\) Based on the Secretary’s comment or response, the EPA can publish its proposal to cancel the pesticide in the Federal Register.\(^{181}\) Although the cancellation takes effect thirty days after notice is given, the registrant

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\(^{171}\) 7 U.S.C. § 136d(b).

\(^{172}\) Miller, supra note 165, at 299.

\(^{173}\) Id.


\(^{175}\) Pesticide Cancellation, supra note 174.

\(^{176}\) 7 U.S.C. § 136d(b)(1).

\(^{177}\) Id. § 136d(b)(2).

\(^{178}\) Applegate, supra note 151, at 308–09.


\(^{180}\) Pesticide Cancellation, supra note 174; see 7 U.S.C. § 136d(b).

\(^{181}\) Id.; see 7 U.S.C. § 136d(b).
has the opportunity to request a trial-like hearing process.\textsuperscript{182} During the cancellation process, a product may be manufactured and sold without restriction until a final decision is reached.\textsuperscript{183}

In 1985, the EPA initiated a Special Review Process to streamline the cancellation process.\textsuperscript{184} This process was created to guarantee that the EPA’s cost-benefit analyses were scrutinized and completed responsibly, exposing their actions to the public eye.\textsuperscript{185} Under this framework, the party favoring registration always bears the “burden of persuasion” that a pesticide should be registered or reregistered.\textsuperscript{186} According to the EPA, the process “determines whether some or all registrations of a particular active ingredient or ingredients meet the federal standard for registration, or whether amendment or cancellation of portions or all of the registrations is appropriate.”\textsuperscript{187}

2. Suspension

The EPA may also suspend the registration of a pesticide.\textsuperscript{188} This decision takes effect immediately and ceases further sale of the product.\textsuperscript{189} The EPA can use either “ordinary” or “emergency” suspension procedures.\textsuperscript{190} “Ordinary” suspensions may not occur unless the Administrator has already issued a notice of intent to cancel, as discussed above.\textsuperscript{191} This may only be done if an “imminent hazard”—a substantial likelihood of serious harm during the duration of the cancellation proceedings—exists.\textsuperscript{192} Manufacturers whose products are subject to a suspension have the opportunity to request an expedited hearing.

\begin{footnotes}
\footnotetext[182]{Pesticide Cancellation, supra note 174. If no hearing is requested, the cancellation becomes final. 7 U.S.C. § 136d(b)(2).}
\footnotetext[183]{Miller, supra note 165, at 299; see 7 U.S.C. § 136d(b)(2).}
\footnotetext[184]{See 40 C.F.R. § 154.1 (2010).}
\footnotetext[185]{See id.}
\footnotetext[186]{Id. § 154.5.}
\footnotetext[187]{Special Review Process, ENVT. PROT. AGENCY, http://www.epa.gov/oppsrrd1/special_review/ (last updated May 17, 2012). In the last forty years, the EPA has reviewed just upwards of one hundred pesticides through this process. Id. Special Review proceedings, originally intended to accelerate the EPA’s cancellation process, now average upwards of seven years, an average increase of five years from the original cancellation proceedings. Hornstein, supra note 150, at 438.}
\footnotetext[188]{7 U.S.C. § 136d(c); Suspension of Registrations Under FIFRA Section 3(c)(2)(B), ENVT. PROT. AGENCY, http://www.epa.gov/pesticides/regulating/registering/suspensions.htm (last updated May 9, 2012).}
\footnotetext[189]{See Suspension of Registrations Under FIFRA Section 3(c)(2)(B), supra note 188.}
\footnotetext[190]{7 U.S.C. § 136d(c) (1), (3).}
\footnotetext[191]{Id. § 136d(c)(1).}
\footnotetext[192]{Angelo, supra note 10, at 170; see 7 U.S.C. § 136d(c) (1).}
\end{footnotes}
within five days of receiving the notice of the intent to suspend.\textsuperscript{193} The suspension order does not become effective until notification has been given and there has been an opportunity for a hearing.\textsuperscript{194}

An “emergency suspension” is the strongest power Congress granted to the EPA under FIFRA.\textsuperscript{195} It allows the EPA to suspend the product before notice to the manufacturer is given, thus making it an ex parte action.\textsuperscript{196} In this respect, a suspension proceeding is like a motion for a preliminary injunction, and an emergency suspension operates like an application for a permanent injunction.\textsuperscript{197} The purpose of both suspension actions is to allow the EPA to fast-track removal from the market of a pesticide that poses an imminent hazard.\textsuperscript{198}

III. THE NEED FOR MORE PROCESS IN DISPERSANT REGULATION

In light of the unprecedented application of dispersants in response to the BP Deepwater Horizon disaster, it is necessary to reconsider the use of dispersants within the national emergency response framework.\textsuperscript{199} A FIFRA-like, front-end regulatory framework would be tremendously valuable in addressing the dearth of information on dispersants and their toxicity.\textsuperscript{200} This increase of information would help the EPA perform more holistic cost-benefit analyses and would ensure that dispersant application is scrutinized before it is carried out.\textsuperscript{201} The argument for requiring additional process for the use of dispersants is even more compelling given the extremely inadequate preparation of an emergency oil spill response in the BP Deepwater Horizon disaster.\textsuperscript{202} Notably, the then-existing regulations allowed for the application of well over a half-million gallons of dispersants in the Gulf before the

\begin{itemize}
\item \textsuperscript{193} 7 U.S.C. § 136d(c)(2).
\item \textsuperscript{194} Angelo, supra note 10, at 170; see 7 U.S.C. § 136d(c)(1), (3), (4).
\item \textsuperscript{195} Miller, supra note 165, at 301.
\item \textsuperscript{196} 7 U.S.C. § 136d(c)(3).
\item \textsuperscript{198} See Miller, supra note 165, at 300–01.
\item \textsuperscript{199} \textit{See Dispersant Working Paper, supra} note 4, at 1. The need for reconsideration of the use of dispersants within emergency response structures and frameworks is not a novel one. Indeed, as Administrator Jackson stated, “[a]s we emerge from this response . . . we need to revisit the contingency plans and the product schedule that pre-authorize dispersant use.” \textit{Use of Dispersants in Response to the Oil Spill: Hearing Before the Subcomm. on Commerce, Justice, Sci., and Related Agencies of the S. Comm. on Appropriations, 111th Cong.} (2010), available at http://appropriations.senate.gov/webcasts.cfm?method=webcasts.view&id=40a4095e-d5ea455c8df9a1c061f71b0d (at approximately 35:30 minutes).
\item \textsuperscript{200} \textit{See Dispersant Working Paper, supra} note 4, at 3.
\item \textsuperscript{201} \textit{See infra} notes 212–271 and accompanying text.
\item \textsuperscript{202} \textit{See supra} notes 144–166 and accompanying text.
\end{itemize}
EPA concluded that the dispersant being applied was no better or worse than any other chemical alternatives.\footnote{See supra notes 108–109 and accompanying text.}

Ultimately, a FIFRA-like, front-end regulatory framework for dispersants would better fulfill the congressional intent behind the National Contingency Plan (NCP)—“to protect the environment from possible deleterious effects caused by the application or use” of emergency response products.\footnote{See National Oil and Hazardous Substances Pollution Control Plan, 59 Fed. Reg. 47,384, 47,406–07 (Sept. 15, 1994) (codified at 40 C.F.R. pts. 9, 300).}

\section{The Advantages of a Front-End Regulatory Framework for Dispersants}

Front-end regulatory frameworks control market access of the product by limiting its ability to enter into commerce.\footnote{Plater et al., supra note 16, at 647.} To some degree, dispersant regulation already falls within this characterization.\footnote{See 40 C.F.R. § 300.915(a)(7) (2010).} To be listed on the NCP Product Schedule, tests measuring the product’s effectiveness are required by the EPA.\footnote{Id. § 300.915(a)(8).} Further, toxicity tests for dispersants meeting the effectiveness requirement are mandated.\footnote{See id. §§ 300.910(a), 300.915.} Manufacturers must provide this information before a dispersant can be placed on the NCP Product Schedule and made available for pre-authorized use within a Regional Contingency Plan (RCP) and on-the-spot use at the discretion of the Federal On-Site Coordinator (OSC).\footnote{See infra notes 212–251 and accompanying text.}

Nevertheless, characterizing the regulation of dispersants as front-end may be disingenuous.\footnote{40 C.F.R. § 300.920(e).} As the NCP Product Schedule concedes, listing of a dispersant on the Schedule is not any type of validation by the EPA; rather, it is only proof that certain data requirements have merely been submitted.\footnote{Id. § 300.915(a)(8).}

\subsection{Resolving Information Gaps}

A true front-end regulatory structure, like the kind employed in FIFRA, would alleviate the current glaring informational deficiencies regarding dispersant application. A FIFRA-like framework would shift the burden of producing information about the dispersant to the pro-
The EPA could, as it does in FIFRA, require the producer to relinquish all data that may be necessary to protect the environment and human health from harm caused by dispersants. Thus, the EPA would enjoy access to a greater amount of information concerning the dispersant by simply requiring it during the registration process. The EPA could also apply the data requirements to the dispersant as a whole, rather than to its specific ingredients, making its investigation more efficient and inclusive concerning matters of public health and the environment. This certainly would have saved the EPA from needing to conduct dispersant toxicity tests well after a half-million gallons of dispersants had been applied in the Gulf.

A front-end regulatory framework would also modify the current NCP Product Schedule. As it currently exists, the NCP Product Schedule does not serve as an approval or certification from the EPA. Nevertheless, because use of the dispersants is predicated on their placement in the NCP Product Schedule—at least for pre-authorized use and on-site use decisions made by the OSC—listing of dispersants allows for their ultimate de facto introduction into the market and society.

A front-end system requires the regulating agency to have the ability to restrict access to the market, much like the NCP Product Schedule does for dispersants in non-emergency situations. By transforming the NCP Product Schedule into an authorizing or licensing medium, the EPA could limit market access to dispersants not fulfilling required criteria. This ability would give the EPA the enforcement mechanism to ensure that its information requirements are satisfied.

2. An Improved Cost-Benefit Analysis

Addressing informational gaps would also improve the cost-benefit analysis undertaken by the EPA in emergency response scenarios.

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212 See Plater et al., supra note 16, at 648.
213 See Applegate, supra note 151, at 309.
214 See id.
215 See 7 U.S.C. § 136a(c)(1)(D), (F) (2006); Applegate, supra note 151, at 309.
216 See BP Commission Report, supra note 2, at 265; supra notes 100–123 and accompanying text.
217 40 C.F.R. § 300.920(e) (2010).
218 See id. § 300.910.
219 Plater et al., supra note 16, at 647.
220 40 C.F.R. § 300.910(a)–(b).
221 See Applegate, supra note 151, at 308.
222 See id. at 308–09.
The current requirements for listing a dispersant on the NCP Product Schedule do not include vital issues "such as environmental persistence, effectiveness with multiple varieties of oil and at multiple temperatures, byproducts, and endocrine effects." The confidential business information exception in the dispersant listing process compounds this situation. For example, the Material Safety Data Sheet (MSDS) for Corexit products identifies "organic sulfonic acid salts" as a component, yet does not provide any specifics. There are several compounds which may constitute the "organic" component, and without this knowledge it is impossible to accurately consider and forecast potential long-term environmental and public health effects of dispersant use. Further, components of a dispersant may be listed generally, rather than by specific chemical ingredient. Corexit 9500 lists "hydrotreated light distillate[es]" as one of the ingredients on its MSDS.

This vague terminology prevents accurate assessment of potential effects of dispersant use on human health and the affected ecosystem, and thus impairs any cost-benefit analysis of the decision to use dispersants. It also precludes interested individuals from inputting their own studies and analyses for the EPA’s consideration in deciding to list the chemical or not, as there is insufficient specificity of information to conduct appropriate scientific examinations, thereby impairing outside contribution to the EPA’s cost-benefit analysis.

A FIFRA-like, front-end regulatory framework specifically contemplates a cost-benefit analysis that accounts for a variety of factors. In order to achieve this end, the FIFRA framework requires that the manufacturer of pesticides submit information supporting registration. Likewise, a front-end system for dispersants could increase the data available to make an informed decision to use dispersants. By requiring this information from the outset, the EPA can include it as a factor in its decision to approve or disapprove RCPs, and its ultimate

224 Id. at 6.
225 See 40 C.F.R § 300.920(c).
226 Burns & Harbut, supra note 61, at 16.
227 See id.
228 Id.
230 See Burns & Harbut, supra note 61, at 3, 16–17, 28.
231 See id. at 17.
232 Angelo, supra note 10, at 161.
233 Plater et al., supra note 16, at 648.
234 See id.
decision to list the product on the NCP Product Schedule.\footnote{See Applegate, supra note 151, at 309.} This would be a significant improvement to the EPA conducting tests on dispersants after they have already been applied in mass quantities.\footnote{See BP Commission Report, supra note 2, at 265; supra notes 100–123 and accompanying text.}

The provision of additional information about dispersants within a front-end framework, thus improving the EPA’s cost-benefit analysis, is consistent with the NCP’s goal of decreasing the potential adverse impact of oil spills and hazardous substance releases.\footnote{See National Oil and Hazardous Substances Pollution Control Plan, 59 Fed. Reg. 47,384, 47,406–07 (Sept. 15, 1994) (codified at 40 C.F.R. pts. 9, 300).} Therefore, front-end regulation of dispersants would be in accord with existing federal policy.\footnote{See id. at 84.} It would also diminish some of the uncertainty involved in emergency spill response situations; by virtue of the information requirements, a front-end strategy identifies the riskier dispersants before, rather than after, their application.\footnote{Id. at 133.} Shifting the uncertainty from a reactive to proactive position within a front-end regulatory framework is superior to the current NCP listing model.

3. Mitigating an Agency’s Lack of Scrutiny of Response Plans

The NCP, in response to an oil spill, should unify both RCPs and the responsible party’s response plan.\footnote{Id. at 133.} Although the CWA directly incorporates the use of dispersants in an emergency response,\footnote{33 U.S.C. § 1321 (d)(2)(G)(i) (2006).} the presence of the dispersant on the NCP Product Schedule and incorporation into authorized RCPs and responsible party response plans makes dispersant application a reality.\footnote{See BP Commission Report, supra note 2, at 143–44.} These response plans, however, are generally not scrutinized.\footnote{See id. at 84.} For example, BP included seals and walruses, species that are not present in the Gulf, in its response plan for a spill at the Macondo wellhead.\footnote{Id. at 133.} BP’s response plan was informed by an expert who had been dead for several years at the time the plan was filed.\footnote{Id.} Further, an internet site provided in the plan that supported BP’s position was, in reality, a Japanese entertainment site.\footnote{Id.}
Such lack of attention both in the production and confirmation of these plans is alarming.

One way to address this lack of attention is to employ a front-end regulatory framework. Again, by controlling the dispersants within a front-end framework, it is possible to limit or eliminate their market access.\(^{247}\) Given the minimal scrutiny applied to federal, local, and private response plans, this limitation upon market access would ensure that the plans could not contain response chemicals that are inconsistent with the NCP and federal policy.\(^{248}\) In this way, the EPA could scrutinize dispersants before they are even considered as part of a response plan, thereby mitigating potential detrimental effects.\(^{249}\) Use of a front-end regulatory framework for dispersants thus ensures that the potential deleterious effects of dispersant application are contemplated at the listing stage, well before a dispersant’s inclusion within a response plan.\(^{250}\) Because there are only nineteen dispersants currently listed on the Product Schedule, this will not dramatically affect the EPA’s regulatory responsibility.\(^{251}\)

B. Addressing Weaknesses in a FIFRA-like Front-End Framework

Proposing a FIFRA-like framework for the regulation of dispersants is not a blanket recommendation of FIFRA’s entire regulatory approach. Notably, despite FIFRA’s enactment, continuing animal and ecological diversity is threatened in part as a result of pesticide use.\(^{252}\) Additionally, FIFRA is not designed to minimize pesticide use or application, and it is unlikely that adoption of a similar front-end regulatory framework for dispersants will promote a decrease in their use in oil spill responses.\(^{253}\) Such weaknesses may give pause to adopting a similar regulatory structure for dispersants; however, for reasons discussed above, a front-end framework would dramatically improve the informational deficiencies, and thus the decision-making calculus in emergency oil spill response situations.

\(^{247}\) See Plater et al., supra note 16, at 647.
\(^{248}\) See id. at 647–48.
\(^{250}\) See Plater et al., supra note 16, at 647.
\(^{251}\) See NCP Product Schedule, supra note 73.
\(^{252}\) Angelo, supra note 10, at 147.
\(^{253}\) See Hornstein, supra note 150, at 392.
1. A Lack of Incentive to Limit Chemical Use

The major policy motivations behind the 1972 amendments to FIFRA addressed environmental concerns, centering largely on the DDT controversy and Rachel Carson’s *Silent Spring*. FIFRA, however, has done little to limit modern pesticide usage. Pesticide use increased by 170 percent between 1964 and 1982. FIFRA is not designed to encourage effective or efficient pesticide usage.

It is not clear, however, that incentivizing minimal or efficient dispersant usage within a dispersant regulatory framework will be appropriate or even worthwhile. First, there have only been roughly two hundred uses of dispersants in the last forty-three years, whereas billions of pounds of pesticides are manufactured and applied annually in the United States. Second, dispersant usage is contemplated with regard to emergency spill response, unlike pesticide application, which is utilized as an everyday solution to pest control. Because federal legislation and regulation contemplates dispersant application only in rare circumstances, promoting effective or efficient dispersant usage is less of a concern than in pesticide application. Although concern over efficient application of dispersants is merited given the unknown effects of dispersants on human and ecosystem health, efficient application concerns would be more appropriately addressed within those plans that contemplate dispersant application in specific instances—Regional Contingency Plans, Area Contingency Plans, and responsible party response plans.

2. Problems Posed by the Unreasonable Risk Standard & Cost-Benefit Analysis

One weakness of a FIFRA-like framework is its incorporation of an “unreasonable adverse effects on the environment” analysis within its determination of whether to register a pesticide, and thus allow its in-

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254 Angelo, *supra* note 10, at 156.
256 *Id.*
257 *Id.* at 400.
258 See *Fingas*, *supra* note 50, at 26.
259 See *supra* note 12 and accompanying text.
262 See 40 C.F.R. § 300.910(a) (2010).
troduction to the market.\textsuperscript{263} Unfortunately, regulation based upon risk is inherently open-ended.\textsuperscript{264} As a result, it entails balancing many unrelated variables, which ultimately creates a case-by-case decision-making process.\textsuperscript{265} This type of approach may result in administrative challenges for the EPA.\textsuperscript{266}

Potential dispersant regulation, however, would not be nearly as burdensome as pesticide regulation given the number of each respective product type currently on the market. The EPA’s updated NCP Product Schedule contains nineteen dispersants, and ninety-four total chemical products, that could be used in emergency oil spill cleanup.\textsuperscript{267} The number of pesticides registered in the United States, however, is roughly nineteen thousand.\textsuperscript{268} The fact that the EPA attempts to control market access of some nineteen thousand pesticides supports the proposition that it could handle an additional nineteen chemical products.

An additional concern with a FIFRA-like framework is its cost-benefit analysis. It is unclear, or even unlikely, that cost-benefit analysis within environmental regulation includes many of the benefits to public health and the environment that are not easily quantifiable in economic terms.\textsuperscript{269} Furthermore, the use of a cost-benefit analysis is troubling given the information gap in regulatory decision making.\textsuperscript{270} Reconciling the weaknesses of a cost-benefit analysis is not the purpose of this Note; however, the adoption of a front-end FIFRA-like regulatory framework should be used to address the information gaps that currently exist in dispersant regulation, thus providing the opportunity to engage in a more accurate cost-benefit analysis.\textsuperscript{271}

\textbf{Conclusion}

Dispersants thundered into the public eye in the wake of the BP oil spill disaster. The unprecedented volume of dispersants applied and

\textsuperscript{263} See Hornstein, supra note 150, at 371, 376–80 (discussing the drawbacks to a risk oriented approach to environmental regulatory decisionmaking).

\textsuperscript{264} Applegate, supra note 151, at 273.

\textsuperscript{265} \textit{Id.} at 276.

\textsuperscript{266} \textit{See id.} at 277.

\textsuperscript{267} \textit{See NCP Product Schedule, supra note 73.}

\textsuperscript{268} \textit{SCHIEROW, supra note 73, at 1.}

\textsuperscript{269} See Angelo, supra note 10, at 125–26.

\textsuperscript{270} \textit{See id.} Specifically, opponents to this type of cost-benefit analysis suggest that the benefits of environmental regulation are more than simply “cancers averted” or “human lives saved.” \textit{Id.} at 125.

\textsuperscript{271} See supra notes 212–251 and accompanying text.
the uncertainty concerning their potential negative effects on the public health and the environment provide more than ample reason to address the existing dispersant regulatory structure (or lack thereof). Such uncertainty and unpreparedness is in opposition to the prevailing policy motivations behind both the creation of the EPA and the NCP. FIFRA, a front-end framework used to regulate pesticides in the United States, provides a worthwhile model for dispersant regulation going forward. While FIFRA is by no means the pinnacle of regulatory efficiency and success, its front-end structure would prove valuable to an increased federal regulation of dispersants within the NCP.

A front-end framework like FIFRA’s would address the informational deficiencies present in the BP oil disaster. Further, such a structure would allow for a more accurate and inclusive cost-benefit analysis on behalf of emergency responders. Finally, the nature of a front-end framework decreases possible risk to the public by addressing and investigating the product before it ever appears on the market. Because a front-end framework for dispersants is superior to the existing method of dispersant regulation, it should be pursued in light of the BP Deepwater Horizon disaster and all of its known and unknown consequences.

272 See supra notes 6–9, 100–123 and accompanying text.
273 See supra notes 30–41 and accompanying text.
274 See supra notes 133–198 and accompanying text.
275 See supra notes 199–271 and accompanying text.
276 See supra notes 212–222 and accompanying text.
277 See supra notes 223–239 and accompanying text.
278 See supra notes 240–251 and accompanying text.
Abstract: Extending beaches seaward by adding sand through replenishment projects has become a common strategy for slowing the effects of erosion. As tons of sand are brought to the beaches, new land literally rises out of the water. Courts and state legislatures have invoked the public trust doctrine to vest title to this new land with the people, but questions remain as to how much public access must be provided to replenished beaches. New Jersey, North Carolina, and Florida are examined as three different approaches to applying the public trust doctrine and providing public access to replenished beaches.

Introduction

It is a familiar sight along the American coast: padlocked gates, roadside tow-zones, and “No Beach Access” signs. Our beaches may be one of the country’s greatest treasures, but they are unquestionably a closely guarded jewel. Property owners and municipalities alike do everything in their power to limit beach access to those who can pay.1 Yet unbeknownst to many of the citizens who are not fortunate enough to live in beachfront homes, billions of tax dollars go toward protecting the property of those who do.2 As the oceans rise and sand washes out to sea, beaches are slowly shrinking.3 To ward off the encroaching ocean, states across the country have heaped over a billion cubic yards of sand onto the nation’s beaches as part of “nourishment” projects.4 Supporters of these projects justify the extraordinary cost by

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3 See infra notes 20–22 and accompanying text.
4 Nourishment Statistics, supra note 2.
citing the need to protect oceanfront property and the beach-dependent travel and tourism industry.5

Though the benefits to the tourism industry and beachfront property owners are great, it is difficult to see what advantage the general public gains from these “nourishment” projects. American law treats public access to beaches as part of the Public Trust Doctrine, an ancient legal principle that places certain natural resources under common ownership for use by members of the public.6 Historically, this right to beach access included only the ocean and wet sand falling below the mean high water mark.7 A number of state courts, however, have recognized that enjoyment of this area of the beach also depends upon access to the inland dry sand.8 When beach replenishment projects use public funds to increase this dry sand area, state legislatures and courts must grapple with defining both ownership and public access rights to this newly created land.9

This Note argues that the public trust doctrine correctly applies to replenished beaches. Part I begins with a description of the mechanics of beach erosion and an overview of beach replenishment projects in the United States. In addition, it reviews examples of laws that govern projects taken to slow the loss of sediment. Most importantly, Part I introduces the foundations of the public trust doctrine as applied to beaches.10 Part II looks at three different state approaches as case studies for how ownership and public access should be determined for re-


8 See City of Daytona Beach v. Tona-Rama, Inc., 294 So. 2d 73, 78 (Fla. 1974) (recognizing the right of the public to enjoy the dry sand area for sunbathing and other recreational purposes); Matthews v. Bay Head Improvement Ass’n, 471 A.2d 355, 365 (N.J. 1984) (finding dry sand recreational uses, such as bathing, swimming, and other shore activities, fall under protection of the public trust doctrine).

9 See discussion infra notes 123–208.

10 See discussion infra notes 123–208.
plenished beaches. Part III considers why the public trust doctrine correctly applies to replenished beaches and mandates that the public have meaningful access. Finally, Part III identifies the strengths and weakness of the three state approaches examined in Part II.

I. THE EVOLUTION OF BEACH REPLENISHMENT

A. Fighting Beach Erosion

The United States has 95,000 miles of shoreline stretching along the Atlantic and Pacific Oceans, the Gulf of Mexico, and the Great Lakes. Beaches, dunes, and barrier islands dominate much of this shoreline, particularly along the coastal plains of Atlantic and Gulf States. In their natural state, these shorelines are constantly changing. The shape of a beach naturally shifts as rain, wind, and waves transport sand and sediment among offshore deposits, beaches, and dunes. In addition to seasonal variations, storms can change a beach’s profile dramatically.

Human activity also disrupts the natural sediment exchange process. Inland, the construction of dams and dredging of navigational channels can cut off the supply of sediments reaching the coastal plain, essentially depriving the beach of its sand supply. At the water’s edge, the construction of seawalls hardens the sandy coastline with concrete and steel to protect property from waves but disrupts intertidal habitats and the natural supply of sand. Most damaging is the development of beachfront homes, resorts, businesses, and industries, which interferes with the natural expansion and contraction of a beach’s dunes system.

11 See discussion infra notes 123–208.
12 See discussion infra notes 209–247.
16 See id.
17 Id.
18 See id.
20 Hedrick, supra note 15, at 1.
and obstructs the sediment transport cycle, leading to higher rates of erosion.\textsuperscript{21}

Rising sea levels further exacerbate the problem of beach erosion.\textsuperscript{22} In the United States, a one-foot rise in sea-level could cause up to one thousand feet of horizontal beach loss to erosion.\textsuperscript{23} Rising sea levels also prime coastal areas for larger storm surges that can alter a beach’s profile overnight.\textsuperscript{24}

There are several approaches to mitigate potential beach loss due to erosion. One of the oldest methods to slow erosion is structural beach stabilization—\textsuperscript{25} which uses physical barriers to protect beaches.\textsuperscript{26} Some of these structures, such as seawalls and bulkheads, permanently fix the shore line, but can accelerate the erosion of the sand beneath them.\textsuperscript{27} Others, such as groins and jetties, extend perpendicularly from the shore.\textsuperscript{28} These perpendicular structures prevent sand from being washed down shore and disperse wave energy to slow the rate of erosion.\textsuperscript{29} These structures, however, cut off the supply of sand to adjacent beaches, so the problem of erosion merely moves along the coastline.\textsuperscript{30}

Another approach involves moving development projects away from the beach.\textsuperscript{31} Land use controls, such as coastal construction setback programs, preserve a beach’s natural sand cycle by limiting new waterfront development.\textsuperscript{32} For beachfront that has already been developed, however, retreat may be the only solution to restore the sand cycle.\textsuperscript{33} Using this technique, oceanfront buildings are removed and re-

\begin{itemize}
\item \textsuperscript{21} See Hedrick, supra note 15, at 1; Technical Summary, supra note 19.
\item \textsuperscript{23} Titus, supra note 22, at 122. Horizontal beach loss due to rising sea level depends on coastal topography. Estimates of beach loss range between 50–100 feet in the Northeast, 200 feet in the Carolinas, 100–1000 feet in Florida, and 200–400 feet in California. Id.
\item \textsuperscript{24} Id.
\item \textsuperscript{25} See Hedrick, supra note 15, at 2.
\item \textsuperscript{26} See id.
\item \textsuperscript{27} Id.
\item \textsuperscript{29} See Hedrick, supra note 15, at 2.
\item \textsuperscript{30} Id.
\item \textsuperscript{31} See id. at 2–3, 10.
\item \textsuperscript{32} Id.
\item \textsuperscript{33} Id. at 3.
\end{itemize}
located, allowing nature to take its course and hopefully restore the beach.\textsuperscript{34} This option has not been very popular in the United States.\textsuperscript{35}

The final approach combats erosion through beach replenishment.\textsuperscript{36} This technique, also termed beach nourishment, is the process of adding fill to a beach to replace sand lost due to the natural erosion process.\textsuperscript{37} The fill originates in several different types of “borrow sites,” a term used to describe the origin of sand to be removed for placement onto a beach.\textsuperscript{38} Offshore sources include drowned barrier islands, sand ridges, sand bars, and tidal deltas.\textsuperscript{39} Some states are increasingly using dredged sediments from navigation projects to nourish beaches.\textsuperscript{40} Upland sources, such as sand dune accumulations and construction-grade excavated sand, may also be used as borrow sites, though they are typically less suitable for beach replenishment.\textsuperscript{41} An important step in selecting a borrow site is evaluating the suitability.\textsuperscript{42} Care must be taken to choose a borrow site with sand of a suitable sediment size, mineralogy, and color to ensure a good match with the destination beach.\textsuperscript{43} The grain size and composition of source sand also affects volume calculations and sand distribution projections for nourishment projects.\textsuperscript{44} Ensuring a good match between source sand and a beach is of particular social and economic importance because discolored, grainy, or otherwise aesthetically unpleasing beaches are not well-received by tourists and beach-goers.\textsuperscript{45}

\textsuperscript{34} Id.
\textsuperscript{35} Technical Summary, supra note 19.
\textsuperscript{36} Id.
\textsuperscript{37} Id.
\textsuperscript{39} Borrow Areas, supra note 38; Glossary, supra note 38.
\textsuperscript{40} Hedrick, supra note 15, at 4.
\textsuperscript{41} See Borrow Areas, supra note 38. Dune sand is typically very fine, which makes it less suitable for beach stabilization. Id. Excavated sand poses logistical problems; transporting the required quantity to the beach is costly and potentially damaging to roads. Id.
\textsuperscript{43} Id.
\textsuperscript{44} Id.
\textsuperscript{45} See Borrow Areas, supra note 38.
B. Regulation and Funding of Beach Replenishment Projects

Federal, state, and local governments share oversight and funding of beach replenishment projects. Such divided control has created an elaborate patchwork of statutes and regulations that govern replenishment projects and access to the completed beach.

The first federal regulation of shoreline protection activities was passed in 1930 and resulted in the creation of the Beach Erosion Board within the United States Army Corps of Engineers (Corps). The same bill also authorized the Corps to work with state governments on shore protection studies. Over the next three decades, Congress created federal funding for beach nourishment projects and opened federal waters to sand excavation. In 1956, Congress further expanded federal authority over shoreline protection when it passed legislation that permitted beach replenishment on “privately owned shores where substantial public benefits would result.” The Coastal Engineering Research Board and the Coastal Engineering Research Center (CERC) replaced the Beach Erosion Board in 1963 to meet the growing demand for beach replenishment studies and projects.

Federal interest in beach replenishment programs, however, has waned over the past two decades. The Water Resources Development Act of 1999 set federal cost-sharing limits that signaled a new movement to reduce the federal contribution to nourishment projects, placing more of the cost on the states. Additionally, the act curtailed federal participation in nourishment projects on privately owned land without public access, public use, and public parking. Both the Clinton and

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47 River and Harbor Act, Pub. L. No. 71-520, 46 Stat. 918 (1930); Law and Policy, supra note 46.


49 Hillyer, supra note 48, at II-4.

50 See Evolution of Laws, supra note 48.


54 Evolution of Laws, supra note 48; Hillyer, supra note 48, at II-4.
George W. Bush administrations opposed federal funding of beach replenishment projects, arguing that the projects should be funded locally.\textsuperscript{55} Despite pressure from congressional representatives of coastal states, the Obama administration has cut federal funding to beach replenishment projects.\textsuperscript{56}

Many agencies jointly oversee nourishment projects. Participating federal agencies include the Corps (administering the federal shore protection program), the National Oceanic and Atmospheric Administration (NOAA) (supporting and subsidizing state coastal zone management activities), the U.S. Geological Survey (researching beach erosion and replenishment), the Federal Emergency Management Agency (coordinating disaster planning and response activities), and the Minerals Management Service of the Department of the Interior (managing continental shelf borrow sites).\textsuperscript{57} At the state level, the Coastal Zone Management Act (CZMA) assists state governments in developing coastal management programs.\textsuperscript{58} The CZMA also furthers a national policy of providing public access to the coasts for recreational purposes.\textsuperscript{59} Though grants under the CZMA generally may not be used to fund beach replenishment projects, they may sometimes be used by states when planning nourishment projects.\textsuperscript{60}

Beach replenishment projects are widespread in the United States.\textsuperscript{61} As of the most recent NOAA survey in 2000, twenty-one of the thirty-three coastal states have formal beach replenishment policies in place.\textsuperscript{62} Approximately 28,000 miles of American beach have been replenished with more than one billion cubic yards of sand.\textsuperscript{63} These re-
plenishment projects have totaled over $2.6 billion.\textsuperscript{64} To date, Florida has spent over $1 billion, making it the leader in beach replenishment spending.\textsuperscript{65} At over $545 million in spending, New Jersey has spent the second most, though it has spent more per mile replenished than any other state.\textsuperscript{66} At over $197 million, North Carolina has also spent a sizeable amount on replenishment projects.\textsuperscript{67}

In spite of all the money poured into these projects, replenishment is not a permanent solution.\textsuperscript{68} A replenished beach must typically be renourished on a periodic basis, ranging between three to seven years.\textsuperscript{69} Thus, some of the money spent on beach nourishment has likely gone to the same stretches of beach repeatedly.\textsuperscript{70}

Though the cost is great, supporters of beach nourishment argue that the benefits of preserving America’s beaches justify the price.\textsuperscript{71} Wide beaches help protect property from storms by dissipating wave energy across the surf zone, which reduces damage to shorefront structures.\textsuperscript{72} Nourished beaches also offer substantial recreational benefits and are a critical part of the travel and tourism industries.\textsuperscript{73} These industries provide jobs and tax revenues to the communities in which they operate.\textsuperscript{74} Supporters also argue that preserving beaches helps maintain habitats for beach flora and nesting species like sea turtles and shore birds.\textsuperscript{75}

D. Beach Replenishment Opposition

Not all groups have welcomed beach replenishment projects with open arms.\textsuperscript{76} Opponents argue that projects amount to “little more than building temporary sand dikes to protect against an advancing

\begin{flushleft}
\textsuperscript{64} Id.\\
\textsuperscript{65} Id.\\
\textsuperscript{66} See id.\\
\textsuperscript{67} Id.\\
\textsuperscript{68} See Hedrick, supra note 15, at 3.\\
\textsuperscript{69} Id.\\
\textsuperscript{70} See id. Cape May, New Jersey, for example, has been replenished ten times between 1962 and 1995. Id.\\
\textsuperscript{71} See Types of Benefits, supra note 5; Houston, supra note 5, at 23.\\
\textsuperscript{72} Technical Summary, supra note 19.\\
\textsuperscript{73} Houston, supra note 5, at 23–24.\\
\textsuperscript{74} Types of Benefits, supra note 5.\\
\textsuperscript{75} Id.\\
\end{flushleft}
sea.” Even some environmental groups are opposed to beach replenishment. These opponents argue that replenished beaches actually erode at a faster rate than the original beaches. Additionally, they argue that the process of both dredging and leveling out sand is destructive to animal habitats.

These groups are also concerned with the reduced recreational benefits of replenished beaches. The Surfers’ Environmental Alliance argues that replenishment projects ruin surfable waves. The group also claims that dredging and replenishment projects affect wave action, causing riptides and creating unsafe conditions for swimmers. An investigation by Florida Sportsman, the nation’s leading sport fishing magazine, concluded that replenishment projects give little consideration to impacts on surf angling and fishing. At the opposite end of the spectrum, beachfront property owners oppose beach replenishment out of fear that artificial dunes created during renourishment will diminish ocean views and lower property values.

On occasion, opponents will point out that past replenishment projects have gone awry. For example, the 1982 replenishment of Ocean City, New Jersey cost 2.5 million dollars, yet only two and a half months passed before all the sand had washed out to sea. In a more startling incident, a two-year beach replenishment operation starting in 2006 in Surf City, New Jersey accidentally used sand from a borrow site that contained hundreds of World War I era munitions. City officials blamed...
the Corps for not screening out debris during the replenishment project, but the Corps project manager predictably denied responsibility.\textsuperscript{89}

E. The Public Trust Justification

With huge amounts of tax dollars going toward beach replenishment projects, one has to ask how the government justifies spending this money. Certainly, this spending can be partially explained by the need for protecting beachfront property and infrastructure\textsuperscript{90} or for supporting the tourism industry.\textsuperscript{91} The underlying justification goes deeper than economics, however, delving into a legal doctrine as old as the beaches themselves. The public trust doctrine is a legal principle that charges the government with protecting certain resources for public use.\textsuperscript{92} The United States has traditionally treated tidal waterways and shores as resources that are protected by the doctrine, and thus owned in common by the public.\textsuperscript{93}

The public trust doctrine has ancient origins in Roman law.\textsuperscript{94} The concept of preserving the beach as natural resources for use by the public was first codified by the Emperor Justinian:\textsuperscript{95}

\textit{[T]he following things are by natural law common to all—the air, running water, the sea, and consequently the sea-shore. No one therefore is forbidden to access the sea-shore, provided he abstains from injury to houses, monuments, and buildings generally; for these are not, like the sea itself, subject to the law of nations.}\textsuperscript{96}

The doctrine has grown and evolved over time. By the Middle Ages, the doctrine had spread throughout Europe, and eventually manifested itself in the common law of England, where the Crown held title to the

\textsuperscript{89} Id.
\textsuperscript{90} See Types of Benefits, supra note 5.
\textsuperscript{91} See Houston, supra note 5.
\textsuperscript{93} See id. at 10.
\textsuperscript{94} Lazarus, supra note 6, at 633.
\textsuperscript{95} Id.
\textsuperscript{96} J. Inst. 2.1.1.
shores in trust for the public. Access to these shores was permitted for purposes of navigation, commerce, and fishing.

The principle spread to the United States with the colonists. After American independence, the royal rights to beaches and shores vested in the states. The Supreme Court first upheld the public trust doctrine responsibilities imposed upon the states in 1892. The Court, in *Illinois Central Railroad Co. v. Illinois*, noted that a state holds title to these lands “in trust for the people of the State that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein freed from the obstruction or interference of private parties.”

Courts continue to draw upon the public trust doctrine in environmental litigation. In the years since *Illinois Central*, courts have extended public beach access rights under the doctrine to go beyond navigation, fishing, and commerce. These decisions require the government to preserve the beach for the public to use for recreational purposes, such as sunbathing and swimming. Thus, the ancient doctrine has evolved to meet the needs of contemporary Americans.

The public trust doctrine affords beaches varying protection from state to state. In most states, the trust includes all land seaward of the mean high water mark, while the dry beach is held as private property. Other states include a broader swathe of beach that includes dry sand, but some protect only the land seaward of the mean low water mark.

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97 Lazarus, supra note 6, at 635.
98 Id. at 647.
99 N.J. PUBLIC TRUST, supra note 92, at 10.
100 Id.
102 Id.
103 Lazarus, supra note 6, at 632.
104 See *Tona-Rama, Inc.*, 294 So. 2d at 76, 78 (recognizing the right of the public to enjoy the dry sand area for sunbathing and other recreational purposes); *Matthews*, 471 A.2d at 358 (finding recreational uses, such as bathing, swimming, and other shore activities fall under protection of the public trust doctrine).
105 *Tona-Rama*, 294 So. 2d at 76, 78; *Matthews*, 471 A.2d at 358.
106 See *Titus*, supra note 7, at 119.
107 Id.
108 Id. Washington, Oregon, Hawaii, and Louisiana hold both the wet and dry sand of a beach in public trust. Id. at 119, fig.8.4. Texas and New Jersey hold the wet beach below high water mark in public trust, however both states also require public access be given along the dry beach inland of the high water mark. Id.
109 Id. Virginia, Pennsylvania, Delaware, Massachusetts, and Maine include only the beach below the mean low water mark. Id.
At common law, property lines retreated as beaches naturally eroded away.\textsuperscript{110} Sand that accumulated gradually and imperceptibly over time was known as an “accretion,” and was automatically included in the adjacent property owner’s title.\textsuperscript{111} Sand that accumulated suddenly and perceptibly—as during a major storm or other natural event—was known as an “avulsion,” and title to this newly created land would vest in the state.\textsuperscript{112} In situations where an adjacent private property owner intentionally increased the shorefront property by creating new beach, that individual would not receive title to the land reclaimed from the sea under the common law.\textsuperscript{113}

Today, a majority of states vest title to the beach created through nourishment projects to the adjacent property owner.\textsuperscript{114} Administratively, such an approach is appealing because it does not require calculating the point at which new sand begins and old sand ends.\textsuperscript{115} It also forecloses the possibility that a state could dump sand in front of private property to create a new publicly owned beach.\textsuperscript{116} Only a minority of states consider the title to the newly created beach to vest in the state.\textsuperscript{117} Some state legislatures have codified this title transfer,\textsuperscript{118} while others have left it to the courts to determine.\textsuperscript{119} Thus, when it comes to beach replenishment, only a few states guarantee that the public will hold title to the product of their tax dollars.

Even if a state does not hold title to the newly created beach, the public may still gain access to a replenished beach through easements obtained by the government.\textsuperscript{120} In these situations, property owners grant easements in exchange for the funding they need to protect their property through beach nourishment.\textsuperscript{121}

In a 2000 report released by the Office of Ocean and Coastal Resource Management, NOAA recommended that the public have access to a nourished beach when large amounts of public funds have been

\textsuperscript{110} Titus, \textit{supra} note 7, at 120.
\textsuperscript{111} Stop the Beach Renourishment, Inc. v. Fla. Dep’t of Envtl. Prot., 130 S. Ct. 2592, 2598 (2010).
\textsuperscript{112} Id.
\textsuperscript{113} Titus, \textit{supra} note 7, at 120.
\textsuperscript{114} Id.
\textsuperscript{115} Id.
\textsuperscript{116} See id.
\textsuperscript{117} Id.
\textsuperscript{118} See, e.g., FLA. STAT. § 161.191 (2011).
\textsuperscript{119} See City of Long Branch v. Liu, 4 A.3d 542, 545–46 (N.J. 2010).
\textsuperscript{120} See Titus, \textit{supra} note 7, at 121.
\textsuperscript{121} See id.
spent on a replenishment project. Spent on a replenishment project. Such access includes “convenient perpendicular access at well-marked access points and the provision of adequate support facilities such as parking, shuttle services, restrooms, and food services.” Twenty-six states have adopted some sort of general beach access requirements, but only California, Connecticut, New Jersey and North Carolina have policies that explicitly address access to replenished beaches.

II. State Case Studies

A. New Jersey’s Top-Down Mandate Approach

The state of New Jersey has a long history with beach nourishment; shore protection efforts have been taking place in the state since the 1800s. By the early twentieth century, New Jersey’s shore communities were serving as beachfront vacation destinations for the residents of New York and Philadelphia. As demand for these resort communities increased, so did shorefront development. Following a period of intense storm activity along the New Jersey coast between 1915 and 1921, the state legislature formed an engineering advisory board to study coastal erosion. The increased public awareness also led to the creation of the American Shore and Beach Preservation Association, a group that would successfully lobby the federal government to become involved in preventing beach erosion.

The earliest attempts to manage erosion in New Jersey focused on structural approaches and did little to slow the rate at which beaches were disappearing. Replenishment projects began in the 1930s using sediments dredged from bays and the ocean floor to widen beaches.

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123 Id.
124 Id. at 9–10.
125 Evolution of Laws, supra note 48.
127 See id.
128 Id.
129 Evolution of Laws, supra note 48.
130 Id.
131 See Trends Report, supra note 126, at 1 (noting that groins built to slow erosion were ineffective or even counterproductive).
132 Id. at 2.
Since then, both the quantity of sand and amount of money spent on nourishing New Jersey beaches have increased steadily.133

New Jersey has justified such expenditures as necessary to support the tourism industry.134 In 2008, travel and tourism brought $27.9 billion to the state—roughly six percent of the gross state product.135 Furthermore, travel and tourism were responsible for over ten percent of total employment in the state, and generated $7.7 billion in tax revenue.136

New Jersey courts first recognized the public trust doctrine’s applicability to beaches in 1821.137 In Arnold v. Mundy, the Supreme Court of New Jersey held that the “coasts of the sea, including both the waters and the land under the waters, for the purposes of passing and repassing, navigation, fishing, fowling, sustenance, and all other uses of the water and its products . . . are common to all the people.”138 Over the next century and a half, however, the New Jersey courts slowly chipped away at the breadth of the doctrine.139 This trend reversed in the 1970s when the New Jersey Supreme Court expanded the state’s authority to regulate beach activities under the doctrine.140

Although the doctrine originally protected fishing and fowling rights along the seashore,141 the New Jersey Supreme Court recognized that such an ancient principle “should not be considered fixed or static, but should be molded and extended to meet changing conditions and needs of the people it was created to benefit.”142 Starting with New Jersey Sports & Exposition Authority v. McCrane, the court recognized that lands in public trust could be put to an increasing number of uses.143 In a concurring opinion, one of the court’s justices noted that in addition to

133 Id. The exception is the decade between 1968 and 1977, when both expenditures and volume of sand decreased to pre-1948 levels. Id.
134 See id. at 1.
135 Id.
136 Id.
137 See Arnold v. Mundy, 6 N.J.L. 1, 1821 WL 1269, at *9 (1821).
138 Id.
141 Arnold, 1821 WL 1269, at *9.
143 See 292 A.2d 545, 552 (N.J. 1972) (finding a sports complex constructed over tidelands to be a public use).
navigation and fishing, “public rights should include as well recreational uses where appropriate, such as bathing, surfing, launching small boats and walking on the land below the mean high-water line when the tide permits.” In *Matthews v. Bay Head Improvement Ass’n*, the court went even further, holding that under the public trust doctrine access to the beach must be allowed not only for the wet sand but also for the dry sand inland of the mean high water mark. Like the court in *McCrane*, the *Matthews* court found that the doctrine protected contemporary activities like bathing, swimming, and other shore activities.

In recent years, the court has specifically addressed the question of how much public trust protection is to be afforded to beaches created through replenishment projects. In *City of Long Branch v. Liu*, an adjacent property owner claimed ownership of the newly created beach that formed in front of their property as a result of a replenishment project. The court held that such a rapid, man-made accumulation did not cause title to the formerly submerged land to shift from state to landowner. Thus, the court ruled that the public trust doctrine required that the dry beach created by the replenishment project be held in trust for the people of New Jersey.

New Jersey also has a set of regulations specifically addressing public access rights to replenished beaches. These regulations require that beaches replenished using public funds must provide public access. The vast majority of New Jersey residents support such a policy: a recent survey found that eighty-two percent of New Jersey residents support public access as a requirement for getting public beach replenishment funding.

New Jersey previously required that towns provide bathrooms every half-mile and public access points every quarter-mile along replenished beaches. These public access rules also mandated twenty-

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144 Id. at 579 (Hall, J., concurring).
145 471 A.2d 355, 365 (N.J. 1984) (“The complete pleasure of swimming must be accompanied by intermittent periods of rest and relaxation beyond the water’s edge.”).
146 See id. at 358.
147 City of Long Branch v. Liu, 4 A.3d 542, 545–46 (N.J. 2010).
148 Id. at 547.
149 Id. at 546.
150 Id. at 545–46.
152 Id.
154 Id.
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four-hour access to nourished beaches. Additionally, New Jersey required any town seeking project funding from the state Shore Protection Fund to enter into an agreement providing for additional restrooms and parking near the beach.

The New Jersey Superior Court overturned these regulations in the 2008 decision *Borough of Avalon v. New Jersey Department of Environmental Protection*.

Avalon had filed suit against the state, arguing that its own access plan provided sufficient access to the beach. Avalon also argued that the mandated twenty-four hour beach access infringed upon its statutory powers as a municipality. The court agreed, holding that a municipality may close beaches at night or during other times that may endanger public safety.

The court also found that the New Jersey Department of Environmental Protection (NJDEP) lacked statutory authority to make additional public parking and restrooms a condition of funding for replenishment projects.

The New Jersey Supreme Court denied NJDEP’s petition for certiorari. In response, the department is currently considering regulations that request, rather than require, individual towns to develop their own public access plans. Towns that do not prepare public access plans risk the loss of state funding for purchasing open spaces, lower ranking on the beach replenishment project funding list, and denial of beach and dune maintenance permits.

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155 See id. 156 Borough of Avalon v. N.J. Dep’t of Envtl. Prot., 959 A.2d 1215, 1218 (N.J. Super. Ct. App. Div. 2008). 157 Id. at 1227. 158 See id. at 1218–19. Avalon’s 4 miles of beach were accessible via 62 public streets, 5700 on-street public parking spaces, and 550 off-street public parking spaces, 370 of which were within a quarter-mile of the beach. Id. Additionally, Avalon had public restrooms at 15 different locations, though they were not located every half-mile along the oceanfront, as required by state regulations at the time. Id. at 1219. 159 Id. 160 Id. at 1220. 161 Id. at 1226. 162 Borough of Avalon v. N.J. Dep’t of Envtl. Prot., 970 A.2d 1049 (N.J. 2009). 163 N.J. Might Alter Its Proposed Beach Access Rules, Assoc. Press (June 2, 2011), http://www.nj.com/news/index.ssf/2011/06/nj_might_alter_its_proposed_be.html. The new rules were originally expected in early 2011, but as of the publication of this Note the NJDEP has yet to adopt final regulations. Kenny Walter, Advocates Slam DEP’s Revised Beach Access Rules, ATLANTICVILLE (N.J.), (Apr. 26, 2012), http://atl.gmnews.com/news/2012-04-26/Front_Page/Advocates_slam_DEPs_revised_beach_access_rules.html. 164 Walter, supra note 163; N.J. Might Alter Its Proposed Beach Access Rules, supra note 163.
B. North Carolina’s “Carrot Approach”

North Carolina has undertaken beach replenishment projects since 1939. As in New Jersey, supporters of these projects justify the cost with the benefits to the tourism industry. North Carolina’s beach tourism industry provides a vital source of income for the state. A 2001 report by the state Legislative Research Commission estimated that coastal tourism brought in 2.9 billion dollars and supported 50,000 jobs.

For most of North Carolina’s history, state courts followed the common law approach of awarding beach accretions to littoral landowners. In 1985, however, the legislature passed a statute that explicitly granted the state title to beaches created through publicly funded replenishment projects. The statute thus established:

[T]itle to land in or immediately along the Atlantic Ocean raised above the mean high water mark by publicly financed projects which involve hydraulic dredging or other deposition of spoil materials or sand vests in the State . . . . All such raised lands shall remain open to the free use and enjoyment of the people of the State, consistent with the public trust rights in ocean beaches, which rights are part of the common heritage of the people of this State.

Administrative regulations further clarify that for all replenishment projects receiving state funding or other state involvement, the entire restored portion of the beach shall be in permanent public ownership.

The statute also requires public access to replenished beaches. Unlike New Jersey, however, North Carolina has always left the details and enforcement to local municipalities. For any project that re-

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166 See Leg. Research Comm., Coastal Beach Movement, Beach Renourishment, and Storm Mitigation 15 (2001), available at http://dcm2.enr.state.nc.us/BIMP/Appendix%20H%20-%20Beach%20Commission%20Report.pdf (noting there is a 386:1 return on investment for beach nourishment dollars when the economic impact of tourism is considered).
167 Id.
168 Id.
169 See Kalo, supra note 165, at 1440, 1445.
170 N.C. Gen. Stat. § 146-6(f) (2010); Kalo, supra note 165, at 1461, n.139.
171 N.C. Gen. Stat. § 146-6(f).
173 N.C. Gen. Stat. § 146-6(f).
174 15A N.C. Admin. Code 7M.0202(d) (2).
ceives state funding or sponsorship for beach restoration, “[i]t shall be a local government responsibility to provide adequate parking, public access, and services for public recreational use of the restored beach.”175 The North Carolina Court of Appeals upheld the delegation of beach access plans to local municipalities in Slavin v. Town of Oak Island.176 The court held that although the statute gave title to the newly created beach to the state, a municipality is entitled to enact regulations protecting public access to a beach located within its limits.177 Furthermore, the court noted that “[a] littoral property owner’s right of access to the ocean is a qualified one, and is subject to reasonable regulation.”178 Accordingly, the littoral property owner’s interest in the beach was “subordinate to public trust protections.”179

In addition to the statute’s mandate for public access to replenished beaches, North Carolina offers towns a “carrot” in the form of funding.180 The state’s Shorefront Access Policies offer matching grants and assistance to local authorities to develop public access plans.181 Guidelines for the Shorefront Access Policies offer an expansive definition of “improvements” that facilitate public access, including “dune crossovers, piers, boardwalks, litter receptacles, parking areas, restrooms, gazebos, boat ramps, canoe/kayak launches, bicycle racks and foot showers.”182 Each municipality receiving funding is expected to contribute ten to twenty-five percent of the cost of these improvements.183 Furthermore, the municipality is responsible for operating and maintaining access sites in the long term.184 This program has funded over 280 access sites.185 Unfortunately, the program is limited to annual awards of only about one million dollars in matching grants.186

175 Id.
177 See id.
178 Id. at 102 (citations omitted).
179 Id. (quoting Weeks v. N.C. Dep’t of Natural Res. and Cmty. Dev., 388 S.E.2d 228, 234 (N.C. Ct App 1990)).
181 See id.
182 Id. at 7M.0302(11).
183 Id. at 7M.0307(e).
185 Id.
186 See id.
C. Florida: Fight and Forget

Florida has more miles of coastline than any other state except Alaska, and nearly as many miles of coast as the entire Atlantic seaboard.\(^\text{187}\) Tourism to these many miles of beach generates an estimated fifteen billion dollars of revenue for Florida’s economy through taxes, sales, and job creation.\(^\text{188}\) Unfortunately, beach erosion has had a large impact on Florida.\(^\text{189}\) One-third to one-half of all the state’s beaches are “critically eroded,” a designation that indicates they are “eroded to a degree such that development, recreation, wildlife, or cultural resources are threatened or lost.”\(^\text{190}\) Due to Florida’s low elevation, population density, and infrastructure near the coast, erosion from the rising sea-level will continue to trouble the state.\(^\text{191}\)

The Florida state constitution gives the state title to the lands seaward of the mean high water line, including beaches.\(^\text{192}\) The state holds this area in trust for the public for navigation and other uses.\(^\text{193}\) The Florida constitution also provides that the state has a responsibility “to conserve and protect its natural resources and scenic beauty.”\(^\text{194}\) Florida courts include the beaches as one of the natural resources that must be protected.\(^\text{195}\)

The Florida state legislature enacted the Beach and Shore Preservation Act (BSPA) in 1961 to protect the state’s beaches.\(^\text{196}\) The Act creates a fund for the nourishment of “critically eroded shoreline,” defined as “a segment of shoreline where natural processes or human


\(^{188}\) Manoj P. Shivlani et al., Visitor Preferences for Public Beach Amenities and Beach Restoration in South Florida, 31 Coastal Mgmt. 367, 368 (2003).

\(^{189}\) See id.

\(^{190}\) Id. at 368, 382 n.1.


\(^{192}\) Fla. Const. art. X, § 11 (“The title to lands under navigable waters, within the boundaries of the state, which have not been alienated, including beaches below mean high water lines, is held by the state, by virtue of its sovereignty, in trust for all the people.”).

\(^{193}\) Clement v. Watson, 58 So. 25, 26 (Fla. 1912).

\(^{194}\) Fla. Const. art. II, § 7(a).

\(^{195}\) Walton County v. Stop the Beach Renourishment, Inc., 998 So. 2d 1102, 1110–11 (Fla. 2008).

\(^{196}\) Beach and Shore Preservation Act, Fla. Stat. § 161 (2010); Shivlani, supra note 188, at 370.
activities have caused, or contributed to, erosion and recession of the beach and dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost.” Following a state-funded replenishment project, the BSPA mandates that “title to all lands seaward of the erosion control line shall be deemed to be vested in the state by right of its sovereignty.” A non-profit environmental group challenged the constitutionality of the BSPA in *Save Our Beaches, Inc. v. Florida Department of Environmental Protection.* Plaintiffs alleged that vesting title to the replenished beach in the state unconstitutionally deprived beachfront land owners of their property rights without just compensation for the property taken. Specifically, the property owners claimed that the Act deprived them of their common law rights of access, reasonable use, and view of the water, as well as their right to accretions of sand.

In the interim, the Florida Supreme Court, in *Walton County v. Stop the Beach Renourishment, Inc.*, held that the right of maintaining contact with the water was secondary to the core right of maintaining access to the water. The court reasoned that “because the Act safeguards access to the water and because there is no right to maintain a constant boundary with the water’s edge, the Act, on its face, does not unconstitutionaly eliminate the ancillary right to contact.” The property owners appealed, and the U.S. Supreme Court unanimously affirmed the Florida Supreme Court’s decision in *Stop the Beach Renourishment, Inc., v. Florida Department of Environmental Protection.* The Court held that because the state owned the submerged land adjacent to the beach, it had the right to fill that land with sand as long as it did not interfere with the rights of the public.

In spite of this landmark decision by the Supreme Court, Florida’s statutes make only brief reference to public access following replenishment projects. The BSPA only requires that any beachfront devel-

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200 Id.
201 Id. at 57.
202 998 So. 2d 1102, 1119 (Fla. 2008).
203 Id. at 1119–20.
204 130 S. Ct. 2592, 2611 (2010).
205 Id. Justice Stevens, whose Florida property is part of the renourishment program, did not participate in the decision. Ilya Shapiro & Trevor Burrus, *Judicial Takings and Scalia’s Shifting Sands*, 35 Vt. L. Rev. 423, 424 (2010).
opment or construction not interfere with public access unless a comparable alternative access way is provided.\textsuperscript{207}

This requirement has done little to ensure public access to replenished beaches. As of 2010, Florida averages one public access site for every five miles of shoreline.\textsuperscript{208} This equates to approximately one public access site for every ten thousand Florida residents, not including tourists.\textsuperscript{209} A 2000 survey indicates that many Florida citizens (roughly forty-one percent) demand more beach access.\textsuperscript{210}

III. Applying the Public Trust Doctrine to Replenished Beaches

Since its creation centuries ago, the public trust doctrine has governed the use of resources made exclusively by nature.\textsuperscript{211} Originally, the boundaries of these resources were determined solely by weather; however, today, man has the power to alter the shoreline.\textsuperscript{212} Beach replenishment projects add tons of sand to the beach, shifting the mean high water line seaward and creating new land that must either be awarded to the state or the littoral property owners.\textsuperscript{213}

Invoking the public trust doctrine, New Jersey, North Carolina, and Florida have all decided to award this new land to the state.\textsuperscript{214} The application of the doctrine to modern beach replenishment projects was made possible by two gradual changes—first, an expansion of the physical area protected by the doctrine, and second, an expansion of the scope of public uses for a beach.\textsuperscript{215} These two contemporaneous

\textsuperscript{207} Id.


\textsuperscript{209} See Fl. Coastal Mgmt. Program, Florida Assessment of Coastal Trends 34, tbl.2–1 (2000), http://bcs.dep.state.fl.us/bchmgmt/reports/fact2000.pdf. As of 2010, Florida has 1,692 beach access points, and a total population of nearly 18 million. Id.

\textsuperscript{210} Id. at 45. Additionally, a majority of respondents to the survey (roughly 61 percent) wanted more parking and more or better restrooms. Id.

\textsuperscript{211} See id.

\textsuperscript{212} See supra notes 61–67 and accompanying text.

\textsuperscript{213} See Stop the Beach Renourishment, Inc. v. Fla. Dep’t of Envtl. Prot., 130 S. Ct. 2592, 2599 (2010).


\textsuperscript{215} See City of Daytona Beach v. Tona-Rama, Inc., 294 So. 2d 73, 78 (Fla. 1974) (recognizing the right of the public to enjoy the dry sand area for sunbathing and other recreational purposes); Matthews v. Bay Head Improvement Ass’n, 471 A.2d 355, 365 (N.J. 1984) (finding that dry sand recreational uses, such as bathing, swimming, and other shore activities, fall under protection of the public trust doctrine).
changes provide a foundation for awarding title of replenished beaches to the state.\textsuperscript{216}

A. A Public Trust Doctrine Renaissance: Extending the Doctrine to Replenished Beaches

The public trust doctrine has been a fixture in American law since the colonial era.\textsuperscript{217} In general, the doctrine applies to the wet sand stretching from the mean high water mark toward the sea.\textsuperscript{218} This area is sufficient to accommodate the historical uses of the beach: navigation, fishing, and fowling.\textsuperscript{219}

Over the years, however, beaches have been put to a variety of new uses. By the twentieth century, beachgoers were less interested in fishing than they were in relaxing on the sand and swimming in the ocean.\textsuperscript{220} If the doctrine is to survive the passage of time, it must be updated to suit the changing needs of society.\textsuperscript{221}

As American courts began broadening the applicability of the public trust doctrine, the popularity of beach replenishment projects soared.\textsuperscript{222} Such large-scale physical manipulations of the ocean’s boundaries, however, trigger property concerns over who will own the new land.

A beach replenishment project essentially shifts one natural resource—the bed of sand beneath the water—to another—the dry, sandy beach.\textsuperscript{223} When a project is complete, layers of sand cover the former boundary of land held in trust by the state, the mean high water mark.\textsuperscript{224} Though it has been covered with imported dry sand, it intuitively makes sense that this boundary should still mark the extent of the land held by the state. Consequently, just as the wet sand and waters covering it are held in trust, so too should the newly created beach be held in trust for the people.

\textsuperscript{216} See, e.g., Liu, 4 A.3d at 549 (justifying awarding title to replenished beach to the state by pointing to the doctrine’s applicability to the use of dry sand beach and recreational purposes).

\textsuperscript{217} N.J. Public Trust, supra note 92, at 10.

\textsuperscript{218} Titus, supra note 7.

\textsuperscript{219} See Arnold v. Mundy, 6 N.J.L. 1, 1821 WL 1269, at *9 (N.J. 1821).

\textsuperscript{220} See Liu, 4 A.3d at 549.

\textsuperscript{221} See id.

\textsuperscript{222} See, e.g., Trends Report, supra note 126, at 1–3 (showing New Jersey beach replenishment sand volumes and expenditures have increased steadily over past decades).

\textsuperscript{223} See Borrow Areas, supra note 38; Technical Summary, supra note 19.

\textsuperscript{224} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2599.
This delineation is the only fair solution because taxpayers across the state and country fund beach replenishment projects. Since all share the burden of funding, it is reasonable to make a replenished beach a publicly held resource. Furthermore, members of the public not privileged enough to live in beachfront houses should be able to access this new land held by the state for their benefit. To deny meaningful access would be to rob the public of the fruits of their tax dollars.

B. Defining Access to Replenished Beaches Held in Trust for Public Use

Once a state places a replenished beach in trust for the public, it must determine the scope of access. When the public trust doctrine was incorporated into the American legal system, the Supreme Court recognized that the doctrine’s objectives could only be met if the public is actually free to use and enjoy the land. The Court implicitly reasoned that public title is only meaningful if there is unfettered public access. In Illinois Central Railroad v. Illinois, the U.S. Supreme Court summarized this principle by noting the need for public access to the shores to remain “free[] from the obstruction or interference of private parties.”

The concept of “access,” however, has changed since the inception of the doctrine. In the ancient world, cars and parking were irrelevant considerations. Today, more is necessary to give meaning to access. Preventing activities for which beaches are typically used through restricted hours or remote access points deprives beachgoers of enjoying public land. Their use would be obstructed by the same private landowners who reap the benefits of a replenished beachfront. Such restrictions would eviscerate the public trust, and only those wealthy enough to live on the beach would be able to enjoy all its advantages.

New Jersey, North Carolina, and Florida are some of the most experienced states in the nation regarding beach replenishment. Moreover, each independently recognizes that land created during beach replenishment projects must be held in trust for the public.

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225 See Editorial, supra note 1.
227 See id.
228 Id.
229 Liu, 4 A.3d at 549.
230 See id.
232 See Nourishment Statistics, supra note 2. Florida, New Jersey, and North Carolina have respectively the first, second, and fourth highest expenditures on beach replenishment. Id.
these states, however, has developed different rules governing public access to replenished beaches.234

Each state approach offers a varying degree of public access to replenished beaches.235 As the problem of beach erosion continues to grow236 and states increasingly fund replenishment projects with less federal assistance,237 the need for a comprehensive, practical solution for providing public beach access increases.

With the only replenishment policy explicitly approved by the Supreme Court, Florida arguably has the strongest support for holding title to replenished beaches in trust for the public.238 Florida’s hands-off approach, however, shows that simply placing a replenished beach in trust for the public is insufficient. Since the state fought to win Stop the Beach Renourishment, it has largely ignored the question of access.239 Because Florida failed to define the scope of access to replenished beaches, the public still clamors for increased and improved access to the shores.240 Florida’s approach demonstrates that the public needs more than title to enjoy a replenished beach.

In contrast, New Jersey’s excessive requirements for public access were struck down by the courts.241 Though favored by the people,242 local municipalities resisted the state’s unfunded mandate for twenty-four hour access and additional restrooms and parking.243 The failure to accommodate local interests illustrates the need for more flexible rules that can be tailored to each town’s needs.244 The newly proposed rules give local municipalities control over designing public access plans, but punish towns that do not comply.245

North Carolina takes the opposite approach by incentivizing public access to beaches.246 Offering a carrot instead of a stick, the state

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235 See supra notes 125–216 and accompanying text.
236 See Titus, supra note 22, at 118.
237 See supra notes 46–75 and accompanying text.
238 See Stop the Beach Renourishment, Inc., 130 S. Ct. at 2611.
240 See Fla. Coastal Mgmt. Program, supra note 209.
242 Poll, supra note 153.
243 Borough of Avalon, 959 A.2d at 1218.
244 See id. at 1227.
246 See supra notes 165–186 and accompanying text.
provides municipalities with matching grants to improve access to beaches. These grants, however, are insufficient due to their size. It is unlikely that the state can incentivize meaningful public access with such a meager budget. Additionally, North Carolina’s grant program is not specifically tailored to replenished beaches. While a general beach access grant program may indirectly improve access to replenished beaches, it does not ensure that the public will have access to the sand for which their tax dollars paid.

**Conclusion**

Beaches play a vital role in the economies of coastal states. As erosion and rising sea levels increasingly threaten these precious resources, states will likely continue to replenish beaches to slow the loss of sand. Since states often pay for nourishment projects with public funds, they need to do more to ensure public access to replenished beaches.

Each of the approaches taken by New Jersey, North Carolina, and Florida represents a step in the right direction, but more is needed. Florida’s failure to codify comprehensive requirements for public access shows that court decisions alone will not ensure widespread access to replenished beaches. On the other hand, New Jersey’s struggle to regulate beach access suggests that greater incentives are needed for towns to comply with regulations. North Carolina provides such incentives, but on too small a scale to effectuate public access to all replenished beaches.

As more and more sand is dumped into replenishment projects across the United States, it is time for states across the country to take notice of the successes and failures of New Jersey, North Carolina, and Florida’s beach access approaches. Though the public trust doctrine may give title to replenished beaches to the people, states must ensure that the public has meaningful access. Only then can the public trust doctrine’s full potential be realized in modern times.

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247 See *Public Beach and Waterfront Access: Grant Program for Local Governments*, supra note 184.
248 See id.
249 See id. Grants are intended to improve access to the state’s beaches and waterways. Id.
250 See Leg. Research Comm., supra note 166, at 15; Shivlani, supra note 186, at 368; Trends Report, supra note 126, at 1.
251 See Titus, supra note 22, at 118.
ACCOUNTING FOR EMISSIONS TRADING: HOW ALLOWANCES APPEAR ON FINANCIAL STATEMENTS COULD INFLUENCE THE EFFECTIVENESS OF PROGRAMS TO CURB POLLUTION

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Abstract: Cap-and-trade programs to curb carbon emissions frequently rely on the use of tradable emissions credits known as “allowances.” To date, companies’ presentations of their usage of these allowances on their financial statements has not been uniform. Cap-and-trade programs will be most effective when presentation of allowances on financial statements is standardized, since all companies will be forced to be transparent about their methods of compliance with carbon emissions trading systems. Therefore, the Financial Accounting Standards Board and the International Accounting Standards Board should implement standards for the presentation of allowances on companies’ financial statements.

INTRODUCTION

Cap-and-trade programs, proposed as a means to regulate air quality, reduce emissions by limiting the total amount of pollution that can be emitted in a given area at a given time. The government issues entitlements for a certain quantity of pollution, which companies can then trade as needed. To be successful, cap-and-trade programs must work efficiently over the long-term with industry and business, and will only

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* Articles Editor, Boston College Environmental Affairs Law Review, 2011–12.


3 See id.

be effective if they change the way businesses account for their impacts on the environment.\textsuperscript{5} To date, major accounting standards-setting bodies have not passed concrete guidance on cap-and-trade accounting, giving businesses the ability to only seemingly comply with emissions trading laws by manipulating their financial statements.\textsuperscript{6}

In response to this lack of uniform reporting across financial statements, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) placed accounting for cap-and-trade programs on their regulatory agendas.\textsuperscript{7} After a series of preliminary hearings, the two bodies delayed further decision making until opportunities for public comment conclude in the second quarter of 2012.\textsuperscript{8} Despite this delay, uniform guidance from these authorities is necessary.\textsuperscript{9}

With the rise in awareness of global warming and increased sensitivity to reducing greenhouse gas (GHG) emissions,\textsuperscript{10} accounting for carbon cap-and-trade programs is an increasingly relevant issue.\textsuperscript{11} Although GHG emissions trading is neither required nor facilitated by federal law in the United States, a future transition to this system is possible.\textsuperscript{12} In addition, U.S. companies operating abroad may be required to follow foreign cap-and-trade regulations of GHGs.\textsuperscript{13} Since limitations on GHG emissions will potentially impact many U.S. companies, this Note focuses on accounting for cap-and-trade with specific regard to carbon emissions.\textsuperscript{14} This Note draws on U.S. accounting standards and


\textsuperscript{7} See FASB Technical Plan and Project Updates, FIN. ACCT. STANDARDS Bd., http://www.fasb.org/cs/ContentServer?site=FASB&c=FASBContent_C&pagename=FASB%2FFASBContent_C%2FProjectUpdatePage&cid=900000011097 (last updated Dec. 6, 2010) [hereinafter Project Updates].


\textsuperscript{10} See CONG. BUDGET OFFICE, supra note 2, at 1.


\textsuperscript{12} See CONG. BUDGET OFFICE, supra note 2, at 1.


\textsuperscript{14} See infra notes 21–113, 160–265 and accompanying text.
considers international implications of current foreign legislation as well as current and potential U.S. regulations.\textsuperscript{15}

This Note presents a solution to the issue of ambiguity in accounting practices for cap-and-trade.\textsuperscript{16} Part I addresses the structure of cap-and-trade programs, and discusses emissions trading in the United States and abroad.\textsuperscript{17} Part II describes the structure of financial statements and addresses the FASB and the IASB rulemaking process.\textsuperscript{18} Part III describes current guidance from the Securities and Exchange Commission (SEC) on GHG accounting and discusses voluntary reporting programs.\textsuperscript{19} Part IV presents a solution for the lack of uniformity in allowance accounting, and discusses the benefits of such a solution.\textsuperscript{20}

I. CAP-AND-TRADE PROGRAMS AS SOLUTIONS FOR ENVIRONMENTAL PROBLEMS

In the past decade, the world has grown more interested in cap-and-trade initiatives.\textsuperscript{21} Cap-and-trade programs control and limit levels of pollution emitted into the environment,\textsuperscript{22} thus encouraging businesses to change their operations to reduce pollution.\textsuperscript{23} Cap-and-trade legislation holds businesses more accountable for their negative impacts on the environment.\textsuperscript{24}

Both shareholder calls for environmental reform and cap-and-trade regulations force corporations to internalize the costs of pollution.\textsuperscript{25} Shareholders apply pressure to business leaders of publically

\textsuperscript{15} See infra notes 52–178, 192–265 and accompanying text.
\textsuperscript{16} See infra notes 192–265 and accompanying text.
\textsuperscript{17} See infra notes 21–113 and accompanying text.
\textsuperscript{18} See infra notes 114–159 and accompanying text.
\textsuperscript{19} See infra notes 160–191 and accompanying text.
\textsuperscript{20} See infra notes 192–265 and accompanying text.
\textsuperscript{21} See Donald N. Dewees, Emissions Trading: ERCs or Allowances?, 77 LAND ECON. 513, 513 (2001). Cap-and-trade schemes are one of several different types of programs that can fall under the rubric of emissions trading, including baseline and credit systems, project-based certificates, and renewable energy certificates. See Project Updates, supra note 7. Although all such schemes are considered by the FASB, this Note will focus solely on cap-and-trade allowances. See id.
\textsuperscript{23} See Dewees, supra note 21, at 525 (discussing how emissions limitations may motivate businesses to reduce levels of pollutant-producing activities).
\textsuperscript{24} See Janet Peace & Robert N. Stavins, Pew Ctr. on Global Climate Change, Meaningful and Cost Effective Climate Policy: The Case for Cap and Trade 1–2 (2010).
\textsuperscript{25} See Bartels, supra note 5, at 304.
held companies to take environmental reform measures. Additionally, given courts’ increased consideration of environmental harms, corporate managers may increase their responsiveness to shareholder environmental concerns. Thus, due to the possibility of federal cap-and-trade legislation and shareholder influence, corporations may be on the cusp of major environmental reform.

A. The Structure of Cap-and-Trade

Cap-and-trade programs center on government distributions of emissions authorizations to regulated entities, and cap total emissions across all entities within a given area. Generally, the government then distributes a set level of emissions authorizations to regulated entities. These allowances are authorizations to emit fixed quantities of pollution. Companies may trade allowances, thus ultimately performing a cost-benefit analysis of emitting additional pollution. The government may issue emissions allowances for many different types of pollution. Governments have notably used the allowance system to curb carbon emissions and reduce acid rain. Although there are different designs of cap-and-trade systems, this Note focuses on the allowance methodology.

26 See id. at 332.
27 See id. at 333.
28 Cong. Budget Office, supra note 2, at 1 (describing the possibility of federal carbon cap-and-trade legislation in the United States and discussing shareholder proposals as “important supplement[s]” to environmental legislation).
29 Id.
30 Id.
31 Id.
32 See Ass’n of Wash. Cty’s, supra note 22, at 3.
33 See id. at 2 (describing a company’s process for determining the number of allowances it needs); see also Cong. Budget Office, supra note 2, at 2 (describing an allowance trading market).
34 Colby, supra note 1, at 638 (describing the use of market mechanisms to control “lead in gasoline, ozone depleting chemicals, nitrogen oxide and sulfur emissions, new vehicle fuel efficiency, urban land development, and retirement of older, heavily polluting vehicles”).
36 See Dewees, supra note 21, at 513 (noting differences between systems based on emission reduction credits and allowances, as well as open and closed trading markets).
In an allowance trading system, a government regulator distributes allowances according to the design of the particular cap-and-trade program. The regulator may sell allowances directly to companies through an auction, or may initially allocate allowances to companies at no cost. Companies use their allowances when they emit pollution. Under some cap-and-trade program designs, if a company has unused allowances during the regulatory period, it may carry them over to future years—a practice referred to as banking. In addition to banking allowances, regulated entities can also trade unneeded allowances. Following each regulatory period, the regulator determines whether the polluter has an allowance to satisfy all units of pollution emitted. If the entity has released too much pollution, the regulator may impose fines.

Importantly, emissions trading markets may impact the industrial sector on the whole, as companies can profit from the sale of unused credits. The initial allocation of allowances by governments to companies, followed by secondary trading in the market, impacts the prices of goods and services to consumers. For example, companies not impacted directly by allowances may see competitors’ prices altered by expenses or profits resulting from allowance trading. Thus, properly accounting for allowances affects a company’s ability to remain competitive in its primary market.

Cap-and-trade programs for GHG emissions impact many different industries. Within each industry the effects of cap-and-trade on business are not limited to profits and losses from the sale and purchase of allowances, but may also have consequences for large-scale business

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37 See Ass’n of Wash. Cities, supra note 22, at 2.
38 Id.
40 See, e.g., id. at 2.
42 See, e.g., Cong. Budget Office, supra note 2, at 1–2.
44 See Ass’n of Wash. Cities, supra note 22, at 2. See generally Colby, supra note 1 (discussing the wide-ranging impacts that environmental market mechanisms can have on industry).
45 Ass’n of Wash. Cities, supra note 22, at 2.
46 Id. For instance, under the Acid Rain Program, only larger coal-burning electric utilities in certain locations were initially regulated, leaving smaller non-coal burning plants exempt from complying with the allowance system. See SO2 Reductions, supra note 35.
47 See Ass’n of Wash. Cities, supra note 22, at 2; Ernst & Young, supra note 11, at 5.
Directly affecting business decision making as it relates to the environment is an important aspect of cap-and-trade. For example, businesses may increase capital expenditures on technology to reduce emissions, thereby requiring fewer allowances. By changing the way companies operate in the long-term, emissions trading programs seek a steady reduction in carbon in a cost-conscious and effective manner.

B. Greenhouse Gas Cap-and-Trade in the United States

1. A Recent History of Federal Cap-and-Trade Programs in the United States

In the last decade, cap-and-trade programs have risen to the forefront of U.S. politics. Many debate the possibility of using cap-and-trade to combat global warming. Global warming occurs when GHGs—most notably carbon dioxide—remain in the atmosphere trapping sunlight, which causes the Earth’s temperature to increase. In recent years, Congress has considered legislation that would establish a trading system to limit U.S. carbon emissions. Although Congress has not passed such legislation, these proposals and other state laws ensure that carbon cap-and-trade will continue to be an issue for American companies.

50 See id. at 24 (indicating that a company may purchase allowances rather than invest in greener technology).
52 See Dewees, supra note 21, at 513.
The proposed cap-and-trade bills are useful for predicting the structure of a future U.S. carbon emissions trading system.\textsuperscript{57} The House of Representatives passed the American Clean Energy and Security Act of 2009 (also known as the Waxman-Markey Bill),\textsuperscript{58} marking the first time a house of Congress supported a firm carbon emissions limitation.\textsuperscript{59} The bill proposed a cap-and-trade system that reduced GHG emissions to 83\% of 2005 levels by the year 2050.\textsuperscript{60} The bill recognized market effects of cap-and-trade legislation by giving companies in the energy sector free allowances to maintain a lower cost of energy.\textsuperscript{61} To preserve the ability to compete worldwide, the bill also called for government rebates to companies that interact frequently in the global market.\textsuperscript{62} The bill would have created distributions to other companies through the use of government grants or auctions, proceeds of which would be used to fund industry-specific subsidies.\textsuperscript{63} Despite its merits, the Senate did not pass the proposed legislation.\textsuperscript{64}

Prior to the Waxman-Markey Bill, the Lieberman-Warner Climate Security Act of 2007 proposed a cap-and-trade system that also relied on the use of allowances.\textsuperscript{65} The Lieberman-Warner Bill would have reduced GHG emissions to 42\% of 2000 levels by the year 2050.\textsuperscript{66} This bill rewarded companies that previously reduced emissions by granting substantial amounts of free allowances.\textsuperscript{67} Industry supported this proposed legislation because companies would receive rather than purchase allowances from the government.\textsuperscript{68} Nevertheless, neither the House nor Senate voted on the bill due to a lack of popular support.\textsuperscript{69}

\textsuperscript{57} See Richards & Richards, \textit{supra} note 55, at 3–4.
\textsuperscript{60} Id. at 362–63.
\textsuperscript{61} Id. at 363.
\textsuperscript{62} Id.
\textsuperscript{63} See Tutwiler, \textit{supra} note 58.
\textsuperscript{64} Waxman-Markey Climate Change Bill, GovTrack.us, http://www.govtrack.us/congress/bill.xpd?bill=h111-2454 (last visited May 9, 2012). A major concern was that the plan would disadvantage U.S. companies in competition with businesses from developing countries that do not have climate change legislation. See Etienne, \textit{supra} note 59, at 365.
\textsuperscript{65} S. 2191, 110th Cong. § 1201 (2007).
\textsuperscript{66} See Richards & Richards, \textit{supra} note 55, at 11.
\textsuperscript{67} See \textit{id.} at 37.
\textsuperscript{68} See Tutwiler, \textit{supra} note 58.
Although the federal government has not imposed a cap-and-trade system for carbon emissions, however, it has implemented a cap-and-trade system for acid rain. Created under Title IV of the 1990 Clean Air Act Amendments, the acid rain cap-and-trade program targets sulfur dioxide, one of the primary causes of acid rain. In this system, the EPA allocates allowances to companies, which can then freely trade the allowances with other businesses. The Acid Rain Program uses allowances as the primary regulatory methodology, and the EPA implements the program in two phases. During the first phase, the EPA distributes allowances to companies—information about the distributions is publicly available. In phase two, the EPA adopts a broader approach, expanding the group of sources required to use allowances and placing a hard cap on total annual sulfur dioxide emissions. Thus, acid rain cap-and-trade is a system whose regulatory impacts increase over time.

2. State Regulation of Greenhouse Gases

In lieu of federal action, state and local governments developed laws and regulations regarding GHG emissions—California is the primary example. In addition to creating a statewide cap on emissions, the California legislature passed the Global Warming Solutions Act of 2006 requiring the California Air Resources Board to pass regulations that mandate the reporting of total emissions from individual sources within the state. Following California’s lead, several other states re-
ently created programs to curb GHG emissions.\textsuperscript{78} Although implementation of these programs proved difficult, they serve as reminders that more serious federal regulations on global warming should be considered.\textsuperscript{79}

Various state lawmakers created the Regional Greenhouse Gas Initiative (RGGI) in 2005 in an effort to curb climate change.\textsuperscript{80} As a result of RGGI, ten states in the Northeast and Mid-Atlantic participated in a regional carbon cap-and-trade program.\textsuperscript{81} Targeted at companies in the energy industry, the program caps carbon emissions at a declining rate.\textsuperscript{82} Although states have historically refused to collectively address environmental concerns, regional climate change initiatives such as RGGI show that increased cooperation between states is possible.\textsuperscript{83}

The Western Climate Initiative is another regional program that focuses on preventing climate change.\textsuperscript{84} The initiative is a coalition of seven U.S. states and four Canadian provinces committed to reducing GHG emissions.\textsuperscript{85} During the signing of the Initiative, Governor Janet Napolitano of Arizona remarked that “[i]n the absence of meaningful federal action, it is up to the states to take action to address climate change and reduce greenhouse gas emissions in this country.”\textsuperscript{86} Thus, many regional and state programs are perhaps only temporary solutions to the problem, and should be replaced by more permanent federal regulations.\textsuperscript{87}

\textsuperscript{78} See id. at 173–74.  
\textsuperscript{79} See id. at 168, 174.  
\textsuperscript{82} See id. (stating that “these states have capped and will reduce power sector CO$_2$ emissions 10 percent by 2018”).  
\textsuperscript{83} See McAllister, supra note 80, at 92–93 (identifying and discussing “three reasons for the high degree of state collaboration: to facilitate policy diffusion, to achieve efficiencies in cap-and-trade, and to engage in a regional race to national influence”).  
\textsuperscript{87} See Howland, supra note 56, at 414.
The Midwest Greenhouse Gas Reduction Accord (MGGRA) is another regional program aimed at reducing GHG emissions.\textsuperscript{88} Notable to MGGRA’s design is the program’s creation of and reliance upon the Greenhouse Gas Advisory Group—a coalition of public, corporate, and non-profit representatives that makes recommendations to state legislators.\textsuperscript{89} Despite the benefits of regional cap-and-trade programs, some debate the value of individual states’ participation.\textsuperscript{90} The struggles experienced with implementing regional cap-and-trade programs highlight the need for federal climate change intervention.\textsuperscript{91}

C. Greenhouse Gas Cap-and-Trade Abroad

1. The European Union’s Emissions Trading System

Although the United States does not currently require participation in a carbon cap-and-trade program, emissions trading abroad still impacts U.S. businesses.\textsuperscript{92} In 2005, the European Union (EU) imposed a cap-and-trade system named the Emissions Trading System (ETS).\textsuperscript{93} Implemented in thirty countries, the system regulates carbon dioxide and nitrous oxide emissions.\textsuperscript{94} The program caps the total amount of the emissions, and program administrators then issue allowances to companies that can buy and sell them on the open market.\textsuperscript{95} By limiting the total number of allowances available, the regulators ensure that each allowance has a value.\textsuperscript{96} As allowances are traded on the emissions market, their values may fluctuate according to bid and offer prices.\textsuperscript{97} Further, the ETS program reduces the number of allowances available


\textsuperscript{89} See Keenan, supra note 76, at 171.

\textsuperscript{90} See, e.g., Russ Harding, Time to Abandon Midwest Greenhouse Gas Reduction Accord, Mackinac Ctr. for Pub. Pol’y (May 6, 2010), http://www.mackinac.org/12692 (arguing that Michigan should withdraw from MGGRA because participation in the program harms the state’s economy).

\textsuperscript{91} See McAllister, supra note 80, at 82.

\textsuperscript{92} See Deatherage, supra note 13, at 35.

\textsuperscript{93} See EU ETS, supra note 35.

\textsuperscript{94} Id.

\textsuperscript{95} See id.


yearly, with a goal of reducing emissions in 2020 to 79% of 2005 levels.\textsuperscript{98}

Some commentators claim that the program is a “complete failure.”\textsuperscript{99} They argue that the cap-and-trade system has not resulted in increased investment in green technology, but has shifted attention away from more effective methods of decreasing carbon emissions.\textsuperscript{100} Complying with the ETS, however, remains an important consideration for U.S. companies doing business abroad,\textsuperscript{101} and any future U.S. emissions trading regulatory regime should contemplate the European experience.\textsuperscript{102}

2. The Kyoto Protocol

Although not law in the United States,\textsuperscript{103} the Kyoto Protocol represents a significant attempt at reducing global emissions of GHGs.\textsuperscript{104} The Protocol sets emissions targets for thirty-seven countries to reduce GHGs to 1990 levels.\textsuperscript{105} The Protocol allows countries to meet their individual targets through a variety of primary market-based mechanisms.\textsuperscript{106} Article 17 of the Protocol creates markets for emissions trading.\textsuperscript{107} In addition to carbon permits, other regulated substances within the program can be traded as well.\textsuperscript{108} Furthermore, the Kyoto Protocol

\begin{itemize}
\item \textsuperscript{98} See EU ETS, \textit{supra} note 35.
\item \textsuperscript{99} Sarah-Jayne Clifton, \textit{Friends of the Earth, A Dangerous Obsession: The Evidence Against Carbon Trading and for Real Solutions to Avoid a Climate Crunch} 20 (2009), available at http://www.foe.co.uk/resource/reports/dangerous_obsession.pdf (arguing that the ETS has failed in the industrial sector).
\item \textsuperscript{100} See \textit{id.} at 5.
\item \textsuperscript{101} See Deatherage, \textit{supra} note 13, at 35.
\item \textsuperscript{102} See Richards & Richards, \textit{supra} note 55, at 22.
\item \textsuperscript{104} See Kyoto Protocol, U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE, http:// unfccc.int/kyoto_protocol/items/2830.php (last visited May 9, 2012).
\item \textsuperscript{105} See \textit{id.}
\item \textsuperscript{106} See \textit{id.}
\item \textsuperscript{108} See \textit{id.} Other instruments that may be traded under the Kyoto Protocol include removal units based on land use, land use change and forestry activities like reforestation, emission reduction units from joint implementation projects, and certified emission reduction from clean development mechanism project activity. \textit{Id.}
\end{itemize}
sets out registry systems to track all sales of traded emissions units.\textsuperscript{109} The registry ensures that traded emissions units can be tracked to the current owner of the units.\textsuperscript{110}

Like the global experience, the U.S. debate over the implementation of a carbon cap-and-trade program highlights different views on how to make carbon cap-and-trade programs effective.\textsuperscript{111} A successful program must involve a scheme that is workable for businesses and incentivizes true compliance with pollution-reduction goals.\textsuperscript{112} Accounting regulations are one way to influence businesses operations.\textsuperscript{113}

\section*{II. How Accounting Interacts with Cap-and-Trade}

\subsection*{A. Accurate Accounting Is Necessary to Provide Markets with a True Understanding of Financial Position}

Financial statements are the primary means by which outsiders evaluate a company.\textsuperscript{114} A company’s financial statements impact how others will value the company, which can ultimately affect the price of stock, the ability of the company to receive loans, or its ability to engage in a variety of business transactions.\textsuperscript{115} With respect to allowances, two financial documents of interest are the balance sheet and income statement.\textsuperscript{116} The balance sheet values assets, liabilities, and equity, while the income statement presents revenues and expenses.\textsuperscript{117} The information presented in financial statements should accurately depict a company’s financial position in part because stakeholders rely on these documents to make value determinations.\textsuperscript{118}

\begin{footnotesize}
\textsuperscript{110} Id.
\textsuperscript{111} Id.
\textsuperscript{112} See Keenan, supra note 76, at 171.
\textsuperscript{113} Cf. McAllister, supra note 80, at 95 (discussing the effect of state climate policy on in-state businesses).
\textsuperscript{116} See Ernst & Young, supra note 11, at 6 (discussing the possibility of accounting for cap-and-trade impacting obligations on the balance sheet and also affecting gains on the income statement).
\textsuperscript{117} See Stickney & Weil, supra note 115, at 11.
\textsuperscript{118} See Dyckman et al., supra note 114, at 5.
\end{footnotesize}
The balance sheet displays the assets, liabilities, and equity of a company.**119** Assets are “economic resources with the ability or potential to provide future benefits to a firm.”**120** Liabilities represent a company’s future obligations, and equity is the owners’ investment in the firm.**121** Revenues and expenses impact retained earnings, which is part of equity.**122** As a general rule, the sum of liabilities and equity must equal assets—for every increase or decrease to assets, there must be a corresponding increase or decrease to liabilities or equity.**123** Individual assets, liabilities, revenues, and expenses are listed in separate accounts on the balance sheet.**124**

Cap-and-trade programs could also affect the income statement.**125** The income statement lists revenues and expenses, and the difference between the two is recorded as net income.**126** Since revenues increase net income, and expenses decrease net income, company managers generally seek to maximize revenue while minimizing expenses.**127**

The income statement must accurately reflect business transactions for the period in which they occur.**128** When a company’s business operations incur an expense, the company should record the expense on both the balance sheet and the income statement, regardless of whether there was a cash expenditure during the period.**129** This method of accounting is known as an accrual, and requires both a debit to “Accrued Expenses” and a credit to “Expenses Payable” in the equity and liability sections of the balance sheet, respectively.**130**

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**119** *Stickney & Weil*, supra note 115, at 9.
**120** *Id.*
**121** *Id.* at 9–10.
**122** See *id.* at 10–11.
**123** See *id.* at 44. Assets are increased through debits and decreased through credits, while liabilities and equity are increased through credits and decreased through debits. *Id.* at 75.
**124** *Id.* at 64–67.
**125** See *Ernst & Young*, supra note 11, at 6 (noting that cap-and-trade could impact gains on the income statement).
**126** *Stickney & Weil*, supra note 115, at 11.
**127** See *id.* at 12.
**128** See *Dyckman et al.*, supra note 114, at 35.
**130** See *Dyckman et al.*, supra note 114, at 73–74.
The income statement may also impact management’s incentives when executives are paid using incentive-based compensation. Under this compensation structure, when the company is performing well in the stock market, managers’ compensation will be higher than when the company is performing poorly. Incentive-based compensation structures can therefore provide managers with a direct personal incentive to increase profitability.

Financial statements include both quantitative disclosures, such as the income statement and the balance sheet, and qualitative disclosures, such as written discussions of financial performance in the financial statement footnotes. Various methods may be used to measure the value of assets, liabilities, equity, revenues, and expenses in these documents. For example, an asset may be valued at its purchase price or at fair market value. When the value of an asset is measured at fair market value, companies must make year-end adjustments to increase or decrease the value of the asset based on fluctuations in the market price. To increase the value of an asset, an asset account is debited and an equity account—“Unrealized Gain on Asset”—credited. Unrealized gain and loss accounts are listed in a special section of the income statement called “Other Comprehensive Income,” and do not impact net income. Gains and losses do not impact net income until they are realized—meaning that the asset has actually been sold and the company has received cash. When a company sells

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132 See id.
134 See STICKNEY & WEIL, supra note 115, at 11.
135 See William E. Shafer, Qualitative Financial Statement Disclosures: Legal and Ethical Considerations, 14 BUS. ETHICS Q. 433, 434 (2004).
136 See DYCKMAN ET AL., supra note 114, at 37.
137 See id.
138 See STICKNEY & WEIL, supra note 115, at 673–74.
139 See DYCKMAN ET AL., supra note 114, at 659. To decrease the value of an asset, an asset account is credited and the equity account “Unrealized Loss on Asset” is debited. See id.
140 STICKNEY & WEIL, supra note 115, at 674–75.
141 See id.
an asset, “Unrealized Income” is debited and “Realized Gain” or “Realized Loss” is credited,\textsuperscript{143} thereby impacting net income.\textsuperscript{144}

To illustrate the need for uniformity in accounting methods,\textsuperscript{145} consider two identical companies that have excess allowances to sell. If the first company recognizes the allowances as assets while the second company merely mentions the extra allowances in the footnotes to its financial statements, the first company may appear financially stronger when compared to the second.\textsuperscript{146} This discrepancy would result in inefficient valuation by the market. Uniformity in accounting standards could prevent such an outcome.\textsuperscript{147}

B. Uniform Accounting Standards Are Promulgated by the FASB and the IASB

To prevent misleading financial statements, all publicly-traded U.S. companies must follow Generally Accepted Accounting Principles (GAAP), a set of rules promulgated with help from the Financial Accounting Standards Board (FASB)\textsuperscript{148} under the regulatory authority of the SEC.\textsuperscript{149} Due to the need for a common global conceptual accounting framework, efforts to align GAAP with the international accounting standards known as International Financial Reporting Standards (IFRS) have increased in recent years.\textsuperscript{150} The International Accounting Standards Board (IASB) promulgates IFRS, which companies throughout the world follow.\textsuperscript{151}

Neither IFRS nor GAAP provides clear guidance on accounting for cap-and-trade allowances.\textsuperscript{152} As a result, companies disclose greenhouse

\textsuperscript{143} See id.
\textsuperscript{144} See Stickney & Weil, supra note 115, at 674–75.
\textsuperscript{145} See id. at 20 (discussing the need for uniformity in selecting accounting methods across firms).
\textsuperscript{146} See id. at 9 (stating that assets have the potential to provide benefits to a firm). The dollar value of assets held by the first company will be higher than the assets of the second. Id. Thus, even though both companies are identical, one will be deemed to be in a stronger financial position than the other. Id.
\textsuperscript{147} See id. at 20 (discussing the benefits of uniformity in accounting methods).
\textsuperscript{152} See Lugo, supra note 6.
gas emissions in varying manners,\(^{153}\) highlighting the need for an accounting framework companies can apply consistently.\(^{154}\) Even when commentators agree that allowances should be presented in financial statements, determining how to measure allowances still remains open to debate.\(^{155}\) Not only do companies vary in whether they display allowances quantitatively or qualitatively, but they also differ in their methods for listing and quantifying disclosures.\(^{156}\) In a study of 125 financial statements filed between 2000 and 2004, 61 companies (or 49\%) did not disclose allowances at all, while 47 (or 37\%) qualitatively disclosed allowances, and only 17 (or 14\%) had some form of quantitative disclosure.\(^{157}\)

Because methods of accounting for allowances are diverse both internationally and in the United States, the IASB and the FASB recognize the need to set concrete regulations for allowance accounting.\(^{158}\) The FASB and the IASB are currently in the process of developing these standards.\(^{159}\)

### III. Authoritative and Voluntary Regulations for Allowances Accounting

#### A. Current Authoritative Regulations on Accounting for Greenhouse Gas Emissions

During debate over accounting for allowances at the Financial Accounting Standards Board (FASB),\(^{160}\) the SEC issued an interpretive release titled *Commission Guidance Regarding Disclosure Related to Climate Change* in response to increased public discussion of the topic.\(^{161}\) The release clarifies the SEC’s views on proper accounting for climate change under existing law,\(^{162}\) and provides qualitative guidance, sug-

\(^{153}\) See Ragan & Stagliano, *supra* note 4, at 55 tbl.4.

\(^{154}\) See Ernst & Young, *supra* note 11, at 5.

\(^{155}\) See Lugo, *supra* note 6 (discussing differences between the IASB’s and FASB’s approach to allowance accounting).


\(^{157}\) Id.

\(^{158}\) See *Project Updates, supra* note 7.

\(^{159}\) See Lugo, *supra* note 6; *Project Updates, supra* note 7.

\(^{160}\) See Lugo, *supra* note 6.


\(^{162}\) See id. Accounting standards are generally governed by Regulation S-K, Regulation S-X, the Securities Act Rule 408, and Exchange Act Rule 12b-20. Id. The SEC guidance considers how non-financial statement disclosure rules should be applied to climate change issues. Id.
gesting reporting locations, descriptions, and methods for describing assessments of risks.\textsuperscript{163}

In its release, the SEC suggests that companies include environmental considerations in the description of their business.\textsuperscript{164} For example, companies should note the costs of compliance with environmental laws, and report costs related to capital expenditures required to bring them into compliance with regulations.\textsuperscript{165} In addition, the SEC encourages companies to describe legal proceedings related to non-compliance with environmental laws, unless the proceedings are considered “ordinary routine litigation incidental to . . . business.”\textsuperscript{166}

Further, the SEC discusses the relevance of the “Management Discussion and Analysis” section of financial statements, stating that companies should disclose known trends likely to have a material impact on financial position.\textsuperscript{167} In this section, management must disclose information about the quality and variability of the company’s earnings so external users can evaluate the degree to which current financial statements predict future financial position.\textsuperscript{168} Management may need to reveal potential impacts of a cap-and-trade system on future financial position.\textsuperscript{169}

In its release, the SEC also notes that financial statements should present potential risks related to climate change.\textsuperscript{170} In the footnotes to the financial statements, a section titled “Risk Factors” should discuss significant issues that could put the company’s financial position at

\textsuperscript{163} See id. at 6293–94 (noting a list of non-quantitative disclosures).
\textsuperscript{164} See id. at 6293.
\textsuperscript{165} See id.
\textsuperscript{166} Id. The legal proceedings may or may not need to be disclosed in the financial statements. See id. The SEC states that litigation is not to be considered ordinary or incidental, and hence must be disclosed, when: 1) the proceeding is material to the business’ financial position; 2) the potential amount of liability exceeds ten percent of current assets; or 3) the government is a party to the litigation and monetary sanctions will likely exceed $100,000. See id. at 6293–94.
\textsuperscript{168} See id., at 6293. The SEC acknowledges that a company may be uncertain about how environmental issues will affect the business in the future. See id. Management need only report environmental concerns in the “Management Discussion and Analysis” section if the issue is considered material to financial position. See id. In evaluating the materiality of a future environmental concern, management must first consider whether the event is reasonably likely to occur. See id. at 6295. Second, if management cannot come to a conclusion about the likelihood of occurrence, it must consider the consequences of the event assuming that it will occur and whether or not those consequences will be material to the company’s financial position. See id.
\textsuperscript{169} See id. at 6290–91.
\textsuperscript{170} See id. at 6290–94.
risk. The risk of a potential impact of future environmental legislation or regulation on the company’s financial position should be disclosed if it is reasonably likely to be enacted, or assuming it is enacted, is reasonably likely to materially affect the company’s financial position. Possible consequences of cap-and-trade regulation include expenses or profits related to sales of allowances, costs to improve facilities for compliance with emissions limitations, and changes in demand resulting from alterations in prices for goods and services. The SEC even suggests that the physical effects of climate change, if particularly significant to a business, should be noted in the financial statements. These physical effects include “the severity of weather . . . sea levels, the arability of farmland, and water availability and quality.” The SEC’s interpretive release serves as valuable guidance on federal securities laws and regulations to the business community.

B. Voluntary Reporting Regimes

In addition to authoritative guidance, companies may also look for accounting guidance from independent bodies that support voluntary environmental reporting standards. Optional compliance may be in the best interests of a company that wishes to avoid a reputation for causing environmental harm. One such program is The Climate Registry, which implements standards in North America “to calculate, verify and publicly report . . . [businesses’] carbon footprints in a single, unified registry.” The Registry’s goal is to provide transparency to the public regarding greenhouse gas (GHG) emissions. Public reports on each participating company include information about direct and

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171 See id. at 6294.
172 See id. at 6296.
174 See id. at 3.
175 See Ass’n of Wash. Cities, supra note 22, at 2.
177 Id.
179 See Deatherage, supra note 13, at 39.
180 See id.
182 See id.
indirect emissions, geographic area impacted, and presentation of emissions over multiple years.\textsuperscript{183}

A similar institution, the Carbon Disclosure Project, works with more than 650 institutional investors to gather GHG emissions data.\textsuperscript{184} The Project seeks to curb global warming by making information about emissions available to large investors, potentially impacting investment decisions.\textsuperscript{185} Reporting to the Project can help companies gain a reputation as leaders in GHG emissions reductions.\textsuperscript{186}

A third voluntary regulatory body, the Global Reporting Initiative, publishes sustainability reports on participating companies.\textsuperscript{187} The Initiative establishes metrics by which participating entities can compare and measure their “economic, environmental, social, and governance performance.”\textsuperscript{188} It focuses on reporting information relating to environmental practices of companies throughout the world.\textsuperscript{189} Voluntary reporting regimes can be an important source of public information on environmental compliance.\textsuperscript{190} True transparency, however, only comes with nondiscretionary disclosures.\textsuperscript{191}

IV. Accounting for Allowances: An Analysis

Although the United States does not have a federal climate change program,\textsuperscript{192} recent proposals for regulations that would limit greenhouse gas (GHG) emissions show that such federal legislation may be forthcoming.\textsuperscript{193} One can make predictions about the potential features of a future federal carbon cap-and-trade program based on analogous

\begin{footnotesize}
\begin{itemize}
\item\textsuperscript{183} See Public Reports, CLIMATE REGISTRY, http://www.theclimateregistry.org/public-reports/ (last visited May 15, 2012).
\item\textsuperscript{184} See CDP Investor Initiatives, CARBON DISCLOSURE PROJECT, https://www.cdproject.net/en-US/WhatWeDo/Pages/investors.aspx (last visited May 15, 2012).
\item\textsuperscript{185} See id.
\item\textsuperscript{187} About GRI?, GLOBAL REPORTING INITIATIVE, https://www.globalreporting.org/information/about-gri/Pages/default.aspx (last visited May 15, 2012).
\item\textsuperscript{188} See id.
\item\textsuperscript{189} See id.
\item\textsuperscript{190} See Deatherage, supra note 13, at 39.
\item\textsuperscript{192} See Howland, supra note 56, at 414.
\item\textsuperscript{193} See Richards & Richards, supra note 55, at 3–4.
\end{itemize}
\end{footnotesize}
state and regional programs.\textsuperscript{194} Potential cap-and-trade systems are likely to revolve around both allowance requirements for emissions and an emissions trading market with ready buyers.\textsuperscript{195}

Despite the lack of a federal emissions trading system, foreign cap-and-trade regulations will continue to apply to U.S. companies operating abroad.\textsuperscript{196} The European Union Emissions Trading System demonstrates that such programs can be implemented successfully on a large scale,\textsuperscript{197} while the Kyoto Protocol highlights a global trend towards using permits and other market mechanisms to regulate pollution.\textsuperscript{198} Even if Congress does not pass GHG cap-and-trade legislation, accounting for allowances within an emissions trading framework will still be a relevant issue for U.S. companies facing existing foreign and state cap-and-trade regulations.\textsuperscript{199}

The underlying policy goals of cap-and-trade legislation are to control pollution\textsuperscript{200} and incentivize businesses to implement greener, more environmentally friendly methods of operation.\textsuperscript{201} Generally, the government reduces emissions limits over time until emission targets are met.\textsuperscript{202} When the government reaches its target, it has achieved its ultimate goal of creating a more sustainable environment.\textsuperscript{203} The current system of accounting for allowances does not facilitate accomplishment of this goal.\textsuperscript{204}

Currently, no system exists for accounting for, and reporting on, cap-and-trade programs.\textsuperscript{205} Additionally, there are no comprehensive regulations imposing uniform accounting standards for cap-and-trade

\textsuperscript{194} See Keenan, \textit{supra} note 76, at 169 (describing states as laboratories for experimenting with new ideas for emissions reduction programs).
\textsuperscript{195} See \textit{id.} at 187–88.
\textsuperscript{196} See Deatherage, \textit{supra} note 13, at 35.
\textsuperscript{197} See \textit{EU ETS, supra} note 35.
\textsuperscript{198} See \textit{Emissions Trading, supra} note 107.
\textsuperscript{199} See Deatherage, \textit{supra} note 13, at 35.
\textsuperscript{200} See \textit{Ass’n of Wash. Cities, supra} note 22, at 1–2.
\textsuperscript{201} Keeler, \textit{supra} note 48, at 24 (indicating that a company may purchase allowances rather than invest in greener technology). For example, businesses may take meaningful steps towards reducing GHGs in the environment by investing in cleaner technologies or by redesigning distribution systems to reduce the need for transportation. \textit{E.g.}, \textit{id.} (discussing the decision to buy allowances or develop green technology).
\textsuperscript{202} See \textit{Ctr. for Am. Progress, supra} note 51, at 1.
\textsuperscript{204} See Ragan & Stagliano, \textit{supra} note 4, at 56 (stating that the current accounting model may simply be “inadequate to deal with the matter of cap-and-trade permits”).
\textsuperscript{205} See \textit{Ernst & Young, supra} note 11, at 5.
related issues. Accordingly, businesses use a variety of accounting methods and reporting techniques. When companies do not use the same accounting methods, businesses’ cap-and-trade compliance levels may be difficult to compare, and thus police.

Furthermore, market participants may not realize which businesses consistently purchase large quantities of allowances or pay fines for noncompliance. Although companies that pay fines or purchase large numbers of allowances comply with cap-and-trade laws, such behavior is not consistent with the purpose behind the legislation—to promote a greener and more sustainable environment. Because businesses do not provide clear and uniform disclosures of cap-and-trade impacts to the market, market participants will not be able to police such companies. Changes in business behavior will not occur unless shareholders understand the business’s attitude toward pollution.

Ultimately, the lack of information available to market participants results in a lost opportunity for increasing the effectiveness of cap-and-trade regulation in relation to its underlying policy goals. Market participants may be helpful in pressuring companies to develop operations consistent with the spirit of cap-and-trade legislation. Although cap-and-trade regulators can ensure compliance with the law, market participants may help to promote the internalization of the cost of pollution to companies. Such market pushback against

206 See id.
207 See Ragan & Stagliano, supra note 4, at 54–55.
208 See id. at 56.
209 See id. at 55 (indicating that forty-nine percent of firms fail to account for cap-and-trade allowances); Robert Freehling, Carbon Markets: Buying and Selling the Right to Pollute, Iowa Sierran (Sierra Club Iowa Chapter, Des Moines, Iowa), Summer 2009, at 1, available at http://iowa.sierraclub.org/Summer09IaSierran.pdf (discussing a company’s ability to “buy their way out of reducing emissions” by purchasing many allowances).
210 See, e.g., Ernst & Young, supra note 11, at 2 (noting that entities emitting more than allowed limits must buy permits or pay a penalty).
212 See Stickney & Weil, supra note 115, at 20 (describing the need for uniformity in selecting accounting methods to provide clarity to financial statements).
213 See Bartels, supra note 5, at 333 (describing shareholders’ ability to influence environmental reform).
214 See id.
215 See id.
217 See Bartels, supra note 5, at 333.
excessively polluting corporations could have a real impact on decreasing emissions.\textsuperscript{218}

For markets to police companies, however, there must be uniform and transparent disclosure of cap-and-trade’s impact on businesses’ financial statements.\textsuperscript{219} The Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) initiative will hopefully provide a solution to this issue.\textsuperscript{220} In evaluating any system of allowance accounting, one must keep the ultimate goals of GHG cap-and-trade in mind.\textsuperscript{221}

The next section presents a proposal for balance sheet disclosure of cap-and-trade allowances, illustrating a method of transparent disclosure that would accomplish this goal. The proposal involves classifying allowances as assets, measured at fair market value.\textsuperscript{222} It also suggests classifying emissions that exceed currently-held allowance thresholds as “Accrued Expenses” until fines are paid or allowances are purchased.\textsuperscript{223}

A. A Transparent System: Allowances as Assets, and Pollution over Allowance Amounts as Accrued Expenses

Companies should classify currently held allowances as assets on the balance sheet.\textsuperscript{224} A company will derive future benefits from holding an allowance because the allowance will enable it to produce a certain amount of GHGs in the production of goods and services.\textsuperscript{225} When the production process necessarily involves the emission of GHGs, the allowance benefits the company by letting it bring products to the market.\textsuperscript{226} Such an allowance can be categorized as an asset. Further, many cap-and-trade programs let companies freely trade allowances, such that a company could gain from selling an allowance at a different price from when it was purchased.\textsuperscript{227} Therefore, allowances not only

\textsuperscript{218}See id.

\textsuperscript{219}See Stickney & Weil, supra note 115, at 20 (describing the need for uniformity in selecting accounting methods to provide clarity to financial statements).

\textsuperscript{220}See Project Updates, supra note 7.

\textsuperscript{221}See Ass’n of Wash. Cities, supra note 22, at 1–2 (stating that “[c]ap and trade sets the limit for emissions and lets the market work out the costs of hitting that limit”).

\textsuperscript{222}See infra notes 224–249 and accompanying text.

\textsuperscript{223}See infra notes 224–249 and accompanying text.

\textsuperscript{224}See Lugo, supra note 6 (stating that the FASB and the IASB have “tentatively agreed that purchased and allocated allowances . . . should be recognized as assets”).

\textsuperscript{225}See Cong. Budget Office, supra note 2, at 1; see also id. (stating that “[a]llowances are certificates, similar to a currency, that can be used to settle scheme liabilities”).

\textsuperscript{226}See Stickney & Weil, supra note 115, at 9 (describing assets as having potential to provide benefit to a firm).

\textsuperscript{227}See Ernst & Young, supra note 11, at 6.
provide value to a company by enabling it to continue to produce goods and services, but also by serving as quasi-investments which can be traded when not needed.\(^{228}\)

When a company purchases an allowance on the emissions trading market, it should increase its “Allowance Asset” account and decrease the “Cash” or “Payable Account.”\(^{229}\) The company should value the initial purchase at acquisition cost, fixing the dollar amount of the “Allowance Asset” account at the dollar amount of the cash outlay required to purchase the allowance.\(^{230}\) Furthermore, when a company uses an allowance by emitting the quantity of pollution authorized, the “Allowance Asset” must be decreased to reflect the reduction in the asset.\(^{231}\) Recording a corresponding allowance expense will decrease net income, forcing companies to list the costs of pollution on the income statement.\(^{232}\)

Financial statements are most useful when they present accurate information.\(^{233}\) Accordingly, companies should make year-end adjustments to the carrying value of “Allowance Asset” accounts to fair market value.\(^{234}\) When the price of an allowance increases in the emissions trading market over the prior year’s value, the “Allowance Asset” should increase by the difference between the prices, with a corresponding increase in the equity account “Unrealized Gain on Allowance.”\(^{235}\) Making these adjustments will ensure companies record allowances at fair market value.\(^{236}\)

When a company sells an allowance, the “Allowance Asset” account must be decreased by the dollar amount of the sale to reflect the

\(^{228}\) See id. at 18.

\(^{229}\) See, e.g., Dyckman et al., supra note 114, at 568 (describing accounting procedures for the purchase of an asset).

\(^{230}\) See Stickney & Weil, supra note 115, at 45.

\(^{231}\) See Dyckman et al., supra note 114, at 550 (indicating that assets can be viewed as “economic service[s] . . . to be consumed over time in the earning of revenues”). This can be accomplished by debiting the “Allowance Expense” account and crediting the “Allowance Asset” account. See id. at 75 (describing the process for reducing the carrying value of an asset and the corresponding expense).

\(^{232}\) See Stickney & Weil, supra note 115, at 11 (indicating that expenses decrease net income and must be reported on the income statement).

\(^{233}\) See id. at 790 (discussing the benefits of accurately presenting financial information).

\(^{234}\) See id. at 600 (describing adjustments of investment assets to market value).

\(^{235}\) See id. Alternatively, if the price of an allowance has decreased, an “Unrealized Loss on Allowance” account should be debited and the “Allowance Asset” should be credited. See id.

\(^{236}\) See id.
change in benefits held by the company.\textsuperscript{237} If adjustments have been made to mark the “Allowance Asset” account to fair market value, the “Unrealized Gain on Allowance” account should be decreased and a “Realized Gain on Allowance” recognized instead.\textsuperscript{238} Realized gains and losses on allowance assets will impact net income, whereas unrealized gains and losses will affect other comprehensive income on the income statement.\textsuperscript{239}

A company should recognize an accrued expense in situations where the company emits more carbon than its current allowance holdings will permit.\textsuperscript{240} The financial statements would then accurately present a company’s true financial position at year end because the cap-and-trade regulator will force the company to either pay a fine or purchase more allowances on the market.\textsuperscript{241} Recognition of an accrued expense will enable the company to record this required future cash outlay in the period in which the event causing the need for the expense actually occurred.\textsuperscript{242} The company would recognize in the present that it will need to purchase allowances in the future.\textsuperscript{243}

Accordingly, a company that exceeded emissions levels authorized by its currently held allowances should record an increase to a “Pollution Fine Expense” account and a decrease to a “Pollution Fine Payable” account.\textsuperscript{244} The accounts should be valued at the cost of the fine the company would be required to pay to the regulator should it not be

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\item \textsuperscript{237} Id. at 56. In addition to decreasing an asset account, a cash or receivable account should be increased to reflect the money that the firm has received from purchasers. See id.
\item \textsuperscript{238} See Stickney & Weil, supra note 115, at 600. Alternatively, if the “Allowance Asset” account has been adjusted down to fair market value, a “Loss on Allowance” account should be debited and the “Unrealized Loss on Allowance” account should be credited. See id.
\item \textsuperscript{239} See id. at 674–75.
\item \textsuperscript{240} See Dyckman et al., supra note 114, at 72–74 (describing accrued expenses); cf. Ernst & Young, supra note 11, at 6 (“[T]he entity generally does not record an obligation to deliver emissions credits to the regulatory agency until the actual level of emissions for a given period exceeds the credits held on the balance sheet.”).
\item \textsuperscript{241} See Dyckman et al., supra note 114, at 72 (describing the importance of accruals to the accuracy of financial statements); Ernst & Young, supra note 11, at 2 (describing the company’s need to either purchase allowances or pay a fine, should emissions exceed the limits corresponding to currently held allowances).
\item \textsuperscript{242} See Dyckman et al., supra note 114, at 72–73.
\item \textsuperscript{243} See id. at 73.
\item \textsuperscript{244} See id. at 72–74 (describing accrued expenses); Ernst & Young, supra note 11, at 6. The “Pollution Fine Payable” account is a liability, because it represents the company’s future obligation to pay the fine resulting from its current excess pollution. See Stickney & Weil, supra note 115, at 66 (indicating that payable accounts are liabilities).
\end{enumerate}
\end{footnotesize}
able to secure needed allowances. If the company purchases allowances to cover its excessive pollution, it can reverse its original accounting entry by decreasing “Pollution Fine Payable” and increasing “Pollution Fine Expense.” If the company ultimately decides to pay the fine instead of securing more allowances, it may record that loss as a decrease in “Pollution Fine Payable” and “Cash” to represent payment of the fine. Pollution fine expenses will immediately decrease net income, while cash outlays related to purchasing allowances will not impact the income statement until the allowances are used.

B. A Solution to the Problem: The Transparent System

The proposed transparent accounting system will increase the effectiveness of cap-and-trade legislation. Providing a uniform method of accounting that brings transparency to cap-and-trade financial information gives market participants increased ability to evaluate a company, potentially increasing the private policing of polluting businesses. With this information, analysts may easily compare usage of allowances between companies, and will be able to identify companies that must pay fines for violations of cap-and-trade laws. Market actors will be able to hold polluting companies accountable for their actions and will have a concrete basis to demand change.

245 See Ernst & Young, supra note 11, at 6. I posit that valuing the expense at the cost of a future fine, as opposed to the cost of purchasing allowances, is most in keeping with accounting’s commitment to conservatism, since companies cannot guarantee that they will be able to purchase allowances from either the government or a private seller in the future. See Dyckman et al., supra note 114, at 45 (describing conservatism).

246 See Stickney & Weil, supra note 115, at 66 (indicating that payable accounts are liabilities).

247 See id. at 52 (indicating that most liabilities require payment of cash).

248 See id. at 11 (indicating that expenses decrease net income).

249 See supra notes 240–241 and accompanying text. When allowances are used, the allowance asset is decreased and an allowance expense is recognized on the income statement. See supra notes 240–241 and accompanying text.

250 See Stickney & Weil, supra note 115, at 20 (describing the need for uniformity in selecting accounting methods to improve clarity in financial statements).

251 See Bartels, supra note 5, at 333 (describing shareholders’ ability to push for environmental reform).

252 Cf. Ragan & Stagliano, supra note 4, at 56 (describing problems with the adequacy of financial statements when identical companies make different disclosures).

253 See supra notes 244–249 and accompanying text (describing the impact of fines on the income statement).

254 See Bartels, supra note 5, at 333 (describing shareholders’ ability to push for environmental reform).
In addition to facilitating market access to information, the accounting system itself may impact the company because it may change its operations to appear financially sound.\textsuperscript{255} Foremost, forcing companies to recognize and separately disclose pollution fine and allowance expenses will have a direct impact on net income.\textsuperscript{256} While a decrease in net income itself is likely to draw the attention of shareholders,\textsuperscript{257} incentive-based compensation to executives will also decrease.\textsuperscript{258} Thus, when corporate decision makers stand to lose significant portions of their compensation, they may be more likely to ensure compliance with the spirit of cap-and-trade laws.\textsuperscript{259} Management response may include investment to reduce the amount of allowances necessary, thus avoiding fines and related expenses on their income statement.\textsuperscript{260}

Moreover, because this accounting methodology calls for quantitatively displaying allowances on financial statements,\textsuperscript{261} it forces companies to internalize the costs of GHG emissions.\textsuperscript{262} By assigning a dollar amount to the emitted pollution, even companies that pollute within their allowance range may be forced to recognize the extent to which they harm the environment.\textsuperscript{263} If allowance expenses substantially decrease a company’s profits, then the company may be polluting more than the total social utility of its goods.\textsuperscript{264} Companies that must purchase large quantities of allowances may be unable to remain competitive as a result.\textsuperscript{265} In this way, allowance accounting can help market actors take into account the social utility of an enterprise and its impact on the environment.

\textsuperscript{255} See Stickney & Weil, supra note 115, at 21 (describing efficient capital markets as reacting quickly to financial information when valuing stocks).
\textsuperscript{256} See supra notes 233–255 and accompanying text.
\textsuperscript{257} See generally Stickney & Weil, supra note 115, at 12 (discussing net income as indicating a firm’s accomplishments relative to expenses).
\textsuperscript{258} See supra notes 131–147 and accompanying text.
\textsuperscript{259} See supra notes 131–147 and accompanying text.
\textsuperscript{260} See supra notes 131–147 and accompanying text.
\textsuperscript{261} See supra notes 224–249 and accompanying text.
\textsuperscript{262} See Bartels, supra note 5, at 304 (discussing the goal of holding “management accountable for their actions”).
\textsuperscript{263} See supra notes 233–262 and accompanying text.
\textsuperscript{264} See Cong. Budget Office, supra note 2, at 6 (noting that “higher allowance prices could lead to greater-than-expected reductions in profits”).
\textsuperscript{265} See Ass’n of Wash. Cities, supra note 22, at 2.
Conclusion

As cap-and-trade programs increase in popularity around the world, pressure on the U.S. government to pass federal greenhouse gas emissions trading legislation continues to build. Whether the United States implements such a system, emissions trading abroad has become an accepted part of international business. With several recent proposals for a federal cap-and-trade program and new regional emissions trading initiatives, it appears that wide-scale emissions trading regimes may be law in the United States in the near future. Furthermore, the interdependent nature of the global economy ensures that U.S. businesses will face accounting for emissions in foreign emissions trading regimes.

The accuracy of accounting information is essential to uphold the integrity of global financial systems, and therefore non-voluntary, non-discretionary accounting standards must be established. Although current SEC regulations describe procedures for reporting locations, descriptions, and assessments of risk, they do not specify a standard measurement methodology. Voluntary reporting regimes provide some guidance on accounting methods, but ultimately do not create the uniform, authoritative standards needed.

Cap-and-trade regulations will be most effective when allowances appear as assets on the balance sheet, and pollution in excess of allowances appears as accrued expenses. Presenting a company’s financial position according to this method will hold companies most accountable to the investing public. Under this proposal, allowance trading may impact net income, potentially incentivizing increased manager responsiveness to the goals of cap-and-trade programs. This method would also cause companies to internalize the costs of pollution. Requiring companies to accurately account for emissions trading is one of the best ways to ensure true compliance with any cap-and-trade system.