An Empirical Investigation of Judicial Decisionmaking, Statutory Interpretation & the Chevron Doctrine in Environmental Law

Jason J. Czarnezki
AN EMPIRICAL INVESTIGATION OF JUDICIAL DECISIONMAKING, STATUTORY INTERPRETATION & THE CHEVRON DOCTRINE IN ENVIRONMENTAL LAW

JASON J. CZARNEZKI†

ABSTRACT

How do the United States Courts of Appeals decide environmental cases? More specifically, how do courts evaluate decisions of statutory interpretation made by government agencies that deal in environmental law? While research on judicial decisionmaking in environmental law has primarily focused on the D.C. Circuit, the Environmental Protection Agency, and the influence of ideology, only recently have legal scholars begun to consider the role of legal factors in judicial decisionmaking in environmental law. Yet, more can be learned about environmental jurisprudence outside the District of Columbia, the “other” environmental agencies, and the influence of legal interpretive approaches and legal doctrine—as opposed to ideology—in environmental law cases. With special attention paid to how courts implement the Chevron doctrine, this Article empirically and doctrinally analyzes environmental law cases decided in the U.S. Courts of Appeals over a three-year period (2003-2005) to investigate what factors, including

† Assistant Professor of Law, Marquette University Law School; A.B., J.D., University of Chicago
I wish to thank Sara Benesh, David Fagundes, William Ford, David Franklin, Jacob Gersen, Rachel Godsil, Andrew Gold, Dan Ho, Jonathan Nash, Anne Joseph O’Connell, Michael O’Hear, Chad Oldfather, Tammy Sarver, Andrea Schneider, Carolyn Shapiro, Lisa Schultz Bressman, Stephanie Tai, Shirley Wiegand, and Kira Zaporski, as well as participants in the Midwest Law & Society Retreat, Marquette University Law School Faculty Workshop Series, Seton Hall University School of Law Faculty Colloquium, and Chicago Junior Faculty Workshop, for their helpful comments and suggestions. I also wish to thank Gahan Christenson, Melissa McCord, and Timothy Johnson for their research assistance.
ideological, legal and institutional variables, impact judicial review of administrative agency interpretations of environmental statutes.

Relying on empirical analysis and descriptive data, this Article finds that environmental cases of statutory interpretation, usually litigated in the D.C., Second and Ninth Circuits, are dominated by EPA involvement and interpretation of the Clean Air and Clean Water Acts. This Article’s findings confirm earlier research that judges vote in their perceived ideological direction and show the Chevron doctrine, when employed in environmental cases, works as expected—courts find most statutory provisions ambiguous and then affirm agency action. There is limited evidence that judges strategically use Chevron step one to achieve desired policy preferences—at the ideological extremes, conservatives deferred to Bush Administration agencies under Chevron step two, while liberals were more likely to reverse the agency by finding the statute unambiguous under step one. Legal preferences, however, do play some role in judicial decisionmaking, and not necessarily to achieve an individual judge’s policy preferences. Invoking legislative history mildly corresponds to a liberal vote, yet ideology does not predict its invocation—suggesting a judicial philosophy toward legislative history actually impacts voting outcomes and lends support for the legal model of judicial decisionmaking.

This Article also makes a number of qualitative findings. Doctrinally, there remains much confusion and conflation in the circuits over how to apply the Chevron doctrine, manifested through poor opinion organization, befuddlement over the application of Chevron step zero, and multiple understandings of the difference between arbitrary and capricious review and the two Chevron steps. The circuits have shown, however, a strong willingness to defer, under any doctrine or framework, to agency action when environmental scientific expertise is required. Ultimately, this Article supports a more nuanced notion of judging in environmental cases that depends upon policy preferences, interpretive philosophies, standards of review, and scientific complexity.
# TABLE OF CONTENTS

**INTRODUCTION**...4

**II. JUDICIAL REVIEW OF AGENCY INTERPRETATIONS OF ENVIRONMENTAL LAW**...7  
A. THE *CHEVRON* DOCTRINE IN ENVIRONMENTAL LAW...7  
   1. *CHEVRON* STEP ONE...8  
   2. *CHEVRON* STEP TWO...10  
B. *CHEVRON* STEP ZERO AND ALTERNATIVE FORMS OF JUDICIAL DEERENCE...11  
C. ARBITRARY AND CAPRICIOUS REVIEW—THE HARD LOOK DOCTRINE...13

**III. JUDICIAL DECISIONMAKING IN ENVIRONMENTAL AND ADMINISTRATIVE LAW**...14

**IV. EMPIRICAL RESEARCH DESIGN**...19  
A. DATA AND CODING METHODOLOGY...19  
B. RESEARCH QUESTIONS AND HYPOTHESES...22

**V. ENVIRONMENTAL LAW IN THE COURTS OF APPEALS: EMPIRICAL FINDINGS AND OBSERVATIONS**...24  
A. DESCRIPTIVE INFORMATION...24  
B. THE ROLE OF IDEOLOGY...27  
C. DOES *CHEVRON* WORK AS EXPECTED?...29  
D. USING *CHEVRON* STRATEGICALLY IN ENVIRONMENTAL CASES...32  
E. THE USE OF LEGISLATIVE HISTORY...36

**VI. DOCTRINAL ANALYSIS**...37  
A. OPINION ORGANIZATION...38  
B. DOCTRINAL CONFUSIONS AND CONTRADICTIONS...41  
   1. DOES *CHEVRON* APPLY?...41  
   2. THE TWO-STEP?...42  
   3. *CHEVRON* STEP TWO VERSUS THE APA...43  
C. TOOLS OF STATUTORY INTERPRETATION...44  
D. ENVIRONMENTAL SCIENCE & LAW...48

**CONCLUSION**...53
INTRODUCTION

How do the United States Courts of Appeals decide environmental cases? More specifically, how do courts evaluate the decisions of statutory interpretation made by government agencies that deal in environmental and natural resources law such as the United States Environmental Protection Agency (“EPA”), Army Corps of Engineers, and the Department of the Interior? While research on judicial decisionmaking in environmental law has primarily focused on the D.C. Circuit, the EPA, and the influence of ideology, only recently have legal scholars begun to consider the role of legal factors in judicial decisionmaking in environmental law. Yet, more can be learned about environmental jurisprudence outside the District of Columbia, the “other” environmental agencies, and the influence of legal interpretive approaches and legal doctrine—as opposed to ideology—in environmental law cases.

A number of factors influence judicial interpretation of environmental law. To lawyers and most legal scholars, law itself is the most obvious influence. In environmental cases, judges may look to any number of interpretive tools including the statute’s underlying purpose, legislative history, and plain meaning of the text. Of great significance, administrative law’s *Chevron* doctrine has transformed judicial review of agency interpretations of federal statutes. The doctrine, laid down by the U.S. Supreme Court in *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, is the most cited case in all American law, and permits extreme deference to administrative agencies if statutory provisions are ambiguous. Ironically, *Chevron* also was voted one of the country’s most

---


3 See Martha Anne Humphries & Donald R. Songer, *Law and Politics in Judicial Oversight of Federal Administrative Agencies*, 61 J. Pol. 207, 212 (1999) (“A major impediment to empirical attempts to assess the impact of the legal model on appellate court decision making has been the difficulty of identifying objective indicators that capture the effects of law and precedent.”).

4 See Part II infra.


6 Miles & Sunstein, *supra* note __, at 823 (“In the past quarter century, the Supreme Court has legitimated agency authority to interpret regulatory legislation, above all in *Chevron U.S.A., Inc v Natural Resources Defense Council, Inc*, the most cited case in modern public law.”).

7 *Chevron*, 467 U.S. at 842-843.
important environmental law cases, and is included in most environmental law casebooks.

These legal factors elicit a number of questions—Do invocations of certain interpretive tools or standards of review lead to pro- or anti-environmental outcomes? In environmental cases, do judges strategically use the Chevron doctrine, because of its potential malleability (e.g., gaming the use of step one), to achieve their perceived environmental policy preferences? While no data are available to answer the former question, recent data suggest the answer to the second inquiry may be affirmative.

Meanwhile, for political scientists and, more recently, some legal scholars, ideology plays the most salient role in judicial decisionmaking. The available data suggest that ideology significantly influences judicial decisionmaking in environmental cases on the D.C. Circuit, and Democratic judicial appointees are more likely to vote against challenges to EPA regulations, whereas Republican appointees are far less likely to do so.

Employing both empirical and traditional doctrinal analysis, this Article considers environmental law cases decided in the U.S. Courts of Appeals over a three-year period (2003-2005) to describe and investigate what factors, including ideological, legal and institutional variables, impact judicial review of administrative agency interpretations of environmental statutes. Part II of this Article discusses judicial review of agency interpretation of environmental law.

---

8 Unscientific Web survey of environmental law professors and practitioners by Professor Jim Salzman, Duke Law School (survey results on file with author).


10 Miles & Sunstein, supra note ___, at 823 (analyzing appellate court decisions from 1990 to 2004, and finding that Republican appointees demonstrated a greater willingness to invalidate liberal agency decisions and those of Democratic administrations).


12 Revesz, supra note ___, at 1719.

13 Sunstein, Schkade & Ellman, supra note ___, at 322-23.
Part III discusses in more detail the empirical scholarship on judicial decisionmaking in environmental and administrative law, focusing on the role of the legal and attitudinal model, as well as institutional constraints on the judicial process. Part IV explains the data and methodology for this study, while Part V contains findings that describe the environmental law docket in the courts of appeals, provides information on how the docket is divided across the circuits and agencies, and states which environmental statutes are at issue in the courts. Part V also analyzes how the courts of appeals decide environmental cases where agencies have interpreted the underlying federal statute, considering the role of ideology and the strategic use of the *Chevron* doctrine. Part VI provides a doctrinal analysis of how courts have used, sometimes with much difficulty, available standards of review in evaluating agency interpretations of environmental statutes. Part VI also discusses the relationship between the need for scientific expertise in environmental cases and the level of judicial deference.

Relying on empirical analysis and descriptive data, this Article finds that environmental cases of statutory interpretation, usually litigated in the D.C., Second and Ninth Circuits, are dominated by EPA involvement and interpretation of the Clean Air and Clean Water Acts. This Article’s findings confirm earlier research that judges vote in their perceived ideological direction and show the *Chevron* doctrine, when employed in environmental cases, works as expected—courts find most statutory provisions ambiguous and then affirm agency action. There is limited evidence that judges strategically use *Chevron* step one to achieve desired policy preferences—at the ideological extremes, conservatives deferred to Bush Administration agencies under step *Chevron* step two, while liberals were more likely to reverse the agency by finding the statute unambiguous under step one. Legal preferences, however, do play some role in judicial decisionmaking, and not necessarily to achieve an individual judge’s policy preferences. Invoking legislative history mildly corresponds to a liberal vote, yet ideology does not predict its invocation—suggesting a judicial philosophy toward legislative history actually impacts voting outcomes and lends support for the legal model of judicial decisionmaking.

This Article also makes a number of qualitative findings. Doctrinally, there remains much confusion and conflation in the circuits over how to apply the *Chevron* doctrine, manifested through poor opinion organization, befuddlement over the application of *Chevron* step zero, and multiple understandings of the difference between arbitrary and capricious review and the two *Chevron* steps. The circuits have shown, however, a strong willingness to defer, under any doctrine or framework, to agency action when environmental
scientific expertise is required. Ultimately, this Article supports a more nuanced notion of judging in environmental cases that depends upon policy preferences, interpretive philosophies, standards of review, and scientific complexity.

II. JUDICIAL REVIEW OF AGENCY INTERPRETATIONS OF ENVIRONMENTAL LAW

Strong synergies exist between environmental law and administrative law. While *Chevron* creates the standard for deference to administrative agencies, it also is an important case of environmental law. In addition, environmental cases play a major role in administrative law casebooks and in developing the processes under which courts review all agency decisions. This Part describes how (and when pursuant to *Mead*) courts review agency interpretations of environmental statutes using the *Chevron* doctrine, the Administrative Procedure Act, and other forms of deference.

A. THE CHEVRON DOCTRINE IN ENVIRONMENTAL LAW

In *Chevron*, Justice Stevens, writing for the majority of the Court, stated:

> When a court reviews an agency’s construction of the statute which it administers, it is confronted with two questions. First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. If, however, the court determines Congress has not

---


directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute.16

This two-part test would revolutionize judicial review of agency interpretations of substantive federal law, especially in the environmental context.

1. **Chevron Step One.** The *Chevron* opinion itself is the product of an environmental case dealing with an EPA interpretation of the Clean Air Act. The issue in *Chevron* was whether the EPA’s “decision to allow States to treat all of the pollution-emitting devices within the same industrial grouping as though they were encased within a single ‘bubble’ is based on a reasonable construction of the statutory term ‘stationary source’” as defined in the Clean Air Act (“CAA”).17

The court held, in light of the ambiguity of the statutory definition of “statutory source,” the lack of judicial expertise18 in environmental regulation and the lack of political accountability in the judicial branch, that the EPA had developed “a permissible construction of the statute [that sought] to accommodate progress in reducing air pollution with economic growth.”19

EPA regulations permitted a plantwide definition of the term stationary source.20 Under section 111(a)(3) of the CAA, “stationary source” is defined as “any building, structure, facility, or installation which emits or may emit any air pollutant.”21 Had Congress unambiguously determined whether to allow this bubble concept? The Court answered in the negative after considering the statutory language, legislative history, and underlying policy of the CAA.22

However, the determination of whether a statutory provision is ambiguous under *Chevron* step one (and thus leading to agency deference under step two) is

---

16 *Chevron*, 467 U.S. at 842-43.
17 *Id.* at 840.
18 To not overstate the expertise rationale (at least in the Supreme Court), it should be noted that *Mead* “suggests that *Chevron* rests on Congress’s implicit delegation of law interpreting authority to agencies.” Jacob E. Gersen, *Overlapping and Underlapping Jurisdiction in Administrative Law*, ___ SUPREME COURT REV. ___ (forthcoming 2007).
19 *Chevron*, 467 U.S. at 866.
20 *Id.* at 840.
21 *Id.* at 840 n.2.
22 *Id.* at 859-66.
subject to much malleability, for what is (un)ambiguous is often in the eye of the beholder. For example, in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, a case determining the extent to which the Department of the Interior could regulate habitat modification under the Endangered Species Act (“ESA”), both the majority and dissent thought the statutory provision at issue was unambiguous but nevertheless reached opposite conclusions. Footnote nine of *Chevron* states:

> The judiciary is the final authority on issues of statutory construction and must reject administrative constructions which are contrary to clear congressional intent. If a court, employing traditional tools of statutory construction, ascertains that Congress had an intention on the precise question at issue, that intention is the law and must be given effect.

Thus, depending on what a judge considers to be legitimate “traditional tools of statutory interpretation,” he or she may reach a different conclusion in environmental cases under *Chevron* step one. The *Babbitt v. Sweet Home* majority relied not only on the “ordinary understanding” of the statutory text, but also on the ESA’s legislative history and on the underlying purpose of the ESA, to protect animal species that are threatened or on the verge of extinction. Alternatively, Scalia’s dissent in *Babbit v. Sweet Home* focused solely on textualism and the plain meaning of the relevant statutory provisions.

---

24 *Chevron*, 467 U.S. at 843 n.9 (internal citations omitted). *Accord* Chemical Manufacturers Ass’n v. NRDC, 470 U.S. 116, 152 (1985) (Marshall, J., dissenting) (“Chevron’s deference requirement… was explicitly limited to cases in which congressional intent cannot be discerned through the use of the traditional techniques of statutory interpretation.”).
26 *Babbitt*, 515 U.S. at 697 (stating that an “ordinary understanding” of the term at issue supports the Secretary of the Interior’s conclusion).
27 *Id.* at 704 (citing S.Rep. 93-307 p.7 (1973); H.R. Rep. No. 93-412, p.15 (1973)) (noting language in both the Senate and House Reports that the ESA was intended to have the broadest possible meaning).
28 *Id.* at 698 (citing *TVA v. Hill*, 437 U.S. 153, (1978)) (referring to the “broad purpose of the ESA” and stating that the ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation”).
29 *Id.* at 717 (Scalia, J., dissenting).
While the courts have debated the legitimacy of certain tools of statutory interpretation under *Chevron* step one, the employment of any particular tool can cut in both directions. Invocations of legislative history can lead to outcomes that both permit and prohibit expansive regulation of environmental and public health, and the same claim can be made regarding invocations of the plain meaning rule and a literal interpretation of the statutory text.

2. *Chevron* Step Two. If an environmental statutory provision is deemed unambiguous under *Chevron* step one, a court will defer to the agency’s interpretation of the provisions under *Chevron* step two so long as it is a “permissible” or “reasonable” construction of the statute. While *Chevron* step two and the arbitrary and capricious standard used in the hard look doctrine, as discussed below, are doctrinally distinct, many courts view them as meaning reasonable on the merits. The D.C. Circuit, however, has attempted to draw a distinction where *Chevron* step two focuses on the reasonableness of the agency interpretation of law, while arbitrary and capricious review focuses on the reasonableness of the agency’s policy choice. Due to the difficulty in defining step two, courts rarely strike down agency action under step two, and the U.S. Supreme Court has done so arguably only twice.

The case of *Ohio v. Department of Interior* is read in environmental law courses to discuss contingent valuation and nonuse values for natural resources and read in administrative law classes to explain the difference between *Chevron* steps one and two. In *Ohio*, the D.C. Circuit held invalid a regulation,


32 See, e.g., United States v. *Labonte*, 520 U.S. 751, 778 (1997) (citing *Chevron*, supra note ___, at 843-44, 866) (“Were the Commission a typical administrative agency, we would ask whether its ‘policy’ choice is ‘reasonable,’ hence ‘permissible,’ given the statute.”).


34 *Breyer, Stewart, Sunstein & Spitzer*, supra note ___, at 396 (citing Republican Nat’l Comm. v. *FEC*, 76 F.3d 400, 407 (D.C. Cir. 1996); Continental Air Lines v. Dep’t of Transp., 843 F.2d 1444 (D.C. Cir. 1988)).

35 There are two possible candidates: *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 485 (2001); *AT&T Corp. v. Iowa Utilities Bd.*, 525 U.S. 366, 392 (1999); id. at 397-98 (Souter, J., concurring in part, dissenting in part). *See also* Levin, supra note ___, at 1261 (stating that as of 1997, the Court had never struck down an interpretation of a statutory provision under step two).
promulgated under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), limiting recovery to the lesser of restoration cost or lost use value of a natural resource.\textsuperscript{36} CERCLA requires damages used “to restore, replace, or acquire the equivalent of such natural resources.”\textsuperscript{37} But, CERCLA states that damages “shall not be limited… to restore or replace such resources.”\textsuperscript{38} Thus, while it is a possible interpretation of law to consider use values alone under the statutory text, it is not a reasonable interpretation of law. The statute is ambiguous under step one because Congress did not explicitly state what standard should be used to determine damages.\textsuperscript{39} But to limit damages to use value alone is unreasonable under \textit{Chevron} step two.\textsuperscript{40}

B. \textit{Chevron} Step Zero and Alternative Forms of Judicial Deference

“[T]he inquiry that must be made in deciding whether courts should turn to the \textit{Chevron} framework at all” can be called \textit{Chevron} “step zero.”\textsuperscript{41} If the \textit{Chevron} framework does not apply, then courts will turn to some other lower or modified form of deference for agency interpretations of statutes (e.g., \textit{Skidmore} deference\textsuperscript{42}), or perhaps an agency will receive deference because it is interpreting something other than a statute such as its own regulations (e.g., \textit{Seminole Rock} deference\textsuperscript{43}) or because deference is appropriate based on the

\textsuperscript{36} 880 F.2d 432, 444 (D.C. Cir. 1989).
\textsuperscript{37} CERCLA § 107(f), 42 U.S.C. § 9607(f)
\textsuperscript{38} \textit{Id.}
\textsuperscript{40} \textit{Ohio}, 880 F.2d at 462 (“While it is not irrational to look at market price as one factor in determining the use value of a resource, it is unreasonable to view market price as the exclusive factor, or even the predominant one.”).
\textsuperscript{42} \textit{Skidmore v. Swift & Co.}, 323 U.S. 134, 140 (1944) (“We consider that the rulings, interpretations and opinions of the Administrator under this Act, while not controlling upon the courts by reason of their authority, do constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance. The weight of such a judgment in a particular case will depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control.”).
need for scientific expertise. In United States v. Mead Corp., the Supreme Court held,

that administrative implementation of a particular statutory provision qualifies for Chevron deference when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority. Delegation of such authority may be shown in a variety of ways, as by an agency’s power to engage in adjudication or notice-and-comment rulemaking, or by some other indication of a comparable congressional intent.

This Chevron step zero inquiry, however, has proved to be both difficult to doctrinally understand and implement in practice. Professor Lisa Schultz Bressman wrote, “When the Supreme Court decided [Mead]..., Justice Scalia predicted that judicial review of agency action would devolve into chaos.... Justice Scalia actually understated the effect of Mead.”

In his article, appropriately titled Chevron Step Zero, Professor Cass Sunstein attempts to “provide an understanding of the foundations and nature of the Step Zero dilemma” and offers a trilogy of cases to sort out the Chevron framework: Christensen v. Harris County, Mead, and Barnhart v. Walton.

Christensen held that agency “[i]nterpretations such as those in opinion letters - like interpretations contained in policy statements, agency manuals, and enforcement guidelines, all of which lack the force of law - do not warrant Chevron-style deference,” and are “entitled to respect” because of their persuasive authority, a lower form of deference than Chevron known as

---

44 Ass’n of Irritated Residents v. EPA, 423 F.3d 989, 997 (9th Cir. 2005) (citing Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 103 (1983); Central Arizona Water Cons. Dist. v. EPA, 990 F.2d 1531, 1539-40 (9th Cir.1993)) (“This is a determination that is scientific in nature and is entitled to the most deference on review.”). See also Part VI.C. infra.


50 Christensen, 529 U.S. at 587.

51 Id. at 587 (citing Skidmore, 323 U.S. at 140).
Skidmore deference. Mead, like Christensen, confirmed that Skidmore deference survived Chevron, and, as quoted above, clarified the “force of law” test found in Christensen. However, Barnhart indicates that the Chevron framework may be applicable even if an agency acts through less formal means than those suggested by Mead. Barnhart Court: “[T]he interstitial nature of the legal question, the related expertise of the Agency, the importance of the question to administration of the statute, the complexity of that administration, and the careful consideration the Agency has given the question over a long period of time all indicate that Chevron provides the appropriate legal lens through which to view the legality of the Agency interpretation here at issue.” 535 U.S. at 222.

C. ARBITRARY AND CAPRICIOUS REVIEW—THE HARD LOOK DOCTRINE

Under section 706 of the Administrative Procedure Act (“APA”), agency decisions will be overturned if they are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” The doctrine was originally described in Citizens to Preserve Overton Park, Inc. v. Volpe. In Overton Park, private citizens and environmental groups challenged the use of federal funds to construct a highway through a public park in Memphis, Tennessee. “The growing public concern about the quality of our natural environment has prompted Congress in recent years to enact legislation designed to curb the accelerating destruction of our country’s natural beauty,” and thus plaintiffs challenged the proposed highway location under a federal statute that prohibited funding of highway construction through public parks if “feasible and prudent” alternative routes existed.

The court held that the APA’s arbitrary and capricious standard requires agencies to engage in careful consideration of relevant factors in the decision-making process, and in this case the agency provided no explanation for the absence of consideration of alternative routes. The Supreme Court clarified

---

52 Sunstein, supra note ___, at 212.
53 Id. at 216-19. Said the Barnhart Court: “[T]he interstitial nature of the legal question, the related expertise of the Agency, the importance of the question to administration of the statute, the complexity of that administration, and the careful consideration the Agency has given the question over a long period of time all indicate that Chevron provides the appropriate legal lens through which to view the legality of the Agency interpretation here at issue.” 535 U.S. at 222.
54 Sunstein, supra note ___, at 219.
55 See infra Part VI.B.
58 Id. at 406.
59 Id. at 404.
60 Id. at 405.
61 Id. at 416-17.
Overton Park in Kleppe v. Sierra Club, in which it explicitly held that courts are required to take a “hard look” at the environmental effects of their proposed action.62 This hard look doctrine provides for searching judicial review, requiring agencies to clearly explain what factors they considered in the decisionmaking process and the weight given to those factors.63

III. JUDICIAL DECISIONMAKING IN ENVIRONMENTAL AND ADMINISTRATIVE LAW

“[E]mpirical legal scholarship on judicial decisionmaking [has] emerged from obscurity to become the subject of disputation in a larger societal or academic arena.”64 This Part discusses the empirical scholarship on judicial decisionmaking in environmental and administrative law, focusing on the role of the legal and attitudinal models. The legal model refers to traditional interpretive approaches familiar to lawyers, such as the language of legal texts, standards of review, and legislative history, while the attitudinal model is legal realism, where judges “decide[] disputes in light of the facts of the case vis-à-vis [their] ideological attitudes and values.”65 The existing scholarship informs us that ideology impacts judicial decisionmaking in environmental cases, and, furthermore, begins to address whether political preferences may influence how judges use Chevron in reviewing agency interpretations of environmental law. This Article expands upon this research.

The current game in empirical legal studies, including in the environmental law context, is explaining decisionmaking as a function of political ideology. Political scientists have long argued that judicial decisionmaking is a function of policy preferences. Professors Jeffrey Segal and Harold Spaeth stated, “Rehnquist votes the way he does because he is extremely conservative; Marshall

65 Czarnezki & Ford, supra note ___, at 848 (citing SEGAL & SPAETH, supra note ___, at 44-86).
voted the way he did because he was extremely liberal. Legal scholarship has confirmed at least some role for the attitudinal model in the environmental law field, though only recently have scholars begun to empirically consider the role legal procedures and doctrine play in case outcomes, whether in environmental law or other areas of law.

Now ten years old, Professor Richard Revesz’ influential empirical study of judicial decisionmaking in cases involving the EPA before the D.C. Circuit concluded, consistent with later findings, that judges’ opinions about the environmental policy at issue determined their votes. Considering 250 challenges to EPA decisions before the D.C. Circuit between 1970 and 1994, Revesz found that in industry challenges to EPA decisions, Republican court appointees had a higher reversal rate than did Democratic appointees. For challenges of EPA decisions brought by environmental groups, Democratic appointees had higher reversal rates than Republican appointees.

---

66 SEGAL & SPAETH, supra note __, at 86.
67 See Revesz, supra note ___; Sunstein, Schkade & Ellman, supra note ___; SUNSTEIN, SCHKADE, ELLMAN & SAWICKI, supra note ___.
68 See Miles & Sunstein, supra note ___.
72 Id. at 1721.
73 Id. at 1738.
74 Id.
Nearly a decade after the Revesz article, Sunstein, Schkade, and Ellman (and now Sawicki) further analyzed judicial decisionmaking in environmental cases before the D.C. Circuit. Building upon the Revesz dataset in their book *Are Judges Political?: An Empirical Analysis of the Federal Judiciary* and in their earlier *Virginia Law Review* article, the authors found that judges more often than not voted in stereotypically ideological directions and that Democratic appointees were far more likely to vote against EPA challenges than Republicans.

Scholars recently have begun to empirically evaluate how methods of legal interpretation and legal frameworks impact judging in the environmental law context. More specifically, significant research has focused on how administrative law standards of deference impact case outcomes, including environmental cases.

Professors Miles and Sunstein analyzed 183 federal appellate cases from all circuits where panels reviewed interpretations of law by the EPA (i.e., *Chevron*).

---

75 SUNSTEIN, SCHKADE, ELLMAN & SAWICKI, supra note __, at 34, 161-62 n.20 (“We assembled the sample of EPA cases by shepardizing *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984), and searching for challenges to EPA decisions…. The sample includes 181 cases from June 25, 1984, through August 1, 2005.”).

76 Again, they explored a larger version of what was initially explored by Revesz’s analysis of challenges to EPA regulations in the D.C. Circuit. See Sunstein, Schkade & Ellman, supra note __, at 322. See also id. at n.33 (“We assembled the sample of EPA cases by searching http://www.ll.georgetown.edu/federal/judicial/cadc.cfm for cases with ‘EPA’ or the EPA administrator’s name in the case title. We crosschecked this set of cases with results from a Lexis search of ‘EPA’ and ‘Environmental Protection Agency.’ If a judge voted to afford the industry challenger any relief, then the vote was coded as a pro-industry vote. The sample includes cases from 09/19/94-12/31/02. For cases before 1994, we relied on Revesz…. We identified a total of 142 cases.”)

77 SUNSTEIN, SCHKADE, ELLMAN & SAWICKI, supra note __, at 34 (finding that Democratic appointees voted in a stereotypically liberal direction 61 percent of the time, in comparison to Republican appointees who voted stereotypically 51 percent of the time).

78 Sunstein, Schkade & Ellman, supra note __, at 322-23 (showing that Democratic appointees voted against agency challenges 64% of the time, compared to Republican appointees voting against agency challenges 46% of the time).

step environmental law cases). They found the overall validation rate (i.e., deference rates to the EPA under *Chevron*) was 61.7%. The rates broken down between Republican and Democratic appointees differed only slightly—62.5% for Republican appointees and 60.7% for Democratic appointees.

Consistent with the findings in Sunstein’s earlier co-authored works, these rates showed a wider disparity along ideological lines when taking into account panel compositions (i.e., panel effects). “Collegial concurrences” were common, where Republican appointees displayed “relatively liberal voting patterns when sitting with two Democratic appointees,” and vice versa. This held true for Democratic appointees sitting on EPA cases, but not for Republicans sitting on EPA cases. “Republican appointees show the same rate of liberal voting regardless of whether they are sitting with one or two Democratic appointees.”

These findings built upon the existing empirical literature about how courts, using *Chevron*, review agency interpretations of statutes. Based on existing research, at least some generalizations can be made. First, *Chevron* has increased the likelihood of affirmance of agency interpretations of law, with deference rates

---

80 Miles & Sunstein, *supra* note ___, at 825.
81 *Id.* at 853.
82 *Id.* at 852, Figure 1.
83 *Sunstein, Schkade, Ellman & Sawicki, supra* note ___, at 34 (considering panel effects and finding that both Republican and Democratic appointees showed “ideological amplification and ideological dampening”). *But see id.* at 62-63 (finding that in the D.C. Circuit environmental regulation challenges, Democrats appointees, unlike Republican judges, are impacted solely by party and not panel effects).
84 Miles & Sunstein, *supra* note ___, at 852 (finding that Democratic and Republican appointees showed far more political voting patterns when they were sitting on panels when all the judges were either Democratic or Republican appointed).
85 *Id.* at 863.
86 *Id.*
87 *Id.*
above 60% or higher. 89 (The data in this study show the rate at 69.2%). Second, while both Democratic and Republican judges are likely to uphold agency interpretations, judges are more likely to support interpretations consistent with their perceived policy preferences. 90 And finally, voting outcomes are influenced by panel effects (i.e., homogenous ideological panels are more likely to reverse agency action inconsistent with their ideological views, 91 including in the environmental law context). 92

89 Schuck & Elliott, supra note __, at 1057 (stating that the most important finding in the study was that circuit courts were affirming agency decisions at a steadily increasing rate from 76% in 1984-85, and over 81% in 1985 after Chevron); Kerr, supra note ___, at 30 (examining applications of the Chevron doctrine in published federal circuit court cases for the years 1995 and 1996, which consisted of 253 applications in 223 published cases, and finding that agency interpretations were accepted in 73% of the applications); Miles & Sunstein, supra note ___, at 849 (finding that the overall average validation rate of the circuit judges in Chevron cases, at about 64 percent, is roughly similar to that of the Supreme Court justices, which averaged 67 percent). See also Humphries and Songer, supra note ___, at 215 (finding across all cases, agencies had a success rate of 58.0%). But see Kritzer et. al, supra note ___, at 15, 22 (finding no evidence of increased deference on the Supreme Court).

90 Kerr, supra note ___, at 36, 39 (finding that judges of both parties upheld Democratic interpretations at 71% rates and Republican interpretations at similar rates of 78% and 73%, with statistically insignificant differences between the rates, and that there was a tendency for Republican and Democratic judges to reach results consistent with their assumed political ideologies); Cross & Tiller, supra note ___, at 2169 (finding “fairly profound” partisan effects as panels consisting of a Republican majority rendered conservative decisions 54% of the time, and panels of a majority of Democrats rendered liberal decisions 68% of the time); Humphries & Songer, supra note ___, at 216 (“Panels of liberal judges are much more likely to uphold liberal than conservative agency decisions and conservative judges favor conservative decisions.”). See also Kritzer et. al, supra note ___, at 17.

91 LEE EPSTEIN & JEFFREY A. SEGAL, ADVICE AND CONSENT: THE POLITICS OF JUDICIAL APPOINTMENTS 117 (In implementing Chevron, “Republican circuit court judges sitting on panels with two other Republicans frequently voted to reverse liberal agency decisions but were less likely to vote to overturn them if a single Democrat served on the panel. Similarly, Democratic judges on panels with other Democrats frequently voted against conservative agency decisions but were less likely to reverse them if even a Republican sat along with them.”); Cross & Tiller, supra note ___, at 2171-172 (finding that case outcomes were impacted dramatically by panel composition).

92 EPSTEIN & SEGAL, supra note ___, at 129 (using data in environmental cases from Sunstein, Schkade & Ellman, supra note ___) (“When Republicans sit with all other Republicans, they support industry challenges to environmental regulations in about seven out of every ten cases. That figure, however, declines to five out of ten if even one Democratic whistleblower is on the panel. And should a judge find herself the lone Republican, odds that she will rule against industry: in only four out of every ten cases do Republicans support challenges to environment[al] regulations when they sit with two Democrats.”).
IV. EMPIRICAL RESEARCH DESIGN

A. DATA AND CODING METHODOLOGY

This Article analyzes environmental law cases decided in the U.S. Courts of Appeals over a three-year period to investigate what factors, including ideological, legal and institutional variables, impact judicial review of administrative agency interpretations of environmental statutes. A search of environmental cases from 2003 to 2005 that cite to *Chevron* created an over-inclusive dataset of ninety-three cases.93

Deleted from this list were cases decided en banc,94 opinions amended later that year,95 and cases not involving an environmental statute or statutory interpretation. What remains are cases, some dealing with multiple issues of statutory interpretation,96 that were decided by three-judge federal appellate panels97 that reviewed agency interpretations of environmental statutes. Judicial votes, however, are the unit of analysis. Thus, the final dataset consists of 347 total judicial votes covering 116 instances of statutory interpretation in 70 environmental law cases.

Analyzing these votes and cases, this Article builds on existing research to further consider the role of legal, as well as ideological, factors in judicial decisionmaking in environmental law, and also seeks more descriptive

93 The actual search, in Westlaw’s FENV-CTA (Federal Environmental Law Cases – Court of Appeals) Database, was as follows: DA(AFT 12/31/2002 & BEF 1/1/2006) & (“467 U.S. 837” OR “104 S.CT. 2778”).
94 The Wilderness Society v. U.S. Fish & Wildlife Serv., 353 F.3d 1051 (9th Cir. 2003); United States v. DuPont, 432 F.3d 161 (3d Cir. 2005).
95 BCCA Appeal Group v. EPA., 348 F.3d 93 (5th Cir. 2003); Envtl. Def. Ctr. v. EPA., 319 F.3d 398 (9th Cir. 2003); Davis v. EPA, 336 F.3d 965 (9th Cir. 2003); Vigil v. Leavitt, 366 F.3d 1025 (9th Cir. 2004); High Sierra Hikers Ass’n v. Blackwell, 381 F.3d 886 (9th Cir. 2004).
96 Each separate issue of statutory interpretation was coded separately. An issue was defined as the interpretation of a single statutory provision that applied, in any fashion, the *Chevron* doctrine. Thus, while one statutory provision could be struck down under *Chevron* step one, step two, or the APA, and all three legal mechanisms discussed, this would count as one issue. See, e.g., New York. v. EPA, 413 F.3d 3, 21-31 (D.C. Cir. 2005) (Part III). Yet, a single case can also contain multiple issues of statutory interpretation. See, e.g., id. at 36-42 (Parts V, VI, VII). Issues were ignored if they did not deal with statutory interpretation or issues of deference to agencies based on their interpretation of an environmental or natural resources statute.
97 The sole exception is the case of NRDC v. Abraham which was decided by only a two-judge panel. 355 F.3d 179, 183 n.1 (2d Cir. 2004) (citing 2d Cir. R. 0.14) (“Judge Calabresi, originally a member of the panel, recused himself subsequent to oral argument. The appeal is being disposed of by the remaining members of the panel, who are in agreement.”).
information about environmental jurisprudence outside the D.C. Circuit and the EPA. To expand upon and supplement earlier empirical inquiries into statutory interpretation in environmental law, this Article also considers the other courts of appeals and other administrative agencies such as the U.S. Forest Service, Army Corps of Engineers and the Department of the Interior.

To operationalize judges’ ideological or policy preferences (and an attempt to improve upon the Democrat versus Republican dichotomy), the best available option is to rely primarily on Giles, Hettinger, and Pepper’s (“GHP”) adaptation of Keith Poole’s “common space scores,” which are measures of ideology of members of the House and Senate. This measure is more refined than using political party of the appointing president. For each appellate judge, GHP assign him or her one of two common space scores. For judges nominated to sit in a state represented by a senator(s) of the president’s party, the senator’s common space score is used (or an average if both senators are of the president’s party), reflecting the tradition of senatorial courtesy. If neither senator is of the same party as the president, then GHP assign the judge the president’s score.

Scores for both senators and presidents are on the same scale as those used for judges, ranging from most liberal at -1.0 to most conservative at +1.0. The GHP score of each participating judge as well as the average GHP score of each panel were calculated.

In addition to considering ideology, through intensive content analysis, the cases were coded for descriptive information, and variables concerning the use of

99 See Michael W. Giles, Virginia A. Hettinger, and Todd C. Peppers, Measuring the Preferences of Federal Judges: Alternatives to Party of the Appointing President (unpublished manuscript on file with the author). The GHP scores have been validated as a measure of ideology. Virginia A. Hettinger, Stefanie A. Lindquist, and Wendy L. Martinek, Comparing Attitudinal and Strategic Accounts of Dissenting Behavior on the U.S. Courts of Appeals, 48 AM. J. POL. SCI. 123 (2004). The GHP scores used were from the 2000 update. For judges appointed after 2000, Poole’s senatorial and presidential GHP scores updated thru the 108th Congress of 2004 were used. Judges appointed in 2005 were assigned the President’s GHP score.
100 See Keith T. Poole, Recovering a Basic Space from a Set of Issue Scales, 42 AM. J. POL. SCI. 954 (1998). Poole’s common space scores are available online at www.voteview.com.
101 See id. at 982.
102 Giles, Hettinger, and Peppers, supra note __, at 4.
103 Accord Humphries & Songer, supra note __, at 212 (measuring panel ideology by computing the mean judge ideology of all the judges who participated in the panel decision).
the *Chevron* doctrine and legal interpretive tools. The cases were coded for a variety of basic descriptive items: year of decision; circuit; agency at issue; environmental statute at issue; names of participating judges; whether the judge signed a majority, concurring (all types) or dissenting opinion; and whether the judge penned the majority opinion.

Requiring more rigorous review, cases also were coded for the following items: ideological direction of the lower court decision; whether it was a pre-enforcement challenge or an enforcement challenge; whether the issue was decided under *Chevron* step one (where a judge determined that the statute was unambiguous or clear, or that Congress had in fact spoken to the precise question at issue); decided under *Chevron* step two (where an agency received *Chevron* deference under step two, or the judge determined the agency interpretation was a reasonable or permissible construction of the statute following a determination that the statutory provision at issue was ambiguous); whether the agency decision violated the arbitrary and capricious standard of the APA; whether the agency action was upheld under another type of deference framework and (if so) under what type; and whether the opinion signed by the judge invoked the use of legislative history.

---

104 A conservative vote is a vote against an environmental group, or a vote for industry over agency. A liberal vote is a pro-environment vote for an agency versus industry, or a vote for an environmental group. In some cases there was no lower court decision due to direct appeal, or the lower court decision had more than one outcome in more than one ideological direction.

105 An enforcement challenge is, for example, a challenge to an agency action seeking to sanction a broken rule, permit, or law, a challenge to an EPA decision that attainment was reached, or a challenge to a permitting decision. Pre-enforcement challenges are, for example, facial challenges to rule, permit, plan, or petition as inconsistent with the statutory language.

106 Where a court exhibited conflation between *Chevron* steps one and two, the case was coded as having been solely decided under step one, unless the court explicitly invoked “step two,” resulting in the cases being coded as considering both steps. Where a court addressed step two only in arguendo, both steps were included in the dataset, unless the agency action was reversed in which case the decision was coded as being decided solely under step one. To know how to best code these “mixed” cases as step one or two, it would be helpful to learn, post-*Brand X*, what words in prior decisions might suffice to permit agency reinterpretation. In other words, are these step one cases or step two cases for *Brand X* purposes?

107 I also sought to code the cases for invocations of the plain meaning rule and underlying purpose of the statute. However, like my previous work, I had reservations about coding for the plain meaning rule. Czarnecki & Ford, *supra* note 24 at 865. I also found that coding for the underlying purpose of the statute is not particularly informative from a quantitative standpoint as many opinions, early in the decision, point out the general purpose of the statute, not making it clear how or why it is relevant to the legal analysis. *See* Part VI.D. *infra*. 
Finally, the cases were coded for the judicial directional vote (where a conservative vote is a vote against an environmental group or a vote for industry over an agency, and a liberal vote is a pro-environment vote for an agency versus industry or a vote for an environmental group), and whether the judge voted to reverse or affirm the government agency’s decision.

Each of the judge-specific variables and the outcome variables were coded for each judge. If one judge joined the opinion of another, without writing separately, all data would be identical save for his or her name and GHP score. It is necessary to elaborate on the coding of the implementation and chosen standards for review of agency action, and the legal tools employed by the judge.

As described doctrinally in Part II above, courts may employ the *Chevron* framework, some lesser form of deference (e.g., *Skidmore*) as permitted by *Mead*, and/or the APA’s arbitrariness standard, as well as alternative forms of deference. As also noted, courts can uphold or strike down agency action under *Chevron* step one or two. While courts likely will not strike down agency decisions as unreasonable under step two, step one allows for greater flexibility, depending on the interpretive tools employed, to strike down or uphold the agency action. Breaking down each judicial vote, in each issue, into each *Chevron* step permits a more refined measure than simply determining whether the court deferred to the agency under either step as was done in the studies discussed in Part III *infra*, and allows for measurement and analysis of whether the doctrine works as expected and analysis of the possible strategic use of the *Chevron* steps in environmental jurisprudence.

Due to the malleable nature of *Chevron* step one as to what interpretive tools are used, cases also are coded for the invocation of legislative history. To count as a use, “a judge must have used the interpretive tool in support of his or her legal analysis” in interpreting the environmental statute at issue, so long as “the reference was not clearly dicta and the reference was not a rejection of the interpretive tool’s value generally.”

**B. RESEARCH QUESTIONS AND HYPOTHESES**

In coding the above cases and corresponding judicial votes, we can learn valuable descriptive and analytical information about how, what and where cases dealing with agency interpretations of environmental statutes are reviewed in the federal appellate courts—and admittedly, these data can provide far more information than this Article presents. These findings have both doctrinal and

---

pedagogical value. Legal scholars are beginning to research and students frequently ask whether the appellate courts consistently review agency actions and how the legal framework chosen actually impacts case outcomes. This type of research also answers a more foundational question—what are the real-world consequences of existing and available legal doctrine in environmental law (or administrative law in the environmental law context)?

This Article attempts to address a number of questions concerning judicial review of agency interpretations of environmental law. What is the distribution of decisions involving judicial review of agency interpretations of environmental law among the circuits? This will consider whether most of these decisions are made in the D.C. Circuit. 109 Often federal law, like the Clean Air Act, requires certain claims to be brought before the D.C. Circuit. 110 Are these pre-enforcement or post-enforcement challenges to agency actions? What number of judicial votes in each of the circuits reach liberal or conservative outcomes, and affirm or reverse the agency action? What agencies were involved, and did their involvement lead to judicial votes for affirmance or reversal of their decisions?

In addition to this information about the relationship between circuit, agency, statute descriptives, and outcome variables, this Article, as noted earlier, addresses whether agency actions are being reviewed consistently by the appellate courts and whether the legal framework chosen, in light of other variables, impacts the case outcome. For example, does the Chevron doctrine work as expected? One would expect that invocations of step two should usually lead to agency affirmance, while agency deference is less predictable under step one. In addition, what judicial review frameworks (e.g., Chevron steps one and two) are associated with liberal or conservative judicial votes, or affirming or reversing the agency action? Finally, and the most difficult to measure, in environmental cases, is the Chevron doctrine used strategically by judges, due to its potential malleability (e.g., gaming the use of step one), to achieve their perceived environmental policy preferences? And, might invocations of certain interpretive tools under Chevron step one lead to pro- or anti-environmental outcomes (i.e., a correlation between judicial invocation of legislative history and a pro-environment vote)?

109 Does the D.C. Circuit really hear the majority of environmental cases, see Sunstein, Schkade & Ellman, supra note ___, at 322 (“[W]e limit our investigation to the D.C. Circuit, which hears the vast majority of environmental cases”), or instead only a plurality?

110 See., e.g., 42 U.S.C. § 7607(b), CAA § 307(b).
A number of hypotheses can be tested. First, consistent with earlier findings supporting the correlation between ideology and directional vote, one would hypothesize that as GHP increases so does the likelihood of a conservative vote. Second, consistent with findings that conservatives are less likely to support the action of environmental agencies, one would expect that as GHP increases the likelihood of an agency affirmation would decrease.

Third, in asking whether the *Chevron* doctrine is used strategically, the hypothesized strategic action would be as follows: When invoked, *Chevron* step one is used strategically by conservative judges to reverse agency actions and achieve a conservative directional vote. Similarly, step one is used strategically by liberal judges to reverse agency actions and achieve a liberal directional vote.

Fourth, invocations of legislative history will lead to liberal outcomes due to the pro-environmental concerns surrounding the passage of any environmental statute. Fifth, as found in earlier studies, the ideological composition of the panel should impact directional vote.

V. ENVIRONMENTAL LAW IN THE COURTS OF APPEALS: EMPIRICAL FINDINGS AND OBSERVATIONS

This Part describes analyses designed to address the questions and test the hypotheses found in Part IV. Of the 347 judicial votes in the dataset, 86.2% were in response to pre-enforcement challenges. Liberal votes were cast 45.5% of the time, and agency decisions were affirmed at a rate of 69.2%. These findings and what follows describe the environmental law statutory interpretation docket in the federal courts of appeals from 2003 to 2005, providing information on how the docket is divided across the circuits, what is the nature of the docket, and which environmental statutes are at issue in the courts. This Part also analyzes how the courts of appeals decide environmental cases where agencies have interpreted the underlying federal statute, considering the role of ideology and the strategic use of the *Chevron* doctrine.

A. DESCRIPTIVE INFORMATION

Where are environmental statutes interpreted? As seen in Figure 1, more judicial votes in the dataset took place in the D.C. Circuit than in any other
circuit. However, only a plurality of votes were made in the D.C. Circuit, not a majority, as 31.1% of the Chevron-environmental judicial votes were cast in the circuit—a finding consistent with other research.  

The D.C. Circuit’s lack of majority is due to the large percentage of judicial votes (~19%) found in both the Ninth and Second Circuits. The Ninth’s Circuit’s size may explain its many votes. The Ninth Circuit is the largest of the courts of appeals with 28 active judgeships covering thirteen districts in nine states plus two territorial courts. Of the most active circuits in deciding environmental law cases, only the judges of the Ninth were more likely to vote in a liberal direction (53.03% of the time), while D.C. Circuit judges cast conservative votes 51.85% of the time.

More difficult to explain, the Second Circuit accounts for 18.7% of the votes in the dataset. One possible explanation is that the U.S. Attorney’s Office for the Southern District of New York litigates environmental cases in a manner

---

111 Perhaps this should be of no surprise since many Clean Air Act suits must be filed in the D.C. Circuit. See 42 U.S.C. § 7607(b), CAA § 307(b).

112 Kerr, supra note __, at 30 (“Fully 30% percent of the applications of the Chevron doctrine originated in the D.C. Circuit.”).
different than would the U.S. Department of Justice. While in other circuits the Department of Justice itself litigates environmental disputes, the U.S. Attorney’s Office for the Southern District of New York represents the United States and its agencies in such civil and criminal litigation before the United States District Court for the Southern District of New York, and is responsible for cases from inception through trial and appeal to the United States Court of Appeals for the Second Circuit.113

While most research on these Chevron-environmental law cases focuses on the D.C. Circuit, all of the research focuses on the EPA. Thus, it does seem appropriate to focus a study of agency interpretation of environmental law solely on the EPA.

As Figure 2 shows, nearly 70% (n = 240) of the judicial votes cast involved cases where the EPA was a primary litigant. In addition, the action of the EPA was affirmed by the courts of appeals 72.9% of the time (175 affirmances of 240 judicial votes).

---

The data show that environmental issues in this dataset are decided in a number of circuits though dominated by EPA litigation. Interestingly, while the dataset includes judicial votes regarding nearly thirty environmental statutes (e.g., Wilderness Act, National Parks Service Organic Act, Endangered Species Act), the cases are dominated by two major federal environmental statutes—the Clean Air Act and Clean Water Act.

As Figure 3 indicates, 64% (222 of 347) of the judicial votes focus on the Clean Water Act and Clean Air Act. The Clean Air Act docket is dominated by, generally speaking, attainment issues including compliance concerns, state implementation plans, and setting of emissions standards, while Clean Water Act cases are nearly always devoted to permitting.

**B. THE ROLE OF IDEOLOGY**

What is the relationship between political ideology and directional vote? Using judicial GHP scores as discussed above, all judges were divided into three categories of ideological distance along the GHP scale of -1 (most liberal) to 1 (most conservative). Similarly, the average GHP scores of all judges on each panel were divided into two categories. Tables 1A and 1B provide two-way comparisons of how judicial votes in these categories were divided in terms of the directional vote.
Table 1A: Relationship between Judicial GHP Score Category and Directional Vote

<table>
<thead>
<tr>
<th>Scale</th>
<th>Conservative</th>
<th>Liberal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1 to -0.33</td>
<td>65</td>
<td>72</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>47.45%</td>
<td>52.55%</td>
<td>100.00%</td>
</tr>
<tr>
<td>-0.33 to 0.33</td>
<td>46</td>
<td>42</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>52.27%</td>
<td>47.73%</td>
<td>100.00%</td>
</tr>
<tr>
<td>0.33 to 1</td>
<td>78</td>
<td>44</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>63.93%</td>
<td>36.07%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>158</td>
<td>347</td>
</tr>
<tr>
<td></td>
<td>54.47%</td>
<td>45.53%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Fisher’s exact = 0.026**

NOTE: The GHP scale runs from -1 (most liberal) to 1 (most conservative).

Confirming the earlier findings that judges vote in their perceived ideological direction, the data show that ideology correlates with directional vote in the predicted direction—the higher the GHP score (i.e., closer to 1), the higher the rate of conservative voting.

As seen in Table 1A, as individual judges fall into higher GHP categories, the rate of conservative votes increase from 47.45% to 52.27% to 63.93%. Similarly, judicial votes on liberal panels, with an average GHP score below zero, are liberal 53.20% of the time. This decreases to 34.72% when the panel is conservative having an average GHP score greater than zero. The data suggest that liberals do not vote as liberal as they would like compared with their conservative colleagues who are more effective in voting conservatively. This is
likely a product of the years included for this study, 2003-2005, when most of the regulations or enforcements at issue were products, in some fashion, of the Bush Administration. Because agency deference is functionally the default rule, one would expect more conservative votes, making conservatives (65.28%) more successful in pursuing their ideological agenda compared with liberals (53.20%). Liberal preferences are mitigated by strong principals of deference in administrative law doctrine.

C. DOES CHEVRON WORK AS EXPECTED?

In asking the simple question “Does Chevron work as expected?,” the answer is a simple “yes” (at least during the years of this study). As seen in Table 2A, most environmental statutory provisions (68.86%) are found to be ambiguous. Not surprisingly, declarations that the provision was ambiguous led to affirmances (usually under step two, but sometimes under another form of deference).

<table>
<thead>
<tr>
<th>Step One</th>
<th>Reverse</th>
<th>Affirm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous</td>
<td>29</td>
<td>170</td>
<td>199</td>
</tr>
<tr>
<td>14.57%</td>
<td>85.43%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>32.95%</td>
<td>84.58%</td>
<td>68.86%</td>
<td></td>
</tr>
<tr>
<td>Unambiguous</td>
<td>59</td>
<td>31</td>
<td>90</td>
</tr>
<tr>
<td>65.56%</td>
<td>34.44%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>67.05%</td>
<td>15.42%</td>
<td>31.14%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>201</td>
<td>289</td>
</tr>
<tr>
<td>30.45%</td>
<td>69.55%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td></td>
</tr>
</tbody>
</table>

Fisher’s exact = 0.000***

NOTE: Includes only those judicial votes where opinion invoked Chevron step one.
In addition, and possibly to the dismay of textualists, when judges invoked the *Chevron* doctrine generally (i.e., using either step), they likely affirmed agency action (69.55%). Yet, Table 2A provides the first indication that *Chevron* results in strategic elements. On the one hand, perhaps judges only invoke *Chevron* step one to declare a statute unambiguous when they want to reverse an agency interpretation. Hence, when judges found a statutory provision unambiguous, they reversed agency action at a rate of 65.56%. On the other hand, perhaps even when a statute is clear in favor of an agency it is simply easier to declare the statute ambiguous and invoke deference under step two. Or, going further, perhaps clear statutes in favor of an environmental agency are not litigated, or judges, for pragmatic reasons, are reluctant to say that a statute has a clear fixed meaning, even in favor of an agency, because it may foreclose (and now will foreclose) future agency interpretations.

114 See Antonin Scalia, *Judicial Deference to Administrative Interpretations of Law*, 1989 Duke L.J. 511, 521 (“In my experience, there is a fairly close correlation between the degree to which a person is (for want of a better word) a ‘strict constructionist’ of statutes, and the degree to which that person favors *Chevron* and is willing to give it broad scope. The reason is obvious. One who finds more often (as I do) that the meaning of a statute is apparent from its text and from its relationship with other laws, thereby finds less often that the triggering requirement for *Chevron* deference exists. It is thus relatively rare that *Chevron* will require me to accept an interpretation which, though reasonable, I would not personally adopt.”); Bradford C. Mank, *Is a Textualist Approach to Statutory Interpretation Pro-Environmentalist?: Why Pragmatic Agency Decisionmaking Is Better than Judicial Literalism*, 53 Wash. & L. Rev. 1231, 1233-34 (1996) (“Even if textualist statutory interpretation resulted in more victories for environmental advocacy groups, the tendency of textualists to place so little value on the interpretations of the environmental agencies that have greater practical experience with the underlying issues raises serious questions about whether textualism is the best way to decide environmental policies.”).

115 Nat’l Cable & Telecommns. Ass’n v. Brand X Internet Servs., 545 U.S. 967, 969 (2005) (“A court’s prior construction of a statute trumps an agency construction otherwise entitled to *Chevron* deference only if the prior court decision holds that its construction follows from the unambiguous terms of the statute and thus leaves no room for agency discretion.”). See also E. Donald Elliott, *Chevron Matters: How the Chevron Doctrine Redefined the Roles of Congress, Courts and Agencies in Environmental Law*, 16 Vill. Envtl. L. J. 1, 11-12 (2005) (recognizing that post-*Chevron* agencies were given more “policy space” to work within).
Table 2B: Relationship between *Chevron* Step Two and Reverse/Affirm Agency Action

<table>
<thead>
<tr>
<th>Vote</th>
<th>Reverse</th>
<th>Affirm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Deference</td>
<td>24</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>88.89%</td>
<td>11.11%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>82.76%</td>
<td>1.73%</td>
<td>13.37%</td>
</tr>
<tr>
<td>Deference</td>
<td>5</td>
<td>170</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>2.86%</td>
<td>97.14%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>17.24%</td>
<td>98.27%</td>
<td>86.63%</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>173</td>
<td>202</td>
</tr>
<tr>
<td></td>
<td>14.36%</td>
<td>85.64%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Fisher’s exact = 0.000***

NOTE: Includes only those judicial votes where opinion invoked *Chevron* step two.

Table 2B indicates that *Chevron* step two also works as anticipated. In the few cases where a court found an agency was not entitled deference under step two (13.37%), nearly all agency action was reversed (88.89%). In fact, where step two was invoked (i.e., no deference under step two), affirmance occurred in only one case, a unanimous, yet opaque, decision (three judicial votes) of the Fifth Circuit, which, after engaging the threshold ambiguity query of step one and discussing step two, affirmed agency action under the *Skidmore* grounds of persuasive deference.116

As one would anticipate, most judges affirmed agency interpretations when invoking step two (85.64%). However, in some situations judges, despite the fact that the interpretation was a permissible construction of statute, nevertheless did not defer to the agency on other grounds (e.g., agency did not follow its own interpretation117). In other cases, not included in Table 2B, judges engaged in the *Chevron* step one ambiguity query, but refused to proceed to step two in light of a violation of administrative law (e.g., violation of APA’s arbitrary and capricious standard118). These findings are consistent with past research noting

117 See, e.g., Skranak v. Castenada, 425 F.3d 1213, 1221 (9th Cir. 2005).
118 See, e.g., Ne. Md. Waste Disposal Auth. v. EPA, 358 F.3d 936, 947-950 (D.C. Cir. 2004) (internal citations omitted) (“Because the term ‘class’ is ambiguous, we would now ordinarily take *Chevron*’s second step and ask whether it was reasonable for the Agency to construe that term as permitting subcategorization based on aggregate plant capacity. But because Industry Petitioners regard this case as governed by step one of *Chevron*, their briefs do not dispute that, assuming
that agencies more likely lost under step one than two and nearly always won under step two, and issues were resolved around one-third of the time under step one.\textsuperscript{119}

D. USING CHEVRON STRATEGICALLY IN ENVIRONMENTAL CASES

Judges vote to achieve their preferred policy preferences,\textsuperscript{120} and the data provide limited evidence that judges strategically use \textit{Chevron} step one to do so. As seen below in Tables 3A through 3C, judges in each GHP category invoke ambiguity in \textit{Chevron} step one at about the same rate, between about 64\% and 74\%. These rates increase as GHP scores increase. Conservatives (i.e., higher GHP scores) more often find statutes ambiguous, leading to conservative votes at a greater rate. On the other hand, the most liberal GHP group invoked step one to declare statutes unambiguous to arrive at liberal outcomes. Since the dataset is derived from the years of the Bush Administration, these findings are unsurprising. If liberals do not want to defer to a Republican administrative agency, they must find the statute unambiguous under \textit{Chevron} step one. Similarly, conservative judges simply find statutes ambiguous more often under step one, leading to likely reversal under step two. However, these findings are statistically significant only at the ideological extremes with the p-value less than 0.05 only in the most liberal category.

\textsuperscript{119} William R. Andersen, \textit{Chevron in the States: An Assessment and a Proposal}, 58 ADMIN. L. REV. 1017, 1020 (2006) (analyzing \textit{Chevron}-like deference in the state courts and finding that “[i]n terms of \textit{Chevron’s} so-called ‘step analysis,’ deference usually was expressed as a ‘Step Two’ matter, the court finding that the agency’s interpretation unreasonable or permissible,” and that “where the agency lost, it was usually on ‘Step One’—the court finding that the statute was unambiguous and contrary to the agency interpretation.”); Kerr, \textit{supra} note ___, at 30-31 (finding that when the full two-step test was applied, the \textit{Chevron} issue was resolved at step one 38\% of the time and at step two 62\% of the time, and that the interpretation was resolved at step one, agency views were upheld almost 42\% of the time and when resolved under step two, agency views were deemed reasonable 89\% of the time).

\textsuperscript{120} See Part V.A.2 \textit{supra}. 
Table 3A: Relationship between *Chevron* Step One and Directional Vote for GHP Range -1 to -.033

<table>
<thead>
<tr>
<th>Directional Vote</th>
<th>Conservative</th>
<th>Liberal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous</td>
<td>42</td>
<td>33</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>56.00%</td>
<td>44.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>76.36%</td>
<td>53.23%</td>
<td>64.10%</td>
</tr>
<tr>
<td>Unambiguous</td>
<td>13</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>30.95%</td>
<td>69.05%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>23.64%</td>
<td>46.77%</td>
<td>35.90%</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>62</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>47.01%</td>
<td>52.99%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Fisher’s exact = 0.012**

Table 3B: Relationship between *Chevron* Step One and Directional Vote for GHP Range -.033 to .033

<table>
<thead>
<tr>
<th>Directional Vote</th>
<th>Conservative</th>
<th>Liberal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous</td>
<td>25</td>
<td>23</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>52.08%</td>
<td>47.92%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>67.57%</td>
<td>67.65%</td>
<td>67.61%</td>
</tr>
<tr>
<td>Unambiguous</td>
<td>12</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>52.17%</td>
<td>47.83%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>32.43%</td>
<td>32.35%</td>
<td>32.39%</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>34</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>52.11%</td>
<td>47.89%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Fisher’s exact = 1.000
Table 3C: Relationship between *Chevron* Step One and Directional Vote for GHP Range .033 to 1

<table>
<thead>
<tr>
<th>Step One</th>
<th>Conservative</th>
<th>Liberal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous</td>
<td>51</td>
<td>25</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>67.11%</td>
<td>32.89%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>80.95%</td>
<td>65.50%</td>
<td>73.79%</td>
</tr>
<tr>
<td>Unambiguous</td>
<td>12</td>
<td>15</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>44.44%</td>
<td>55.56%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>19.05%</td>
<td>37.50%</td>
<td>26.21%</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>40</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>61.17%</td>
<td>38.83%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Fisher’s exact = 0.065*

Not surprisingly, more liberal judges find environmental statutes textually clear because the statutes intrinsically contain pro-environmental language (a type of environmental textualism121), and because environmental groups bring the vast majority of these challenges. However, the data only mildly suggests that conservatives use textualism under step one to limit pro-environmental outcomes, or liberals use step one to encourage such results. This confirms with a caveat to the findings of Revesz discussed *supra*. Revesz argued that ideological voting is dampened in environmental cases involving a statutory challenge because methods and rules of statutory interpretation are less malleable than procedural standards (e.g., lack of adequate response to comments, lack of adequate explanation in the rule’s statement of basis and purpose, lack of adequate notice or opportunity to comment, and improper ex parte communication).122 This raises any number of unanswered queries: Why is textualism not as helpful as conservatives might hope, for it would allow statutory meaning to be locked in and prevent future shifts in administrative policy? Is *Chevron* harder to manipulate than we might think? Might *Chevron* instead be used strategically at step zero, or do judges use a diverse set of legal tools (e.g., all the *Chevron* steps) to achieve their preferred policy outcomes? Or do judges, for the reasons stated by Revesz or otherwise, simply not engage in strong strategic behavior when


122 Revesz, *supra* note __, at 1729-31 n.33.
dealing with principles of statutory interpretation (a conclusion supported by the legislative history findings *infra*?).

Conservative judges do use *Chevron* deference to uphold agency action challenged by environmental and public interest groups, though the findings are statistically significant at only 90% ($p \leq 0.1$). Confirmed in Table 4, the data indicate that judges with lower GHP scores (i.e., more liberal) are less likely to affirm agency action (regardless of *Chevron* step used).

**Table 4: Relationship between Judicial GHP Score Category and Reverse/Affirm Agency Action**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Reverse</th>
<th>Affirm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1 to -0.33</td>
<td>51</td>
<td>83</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td>38.06%</td>
<td>61.94%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>48.57%</td>
<td>35.17%</td>
<td>39.30%</td>
</tr>
<tr>
<td>-0.33 to 0.33</td>
<td>23</td>
<td>64</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>26.44%</td>
<td>73.56%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>21.90%</td>
<td>27.12%</td>
<td>25.51%</td>
</tr>
<tr>
<td>0.33 to 1</td>
<td>31</td>
<td>89</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>25.83%</td>
<td>74.17%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>29.52%</td>
<td>37.71%</td>
<td>35.19%</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>236</td>
<td>341</td>
</tr>
<tr>
<td></td>
<td>30.79%</td>
<td>69.21%</td>
<td>100.00%</td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Fisher’s exact = 0.068*

**NOTE:** There are only 341 judicial votes here, rather than 347, as two CERCLA enforcement cases did not involve the affirmance or reversal of agency action. *See* Colorado v. Sunoco, Inc., 337 F.3d 1233 (10th Cir. 2003); Sierra Club v. Seaboard Farms, Inc., 387 F.3d 1167 (10th Cir. 2004).

Consistent with all research, the data show that an affirmance is more common than reversal of agency action. However, unlike the findings of Miles and Sunstein that show Democratic judges were more likely than Republican judges to defer to EPA action, these data find that affirmance of agency action actually increases as GHP increases (i.e., more conservative judges are less likely to reverse the agency). On its face, this finding may seem counterintuitive. Even though this dataset includes many environmental agencies rather than just the EPA, EPA action dominates the dataset. But again, perhaps this is a product of the dataset used as one might expect affirmance as GHP increases because the
cases involve the Bush Administration’s EPA. During the time period of the dataset, one might then expect that more liberal judges are less likely to affirm agency action.

E. THE USE OF LEGISLATIVE HISTORY

This section considers the interpretive tool of legislative history.\textsuperscript{123} The data show, as seen in Table 5, that invocations of legislative history were made at a rate of 33.73%.

<table>
<thead>
<tr>
<th>Directional Vote</th>
<th>Invoked Legislative History</th>
<th>Conservative</th>
<th>Liberal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>135</td>
<td>98</td>
<td>233</td>
<td></td>
</tr>
<tr>
<td></td>
<td>57.94%</td>
<td>42.06%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>71.43%</td>
<td>62.03%</td>
<td>67.15%</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>54</td>
<td>60</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td></td>
<td>47.37%</td>
<td>52.63%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28.57%</td>
<td>37.97%</td>
<td>33.73%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>158</td>
<td>347</td>
<td></td>
</tr>
<tr>
<td></td>
<td>54.47%</td>
<td>45.53%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td></td>
</tr>
</tbody>
</table>

Fisher’s exact = 0.067*

Judges that sign on to opinions that invoke legislative history are more likely to vote in a liberal direction by a small, but statistically significant, margin (52.63% to 47.37%). Where legislative history is not invoked, the outcome of the judicial vote is more likely to be conservative (57.94%), slightly higher than the overall rate of conservative vote (54.47%).

\textsuperscript{123} In addition to reading each individual opinion, to ensure that no citations to legislative history were missed, cases in the database were searched for key legislative history terms. See Czarnecki & Ford, supra note ___, at 862 n.95. The search was: DA(AFT 12/31/2002 & BEF 1/1/2006) & (“467 U.S. 837” “104 S.CT. 2778”) & (“LEGISLATIVE HISTORY” “COMMITTEE REPORT” “U.S.C.A.N.” “FLOOR DEBATE” “COMMITTEE STATEMENT” “COMMITTEE HEARING” “LEGISLATIVE COUNSEL” “H.R.” “S.J. RES.” “CONG. REC.” “S. RES.” “H.R.J. RES.” “S. DOC. NO.” “S. REP.”).
Interestingly, ideology as measured by the scaled GHP score does predict whether a judge will turn to legislative history. 124 This mildly suggests that any judicial philosophy toward legislative history may impact voting outcomes and lends support for the legal model of judicial decisionmaking. It also may mean that where good legislative history is available, courts will use it, and it supports a pro-environmental position. Taking these legislative history findings in context with reoccurring findings about the role of policy preference plays in judicial decisionmaking, it would appear that judges respond both to the legal and attitudinal models.125

VI. DOCTRINAL ANALYSIS

Doctrinal scholarship often makes sweeping claims about the state of the law with few data points. Similarly, quantitative empirical studies frequently provide analyses in the aggregate absent any detailed analysis of the judicial opinions’ actual written content. This Article seeks to do both, and this Part complements the empirical findings above by providing a doctrinal analysis of the judicial opinions that are part of the quantitative dataset—the “data capture votes rather than opinions. For the actual development of the law, the opinion matters a great deal.”126

This Part discusses how judicial opinions are crafted when deciding issues of statutory interpretation in environmental law. Specifically, this Part addresses the diverse organizational structure of judicial opinions, and the confusion surrounding Chevron—when does the doctrine apply and what do its steps actually mean in practice? In addition, it considers the relationship between

124 A important caveat must be made here: This finding may be a result of collegiality norms and the coding mechanism used. For example, a conservative who signs on to a majority opinion written by a liberal invoking legislative history will be counted as having invoked legislative history, even though he or she would not have invoked the tool if he or she had written the opinion.

125 Humphries & Songer, supra note __, at 217-18 (“The judges do not appear to simply substitute their own policy preferences for those of the administrators without regard for law. Variables that captured elements of the legal model were also related to judicial decisions to a statistically significant degree. Taken together, the evidence suggests that the appeals courts appear to respond to both legal concerns and political preferences. Thus, while it would be naïve to believe that politics is irrelevant in judicial review of agencies, it appears that the courts do fulfill, at least in part, the normative expectations that they will constrain the worst abuses of discretion by administrators by imposing the rule of law.”).

126 SUNSTEIN, SCHKADE, ELLMAN & SAWICKI, supra note ____, at 65.
administrative deference and the need for expertise in areas of scientific complexity.

A. OPINION ORGANIZATION

Most judicial opinions in the dataset, prior to their discussion and analysis sections, systematically lay out (in some cases in rote fashion) the standards of review a federal appellate court uses to review an agency interpretation of environmental law. As discussed in Part II, the D.C. Circuit has a more nuanced view of these standards, and the court’s decision in *New York v. EPA* clearly lays out in substantial detail how to analyze such cases under *Chevron* steps one and two, and arbitrary and capricious review.

In considering these challenges, we apply a highly deferential standard of review. We may set aside a regulation only if it exceeds EPA’s “statutory jurisdiction, authority, or limitations” or is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 42 U.S.C. § 7607(d)(9).

As to EPA’s interpretation of the CAA, we proceed under *Chevron*’s familiar two-step process. See 467 U.S. at 842-43. In the first step (“*Chevron Step 1*”), we determine whether, based on the Act's language, legislative history, structure, and purpose, “Congress has directly spoken to the precise question at issue.” *Id.* at 842. If so, EPA must obey. But if Congress’s intent is ambiguous, we proceed to the second step (“*Chevron Step 2*”) and consider “whether the agency’s [interpretation] is based on a permissible construction of the statute.” *Id.* at 843. If so, we will give that interpretation “controlling weight unless [it is] arbitrary, capricious, or manifestly contrary to the statute.” *Id.* at 844.

Aside from statutory interpretation, we evaluate EPA’s actions based on traditional administrative law principles. See *Ethyl Corp. v. EPA*, 311 U.S. App. D.C. 163, 51 F.3d 1053, 1064 (D.C. Cir. 1995) (noting that the CAA’s review provisions are

---


With some exceptions,130 this is how most cases proceed and the analysis section follows this pattern of moving through the Chevron steps and onto the arbitrariness inquiry. As a result of this process, most courts maintain a judicial finding of ambiguous statutory language and then a conclusion of reasonableness under step two.131 Other times, the statute is unambiguous under step one. In Nat’l Mining Ass’n v. Fowler, the court stated, “In this case, our analysis begins and ends at Chevron step one. [National Historic Preservation Act] section 211 unambiguously limits the Council to promulgating regulations that ‘govern the implementation of [section 106].’”132 In Gifford Pinchot Task Force v. U.S. Fish & Wildlife Service, the court stated, “To answer that question, there is no need to go beyond Chevron’s first step in analyzing the permissibility of the regulation; the regulatory definition of ‘adverse modification’ contradicts Congress’s express

129 Id.

130 See Part VI.B. supra.


132 324 F.3d 752, 758 (D.C. Cir. 2003) (internal citations omitted).
command." And sometimes the unambiguous text of the statute itself confers broad discretion to the agency.

It is the rare case that finds the agency action to violate step two. If found to violate the arbitrary and capricious standard of the APA, courts nearly always remand the case for further consideration to the agency for further explanation and justification of the agency decision.

However, opinions do not always follow the same decisionmaking process in the analysis section. The D.C. Circuit, in *Northeast Maryland Waste Disposal Authority v. EPA*, engaged in the *Chevron* step one ambiguity query, but refused to proceed to step two in light of a violation of administrative law (i.e., violation of APA’s arbitrary and capricious standard). And, quite frequently, courts address the step two inquiry, but only in arguendo. Consider also these two quotes describing the *Chevron* inquiry.

“Pure” legal errors require no deference to agency expertise, and are reviewed de novo. Questions involving an interpretation of the FPA involve a de novo determination by the court of congressional intent; if that intent is ambiguous, FERC’s conclusion will only be rejected if it is unreasonable.

---

133 378 F.3d 1059, 1069 (9th Cir. 2004).
134 City of Abilene v. EPA., 325 F.3d 657, 661 (5th Cir. 2003) (“The plain language of § 1232(p) clearly confers broad discretion on the EPA to impose pollution control requirements when issuing NPDES permits…. Thus, even if *Chevron* deference is not warranted, the challenged permit conditions are within the EPA’s discretion.”) (internal citations omitted).
135 See, e.g., Nuclear Energy Institute, Inc. v. EPA, 373 F.3d 1251 (D.C. Cir. 2004); NRDC v. Nat’l Marine Fisheries Serv., 421 F.3d 872 (9th Cir. 2005).
136 See, e.g., Vigil v. Leavitt, 366 F.3d 1025, 1039-1044 (9th Cir. 2004); Ne. Md. Waste Disposal Auth., 358 F.3d at 950; Davis v. EPA, 336 F.3d 965, 978 (9th Cir. 2003); Bluewater Network v. EPA, 370 F.3d 1, 21 (D.C. Cir. 2004) (stating “that the Agency has not adequately explained its exercise of that discretion in this case”).
137 Northeast Md. Waste Disposal Auth., 358 F.3d at 947-950. Since *Chevron* Step 2, was not invoked, this case was not included in Table 2B.
138 See NRDC v. Abraham, 355 F.3d 179, 199 (2d Cir. 2004) (“Even assuming arguendo that the plain language of the statute was ambiguous as to Congress’s intent, which it is not, the outcome here would be unchanged, as DOE’s interpretation is not based on any permissible construction of section 325(o)(1).”); City of Arcadia v. EPA, 411 F.3d 1103, 1106-07 (9th Cir. 2005) (“Even if the language of the statute were not clear, we would uphold as reasonable the EPA’s interpretation of the Clean Water Act to require approval or disapproval of California’s TMDL.”) (internal citations omitted).
139 Knott v. FERC, 386 F.3d 368, 372 (1st Cir. 2004) (internal citations omitted).
If agencies and legislators read ambiguous language differently, the agency wins under *Chevron*.\(^{140}\)

These are intriguing explanations of the *Chevron* doctrine that raise any number of difficult questions: Is statutory interpretation a distinct inquiry from determining congressional intent?\(^{141}\) Is this distinction lawful? Why should the resolution of agency confusion trump the resolution of congressional confusion? What is the role of plain meaning in determining congressional intent?

**B. DOCTRINAL CONFUSIONS AND CONTRADICTIONS**

When interpreting environmental statutes, courts run into a number of doctrinal confusions, or at least contradictions among the circuits, in determining the appropriate standards of review for agency statutory interpretations—though one would suspect this is not limited to the environmental law context.

1. **Does Chevron Apply?** The issue of whether *Chevron* applies at all is certainly, at best, “muddled,”\(^{142}\) though even if the doctrine does not apply the agency action may be entitled to some modified form of deference. In *United States v. W.R. Grace & Co.*, the Ninth Circuit stated,

> Following *Mead*, the continuum of agency deference has been fraught with ambiguity… Our decisions understandably have been conflicted as to whether *Chevron* deference only applies upon formal rulemaking and whether lesser deference applies in other situations.\(^{143}\)

Due to this intrinsic confusion in the doctrine, the *Grace* court, like many other courts, considered the statutory question under both a modified form of deference and full *Chevron* deference, finding that analysis would elicit the same result.\(^{144}\)

\(^{140}\) Horn Farms, Inc. v. Johanns, 397 F.3d 472, 476 (7th Cir. 2005).


\(^{142}\) See Schultz Bressman, *supra* note ___.

\(^{143}\) 429 F.3d 1224, 1235 (9th Cir. 2005) (internal citations omitted).

\(^{144}\) *Id.* at 1236; Wilderness Soc’y v. U.S. Fish & Wildlife Serv., 316 F.3d 921 (following long discussion admitting the complexity, concludes *Chevron* applies, but result is the same under *Skidmore*); Bullcreek v. NRC, 359 F.3d 536, 541 (D.C. Cir. 2004) (internal citations omitted) (questioning whether *Chevron* applies where more than one agency implements the same statute, but states this issue is moot “because the result is the same whether the court applies *de novo*
Following *Mead*, courts employ the traditional *Chevron* analysis when the agency interpretation arises from formal procedures. Yet, the Ninth Circuit in *Wilderness Society v. U.S. Fish & Wildlife Service* seemed unwilling to speak with such clarity, stating:

> After *Mead*, we are certain of only two things about the continuum of deference owed to agency decisions: *Chevron* provides an example of when *Chevron* deference applies, and *Mead* provides an example of when it does not. 146

Where *Chevron* deference does not apply, courts review the agency action under the arbitrary and capricious standard, and/or courts invoke some form of persuasive deference. 148

2. **The Two-step?** Oftentimes courts will not state *Chevron*’s two-step test or, even if it is stated, will not apply it. Professor Kerr, in his analysis of the doctrine in the U.S. Courts of Appeals, found that in 28% of the applications, courts applied *Chevron* by condensing the two-step test into a single question of whether the interpretation was reasonable, and in these cases upheld agency views 78% of the time. 149

For example, in *NRDC v. National Marine Fisheries Services*, the Ninth Circuit combined both steps into a single reasonableness inquiry after stating that review, deference under *Skidmore v. Swift & Co.*, or *Chevron* deference.”). See also *NRDC v. NMFS*, 421 F.3d 872, 878-79 (9th Cir. 2005) (avoiding and choosing not to resolve the question of whether *Chevron* applies, and instead assuming *Chevron* applies and finds impermissible construction of statute under step one even under the deferential *Chevron* standard of review). For a discussion of *Chevron* avoidance, see Note, The Two Faces of *Chevron*, 120 HARV. L. REV. 1562, 1579-1580 (2007); Schultz Bressman, *supra* note __, at 1464-69.

145 See, e.g., *In the Matter of: Lyon County Landfill*, 406 F.3d 981, 984 (8th Cir. 2005). See also *W.R. Grace*, 429 F.3d at 1235 (citing *Brand X*, 545 U.S. at 2699-2700) (“Nonetheless, in *Brand X* the majority’s language explaining *Chevron* is quite broad and does not come with a proviso that the *Chevron* deference is limited to agency interpretations expressed through formal rulemaking.”).

146 316 F.3d at 921 (citing *Mead*, 533 U.S. 237 n.18)

147 See, e.g., *La. Rivers Alliance v. FERC*, 325 F.3d 290, 296-97 (D.C. Cir. 2003); *W.R. Grace*, 429 F.3d at 1251-52 (Bea, J., concurring) (“Thus, while I concur in the result of the majority's decision, I write separately to emphasize that this court should stand ready to review separately the EPA's actions at different locations at a removal site under the 'arbitrary and capricious' standard stated in 42 U.S.C. § 9613(j)(2).”).


Chevron requires determination of whether the agency decision is a “permissible construction” and “reasonable interpretation” of the statute.\textsuperscript{150} It seems, according to the court, to violate one step is to violate the other—“The interpretation of § 1854(e)(4) [of the Magnuson-Stevens Fishery Conservation and Management Act] stated in the 1998 [National Standards Guidelines] applied in the 2002 quota, is not a permissible (or reasonable) construction of the statute; it is directly at odds with the text and the purpose of the Act.”\textsuperscript{151} Similarly, in Rhinelander Paper Co. v. FERC,\textsuperscript{152} the D.C. Circuit provided no real discussion of step one, instead only determining whether the interpretation is permissible. The court stated, “We conclude that FERC’s reliance on section 10(j)(1) reflects, at least, a permissible reading of the statutory language-and, in particular, of the phrase ‘affected by’ -and should therefore be sustained under the second step of the Chevron inquiry.”\textsuperscript{153}

3. \textbf{Chevron Step Two versus the APA.} Common, among both students and judges, is the conflation between Chevron step two and arbitrariness/hard look review.\textsuperscript{154} For example, does the APA’s arbitrariness standard or hard look review simply inform the meaning of Chevron step two?\textsuperscript{155} Or alternatively, does Chevron inform review under the APA?\textsuperscript{156} Are hard look review and step two doctrinally different, but functionally the same? Or, are they different both doctrinally and practically?

It is not uncommon for courts to note no difference between Chevron step two and arbitrary and capricious review under the APA. For example, in New York Public Interest Research Group, Inc. v. Johnson, the Second Circuit stated, “However, if we determine that the statute is ambiguous, in the second step of the Chevron analysis, we defer to an agency’s interpretation unless it fails the APA’s

\small
\textsuperscript{150} 421 F.3d 872, 879 (9th Cir. 2005) (citation and internal quotation marks omitted).
\textsuperscript{151} Id.
\textsuperscript{152} 405 F.3d 1 (D.C. Cir. 2005).
\textsuperscript{153} Id. at 6.
\textsuperscript{155} See, e.g., Riverkeeper, Inc. v. EPA, 358 F3d 174, 184 (2d Cir. 2004) (internal citations omitted) (“‘[I]f,’ on the other hand, ‘the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute,’ which is to say, one that is ‘reasonable,’ not ‘arbitrary, capricious, or manifestly contrary to the statute.’”).
\textsuperscript{156} See, e.g., Harvey v. Veneman, 396 F.3d at 33-34.
‘arbitrary and capricious’ test.”¹⁵⁷ Thus, in this way, the APA gives meaning to the *Chevron* doctrine, informing what “unreasonable” means under step two.¹⁵⁸

However, this view is inconsistent with those courts that view the two standards of deference as doctrinally distinct.¹⁵⁹ Perhaps the varying levels of confusion in determining how to review agency interpretations of environmental statutes (and statutes in general) cause courts to frequently fall back into a simple reasonableness inquiry. Like combining steps one and two, a court has used the term “(un)reasonable” throughout the opinion to include reasonableness under step two, the APA or unreasonable in light of existing precedent.¹⁶⁰

**C. TOOLS OF STATUTORY INTERPRETATION**

Courts employ a host of tools of statutory construction in determining statutory meaning,¹⁶¹ though there is no clear determination of what are the appropriate tools of statutory construction under *Chevron* footnote nine. While nearly every court agrees that the statutory text makes up part of the initial inquiry,¹⁶² there is considerable debate as to whether the plain language is just the

---

¹⁵⁷ 427 F.3d 172, 179 (2d Cir. 2005). See also N.Y. Pub. Interest Group v. Whitman, 321 F.3d 316, 324 (2d Cir. 2003) (“When the question is not one of the agency’s authority but of the reasonableness of its actions, the ‘arbitrary and capricious’ standards of the APA governs.”).

¹⁵⁸ See Isle Royale Boaters Ass’n v. Norton, 330 F.3d 777, 781 (6th Cir. 2003) (internal citations omitted) (“Under *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, we first determine ‘whether Congress has directly spoken to the precise question at issue’; if it has not, we ask ‘whether the agency’s answer is based on a permissible construction of the statute’. Section 706(2)(A) of the Administrative Procedure Act permits us to set aside the agency’s determination only if it is ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law’.”).

¹⁵⁹ See text accompanying notes 33-34.

¹⁶⁰ See generally Sierra Club v. EPA, 353 F.3d 976 (D.C. Cir. 2004).


¹⁶² See, e.g., Bluewater, 370 F.3d at 13 (internal citations omitted) (“We begin our interpretation of the provision with the assumption that legislative purpose is expressed by the ordinary meaning of the words used.”).
end of the step one analysis or part of a more holistic inquiry. Should courts go beyond the statutory text to find congressional intent contrary to the plain meaning? And if courts were to limit step one to the plain meaning, should extratextual sources be available under step two?

“Legislative history is one of the most common interpretive aids available to judges, but judges, like legal scholars, disagree about its proper use and even whether to use it at all.” Yet debate remains as to whether and when legislative history is an appropriate tool when determining if a statute is unambiguous. In the environmental context, legislative history is often used to determine statutory meaning.

---

163 Sierra Club v. Seaboard Farms, Inc., 387 F.3d 1167, 1169 (10th Cir. 2004) (only looking at the plain language of the statute to determine if ambiguous). But see Forest Watch v. U.S. Forest Serv., 410 F.3d 115, 117 (2d Cir. 2005) (internal citations omitted) (”[T]he plain meaning of language in a regulation governs unless that meaning would lead to absurd results.”).

164 Citizens Coal Council v. Norton, 330 F.3d 478, 481 (D.C. Cir. 2003) (citing Pharm. Research & Mfrs. of Am. v. Thompson, 251 F.3d 219, 224 (D.C. Cir. 2001) (“In this first analytical step, the courts use ‘traditional tools of statutory interpretation-text, structure, purpose, and legislative history.”)).

165 See Hogwarth, 330 F.3d at 1366-67.

166 See Envtl. Defense v. EPA, 369 F.3d 193, 209 (2d Cir. 2004) (using a dictionary as part of step two to determine if reasonable after determining that text was ambiguous); Safe Food & Fertilizer v. EPA, 350 F.3d 1263, 1269 (D.C. Cir. 2003) (internal citations omitted) (stating that step two means “reasonable and consistent with the statutory purpose”).

167 Jason J. Czarnezki, Lori A. Ringhand & William K. Ford, An Empirical Investigation of the Confirmation Hearings of the Justices of the Rehnquist Court, ___ CON. COMM. ___ (forthcoming 2007) (citing Bank One Chi., N.A. v. Midwest Bank & Trust Co., 516 U.S. 264, 279 (1996) (Scalia, J., concurring in part and concurring in the judgment)” (”The text’s the thing. We should therefore ignore drafting history without discussing it, instead of after discussing it.”); Archer-Daniels-Midland Co. v. United States, 37 F.3d 321, 323-24 (7th Cir. 1994) (opinion by Posner, J. (“Legislative history is in bad odor in some influential judicial quarters, but it continues to be relied on heavily by most Supreme Court Justices and lower-court judges; and in the case of statutory language as technical and arcane as that of the DISC provisions, the slogan that Congress votes on the bill and not on the report strikes us as pretty empty.”) (internal citation omitted); Stephen Breyer, On the Uses of Legislative History in Interpreting Statutes, 65 S. CAL. L. REV. 845 (1992)). See also ANTONIN SCALIA, A MATTER OF INTERPRETATION 29-32 (1996).

Judicial opinions also look to the underlying purpose of the statute in determining the meaning of more specific statutory provisions. Statutory purposes are often stated at the beginning of the statutory text and can be quite broad and very ambitious. For example, a goal of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The Congressional declaration in the Clean Water Act is so ambitious that it states, “it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985.” Similarly, the Clean Air Act seeks “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” This section looks at how federal appellate courts in environmental cases invoke a statute’s legislative history underlying purpose.

For the cases in the dataset, courts commonly invoked legislative history to determine statutory meaning, including as an appropriate tool of statutory interpretation under *Chevron* step one. At least in the context of environmental law, it seems any fight against the use of legislative history has ultimately failed, and courts view it as a proper tool of statutory construction under *Chevron*. In fact, citing Supreme Court precedent, circuits have even

---


170 *Id.*


173 Alliance to Protect Nantucket Sound v. U.S. Dept. of the Army, 398 F.3d 105, 109 (1st Cir. 2005) (“In this case, however, we find it unnecessary to reach the question of *Chevron* deference because legislative history reveals, with exceptional clarity, Congress’s intent that Section 10 authority under OCSLA not be restricted to structures related to mineral extraction.”).

174 Alliance to Protect Nantucket Sound, Inc. 398 F.3d at 109 n.3 (citing INS v. Cardoza-Fonseca, 480 U.S. 421, 432 n.12 (1987) (“Even were the text less ambiguous, a reviewing court may consider legislative history to determine ‘whether there is clearly expressed legislative intention contrary to [the statutory] language, which would require [the court] to question the strong presumption that Congress expresses its intent through the language it chooses.’”); Train v. Colo. Pub. Interest Research Group, Inc., 426 U.S. 1, 10 (1976). *But see* Zuni Pub. Sch. Dist. No. 89 v. Dep’t of Educ., ___ U.S. ___, 127 S. Ct. 1534, 1543 (2007) (citing *Chevron*, 467 U.S. at 842-843) (“But what of the provision’s literal language? The matter is important, for normally neither the legislative history nor the reasonableness of the Secretary's method would be determinative if the plain language of the statute unambiguously indicated that Congress sought to foreclose the Secretary’s interpretation. And Zuni argues that the Secretary’s formula could not possibly effectuate Congress’ intent since the statute’s language literally forbids the Secretary to use such a
acknowledged a need to sometimes examine the legislative history despite unambiguous statutory text to avoid a result contrary to congressional intent. Other courts would like to consider legislative history, but have noted that the “legislative history is particularly unhelpful” due to the complexity of environmental legislation.

Turning to discussing statutory purpose as an interpretive tool, most cases in the dataset provide only boilerplate language in describing the purpose and historical background of the statute at issue, but do not use the stated statutory purpose to import meaning to the specific statutory provision at issue. However, this is not always the case. Courts invoke the statute’s goals both to bring meaning to the statutory text, and to confirm that the plain meaning of the text is consistent with congressional intent. Though, courts can invoke the method. Under this Court’s precedents, if the intent of Congress is clear and unambiguously expressed by the statutory language at issue, that would be the end of our analysis."

175 Isle Royale Boaters Ass’n v. Norton, 330 F.3d 777, 784 (6th Cir. 2003) (internal citations omitted) (“When a statute’s text is unambiguous, there is ordinarily no need to review its legislative history. However, there are those ‘rare cases in which the literal application of a statute will produce a result demonstrably at odds with the intentions of its drafters . . . .’”); Bullcreek, 359 F.3d at 541 (internal citations omitted) (“[O]n rare occasions, it may suffice to overcome a result of the plain language of the statute that is ‘demonstrably at odds with the intentions of its drafters.’”); Sierra Club v. EPA, 353 F.3d 976, 988 (citing Nat’l Rifle Ass’n v. Reno, 216 F.3d 122, 127 (D.C. Cir. 2000)).

176 Grace, 429 F.3d at 1240.

177 See, e.g., Sierra Club, 353 F.3d at 979-80 (D.C. Cir. 2004); Public Citizen, Inc. v. EPA, 343 F.3d 449, 452-53 (5th Cir. 2003). See also Envtl. Defense, 369 F.3d at 196 (“To put this case in context, and drawing on legislative history, we essay a very brief summary of what the legislative and the executive branches of government have aimed to accomplish since 1963 when Congress enacted the Clean Air Act, the first modern environmental law.”).

178 Harvey v. Veneman, 396 F.3d at 38 (2005) (“Since the Act is silent on these issues, we must conclude that Congress committed the questions to the Secretary’s discretion and assess the challenged portions of the Rule for their reasonableness in light of OFPA’s overall scheme. Penobscot Air Servs., 164 F.3d at 719; see also United States v. Haggar Apparel Co., 526 U.S. 380, 392, 143 L. Ed. 2d 480, 119 S. Ct. 1392 (1999) (‘If . . . the agency’s statutory interpretation fills a gap or defines a term in a way that is reasonable in the light of the legislature’s revealed design, we give that judgment controlling weight.’”).

179 Said the Ninth Circuit: “This plain reading of section 1313 is consistent with the basic goals and policies that underlie the Clean Water Act—namely, that States remain at the front line in combating pollution.” City of Arcadia, 411 F.3d 1103, 1106 (9th Cir. 2005) (citing 33 U.S.C. § 1251(b) (“It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution . . . .”); 33 U.S.C. § 1370 (stating that “nothing in this chapter shall [] preclude or deny the right of any State or political subdivision thereof . . . to
statutory purpose under step one to overturn agency action. In *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Service*, the Ninth Circuit Circuit used the statutory purpose under *Chevron* step one to strike down a U.S. Fish and Wildlife Service interpretation of the Endangered Species Act that would allow, according to the court, complete elimination of critical habitat necessary for species recovery. This “offends the ESA because the ESA was enacted not merely to forestall the extinction of species (i.e., promote a species survival), but to allow a species to recover to the point where it may be delisted.”

D. ENVIRONMENTAL SCIENCE & LAW

“Law and science have had a troubled marriage.” These difficulties are furthered by the limited institutional capacity of judges to understand scientific principles. At Supreme Court Oral Argument in *Massachusetts v. EPA*, an appeal from the D.C. Circuit’s decision in a case in this Article’s dataset regarding the EPA’s authority and duty to regulate greenhouse gases, Justice Scalia, in a dialogue with the Deputy Attorney General of Massachusetts, readily admitted that judges are not experts in environmental science.

Justice Scalia: “Mr. Milkey, I had -- my problem is precisely on the impermissible grounds. To be sure, carbon dioxide is a pollutant, and it can be an air pollutant. If we fill this room with carbon dioxide, it could be an air pollutant that endangers health. But I always thought an air pollutant was something different from a stratospheric pollutant, and your claim here is not that the pollution of what we normally call ‘air’ is endangering health. That isn’t, that isn’t -- your assertion is that after the pollutant leaves the air and goes up into the stratosphere it is contributing to global warming.”

Mr. Milkey: “Respectfully, Your Honor, it is not the stratosphere. It’s the troposphere.”

---

adopt or enforce [] any standard or limitation respecting discharges of pollutants” unless the standard is less stringent than an existing standard)).

180 Gifford Pinchot, 378 F.3d at 1070 (citing 16 U.S.C. § 1532(3); Sierra Club, 245 F.3d at 438).

Justice Scalia: “Troposphere, whatever. I told you before I’m not a scientist.”

(Laughter.)

Justice Scalia: “That’s why I don’t want to have to deal with global warming, to tell you the truth.”

It is not surprising that courts may be reluctant to definitively rule on issues involving expertise in environmental science, and may defer to administrative agencies in such matters. And the recognition that “[j]udges are not experts in the field” provided the Court with a rationale for the *Chevron* decision itself as perhaps Congress, when discussing who should determine environmental policy, thought “that those with great expertise and charged with responsibility for administering the provision would be in a better position to do so.” Thus, courts may be more willing to (and some argue should) defer when issues of environmental policy or science are involved, and are less willing to do so otherwise.

The cases in the dataset support the notion that courts will defer where scientific expertise is required—a recognition of both present and future institutional capacity as agencies may later choose to change their reasonable interpretation as scientific information evolves. (However, this does not mean that courts must abdicate their responsibility to interpret and enforce clear statutory text.) The Supreme Court itself recognized the relationship between science and administrative deference. In *Baltimore Gas & Electric Co. v. NRDC*, the Court wrote,

---

*182* Supreme Court of the United States, Argument Transcripts, online at www.supremecourts.gov/oral_arguments/argument_transcripts/05-1120.pdf (last visited March 10, 2007).

*183* *Chevron*, 467 U.S. at 865.


*186* For a discussion and use of expertise as a rationale for *Chevron* deference in the courts of appeals, including a small empirical inquiry into the D.C. Circuit, see Note, 120 Harv. L. Rev. 1562, *supra* note __.

*187* See generally Czarnezki, *supra* note __.
[A] reviewing court must remember that the Commission is making predictions, within its area of special expertise, at the frontiers of science. When examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.188

This statement is cited by a number of cases in the dataset,189 and the appellate courts have explicitly recognized their limitations in “making predictions at the frontiers of science,” an endeavor better left to the administrative agencies.190 The D.C. Circuit once stated, “We give particular deference to the EPA when it acts under ‘unwieldy and science-driven’ statutory schemes like the Clean Air Act[,]”191 and courts seem particularly happy to defer to evaluations of complicated science within an agency’s area of expertise.192 Thus, both the complexity of the


189 See, e.g., Ass’n of Irritated Residents v. EPA, 423 F.3d 989, 997 (9th Cir. 2005) (citing Baltimore Gas, 462 U.S. at 103; Central Arizona Water Cons. Dist. v. EPA, 990 F.2d 1531, 1539-40 (9th Cir. 1993)) (“This is a determination that is scientific in nature and is entitled to the most deference on review.”); W.R. Grace, 429 F.3d at 1245 (citing Baltimore Gas, 462 U.S. at 103) (“[W]e will not delve further to second-guess the underlying data absent a showing of specific evidence that the EPA’s conclusion were not warranted.”).

190 Envtl. Defense v. EPA, 369 F.3d 193, 204 (2d Cir. 2004) (Baltimore Gas, 462 U.S. at 103) (“A reviewing court must remember that the agency is making predictions at the frontiers of science. In ‘examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.’”).

191 Bluewater Network, 372 F.3d at 410 (“We give particular deference to the EPA when it acts under ‘unwieldy and science-driven’ statutory schemes like the Clean Air Act. Husqvarna, 254 F.3d at 199 (quoting Appalachian Power Co. v. EPA, 328 U.S. App. D.C. 379, 135 F.3d 791, 801-02 (D.C. Cir. 1998)); see Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 103, 76 L. Ed. 2d 437, 103 S. Ct. 2246 (1983) (court is ‘at its most deferential’ if agency is ‘making predictions, within its area of special expertise, at the frontiers of science’); BCCA Appeal Group, 355 F.3d 817, 825 (5th Cir. 2003) (citing Union Elec. Co. v. EPA, 427 U.S. 246, 256, (1976); Train v. NRDC, 421 U.S. 60, 75, (1975)) (stating that federal courts accord ‘great deference’ to the EPA’s construction of the Clean Air Act); Greenbaum v. EPA, 370 F.3d 527, 533-534 (6th Cir. 2004) (internal citations omitted) (“If Congress has been either silent or ambiguous about the ‘precise question at issue, then a reviewing court must defer to the agency’s interpretation if it is reasonable.’ To uphold EPA's interpretation of a statute, the Court need not find that it is the only permissible construction that EPA might have adopted but only that EPA's understanding of this very ‘complex statute’ is a sufficiently rational one to preclude a court from substituting its judgment for that of EPA.”).

192 BCCA Appeal Group, 355 F.3d at 824 (citing Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 103 (1983) (“A reviewing court must be ‘most deferential’ to the agency where, as here, its decision is based upon its evaluation of complex scientific data within its technical expertise.”); City of Waukesha v. EPA, 320 F.3d 228, 247 (D.C. Cir. 2003) (internal citations omitted) (giving
statutory scheme and underlying science help determine the appropriate scope of deference.

In *United States v. W.R. Grace & Co.*, discussed above, the Ninth Circuit decided whether the EPA had properly characterized cleanup activities under CERCLA as a removal action rather than a remedial action as was preferred by defendants. In addition to citing *Baltimore Gas*, the court used the scientific nature of the question to award the EPA highly persuasive *Skidmore* deference in concluding the EPA’s response was a removal action.

Grace contests the denomination of the action as a removal by cherry-picking discrete cleanup activities which, standing alone, might fall within the ambit of a remedial action. We refrain from slicing and dicing the EPA’s single, cohesive removal action into a myriad of fractured parts. Such atomization would undermine the EPA’s scientific and administrative expertise by requiring us to second-guess whether, for example, the excavation of soil at the local elementary school was a remedial action because 1000 cubic yards of soil was removed when perhaps removal of less soil or less drastic measures could have been employed to counteract the immediate threat. Instead, we take a more comprehensive view of the administrative record in concluding that the EPA’s response was a removal action.

Not surprisingly, this principle of scientific deference held firm when defendants attempted to contest the actual scientific process.

The disputes between Grace and the EPA regarding testing methodology and data analysis are exceedingly complex. The administrative record includes, for instance, the EPA’s response to Grace’s contention that the EPA “inappropriately calculated PCMEs [phase contrast microscopy equivalents] if those findings are going to be compared to the OSHA PEL [Occupational Safety & Health Administration permissible

---

193 See supra Part VI.B.1.
194 429 F.3d at 1226.
195 See supra note 189.
196 Grace, 429 F3d at 1237.
Courts are well-aware of their limitations in addressing issues of scientific expertise. The federal intermediate appellate courts, in environmental cases, have built upon the Supreme Court’s statements in both *Chevron* and *Baltimore Gas* to create strong principles of deference when environmental science is involved. This is consistent with the recently made argument that the courts of appeals, based on reasonable interpretations of Supreme Court precedent, are relying heavily on agency expertise in their deference decisions. Courts have exerted such deference regardless of whether *Chevron* deference is required or whether some lesser form of deference is permitted. Where scientific expertise is involved, due to the highly persuasive findings of the environmental agency and strength of deference employed, it seems there is little difference in outcome whether *Chevron* or *Skidmore* deference is offered up as the legally appropriate standard, a qualitative conclusion that is not readily ascertained from the type of quantitative results available earlier in this Article.

197 *Id.* at 1245-46 (citing Colorado v. Sunoco, Inc., 337 F.3d 1233, 1243 (10th Cir. 2003) (“[Skidmore] deference seems particularly appropriate where an action reasonably can be classified as both ‘removal’ and ‘remedial’ under CERCLA’s complex definitional provisions.”)).

198 Note, *supra* note __, 120 HARV. L. REV. at 1563 (stating that, compared to the Supreme Court, “in the circuit courts, expertise plays a more central role in the deference decision” and that “a noticeable pattern emerges in the way that the courts of appeals apply *Chevron*: they have come to rely on agency expertise in more contexts, and more heavily, in deciding the degree of deference to provide to agency interpretations than the Supreme Court does”).

199 Deference is also granted under the APA’s arbitrary and capricious review. See, e.g., Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv., 378 F.3d 1059, 1066 (9th Cir. 2004) (in upholding USFWS habitat models under the APA, the court noted that “[a]n agency’s scientific methodology is owed substantial deference”); Crutchfield v. County of Hanover, 325 F.3d 211, 217-18 (4th Cir. 2003) (internal citations omitted) (“Our concern with the district court’s decision begins with the standard of review. Under the deferential standard established by the Administrative Procedure Act, federal courts can overturn an administrative agency’s decision if it was ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’ ‘Although our inquiry into the facts is to be searching and careful, this court is not empowered to substitute its judgment for that of the agency.’ Particularly with environmental statutes such as the Clean Water Act, the regulatory framework is exceedingly ‘complex and requires sophisticated evaluation of complicated data.’ ‘We therefore do not sit as a scientific body’ in such cases, ‘meticulously reviewing all data under a laboratory microscope.’ Rather, if the agency ‘fully and ably explain[s] its course of inquiry, its analysis, and its reasoning sufficiently enough for us to discern a rational connection between its decision-making process and its ultimate decision,’ we
CONCLUSION

At minimum, this Article and the descriptive data it presents suggest a number of avenues for future research about the environmental law docket in the United States. First, more time must be devoted to understanding environmental litigation outside the D.C. Circuit, and, more specifically, to learning why certain cases are filed in certain jurisdictions when not mandated by statute (e.g., environmental hot spots, venue preferences). Second, in recognition of the Supreme Court’s 2005 Brand X decision, will fewer courts affirm agency action under Chevron step one in order to give ample “policy space” to agencies in the future? Third, what is the true nature of judicial preferences? In other words, even if a judge may be, at times, ideologically motivated, would he or she prefer to reach certain environmental outcome or affirm the presidential administration with which he or she aligns. For example, if an industry group challenges an interpretation of the Bush Administration’s EPA, does a conservative judge prefer to vote with the “anti-environmental” industry group or the “conservative” Republican administration? Furthermore, might a preference toward executive deference really be a legal preference, not an ideological one? Future work should consider both the nature of the presidential administration in power and the challenging litigants. Fourth, judges have exhibited a strong willingness to defer to agency action when environmental scientific expertise is required. What are the implications for Chevron deference or other forms of deference in other areas of law that deal with scientific or technological complexities?

This Article also makes four basic claims about judicial voting in cases of environmental statutory interpretation that ultimately lead to two possible conclusions, one complementary and the one contradictory. The claims are as follows: (1) Consistent with other research, judges vote in their perceived ideological directions. (2) The Chevron doctrine, when employed in environmental cases, works as expected—courts find most statutory provisions ambiguous and then affirm agency action. (3) The data provide very limited...
evidence that *Chevron* step one is used strategically to achieve desired policy preferences. (4) At some level law itself matters as invocations of legislative history more often corresponds to a liberal vote, yet ideology does not predict this invocation.

These findings are arguably contradictory, and perhaps open to other explanation. How can judges simultaneously be ideological and legal?—perhaps when the two are not in conflict, or perhaps sometimes (or often) judges hold legal preferences higher than policy preferences. One could certainly imagine a judge deciding a case based on *stare decisis* even though as a matter of policy the judge would rather overturn precedent. However, law and politics is not easily disentangled where preferred legal preferences lead to the same result as preferred policy preferences. Future research may examine periods of different and divergent political party control of the administration and judiciary.

In addition, the data look only to the strategic use of *Chevron* step one, but what of the strategic use of *Chevron* step zero, arbitrary and capricious review, other interpretive tools, or the determination of how much expertise is needed to address the problem at hand? Since most research models (with some exceptions) lend support to the existence of ideological voting, is it that diverse legal avenues, a hodgepodge of legal mechanisms (“pick a card, any card”), are being used strategically to achieve preferred policy preferences? Judges are not systematically using a single mechanism such as *Chevron* step one (though it may be used sometimes as suggested by the data) to achieve their preferred outcomes. Thus, the “muddled” nature of *Mead* and *Chevron* may lead to strategic options allowing for “judicial policy space” even though *Chevron* would presumably create “agency policy space.”

But this Article’s findings are equally complementary. Taking its findings, both suggesting mild claims in opposite directions, regarding the use of legislative history based on judicial philosophy and strategic use of *Chevron* based on ideology, in context with reoccurring findings of the role policy preferences in judicial decisionmaking, it would appear that judges respond both to the legal and attitudinal models. 203 Thus, legal choices such as whether to

203 Humphries & Songer, *supra* note __, at 217-18 (“The judges do not appear to simply substitute their own policy preferences for those of the administrators without regard for law. Variables that captured elements of the legal model were also related to judicial decisions to a statistically significant degree. Taken together, the evidence suggests that the appeals courts appear to respond to both legal concerns and political preferences. Thus, while it would be naïve to believe that politics is irrelevant in judicial review of agencies, it appears that the courts do fulfill, at least in
defer to an agency and judicial philosophy about the legitimacy of certain interpretive tools, as well as ideology, are key aspects to judicial decisionmaking.\textsuperscript{204}

Finally, empirical scholarship of environmental and administrative law requires, in practice and methodology, a more sophisticated understanding of judging in environmental cases and a more nuanced model of judicial decisionmaking in general,\textsuperscript{205} that depends not only upon political ideology, but also on how law creates a set rules by which decisions are made (e.g., the \textit{Chevron} doctrine), the malleability of those rules (e.g., how many \textit{Chevron} steps can one choose from), and the facts given to the court (e.g., complex statutes or scientific findings requiring expert analysis).

---

\textsuperscript{204} Accord Kritzer et al., \textit{supra} note ___, at 1, 23.

\textsuperscript{205} James Gibson, \textit{From Simplicity to Complexity: The Development of Theory in the Study of Judicial Behavior}, 5 POL. BEHAVIOR 7, 32 (1983) ("Judges’ decisions are a function of what they prefer to do, tempered by what they think they ought to do, but constrained by what they perceive is feasible to do.").