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Remand Without Vacatur in a Changing Environment

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ABSTRACT. When courts review deficient agency action, the usual remedy is vacatur. But sometimes, courts remand to the agency without vacating. The test for "remand without vacatur" turns on two factors: the defectiveness of the agency's action and the disruptiveness of the court's remedy. When these factors conflict, however, the test provides little guidance on how to reconcile them. And in a paradigmatic context, challenges to environmental regulations, conflicts between the factors only become more likely as a changing natural environment increases both the complexity and the stakes of regulation. This Essay surveys diverging approaches in environmental cases to the test for remand without vacatur. It then draws on parallels with preliminary relief to develop a framework for the test focused on minimizing the costs of uncertainty. The proposed approach unifies the test's factors, contributing coherence and administrability to judicial review of agency action in an age of environmental change.

INTRODUCTION

Multiple Supreme Court filings last Term brought an unusual form of relief into the spotlight.[1] When courts review deficient agency action, the usual remedy is vacatur. But sometimes courts remand to the agency without vacating, guided by a two-factor test from *Allied-Signal, Inc. v. U.S. Nuclear Regulatory Commission*.[2] The test balances the legal deficiencies of an agency's action against the hardship that vacating the action may cause.[3] The proper way to strike that

1. *See* Petition for Writ of Certiorari at 1, Spire Mo., Inc. v. Env't Def. Fund, No. 21-848 (U.S. Dec. 3, 2021), 2021 WL 5827773, at *1, *cert. denied*, 142 S. Ct. 1668 (2022); Application for a Stay Pending Appeal at 21, Louisiana v. Am. Rivers, No. 21A539 (U.S. Mar. 21, 2022), *stay granted*, 142 S. Ct. 1347 (2022).

2. 988 F.2d 146 (D.C. Cir. 1993).

3. *Id.* at 150-51.

balance, however, has stirred up disagreement,[4] raising in one petitioner's words "perhaps the most significant question of administrative law that this Court has never addressed."[5]

The disagreement has been especially pronounced in environmental cases,[6] long a favored arena for *Allied-Signal* analysis.[7] And now, biodiversity loss and climate change challenge courts to apply the test in the face of grave risks and extensive uncertainty. Approaches seem poised to vary widely.

In response, this Essay proposes to rediscover the link between *Allied-Signal* and preliminary relief. A brief genealogy of *Allied-Signal* reveals that its test borrows analytical structure from the law of preliminary injunctions.[8] Because the principles of preliminary relief have been refined to orient decision-making in low-information conditions, excavating and revitalizing their mark on *Allied-Signal* can provide clearer guidance in these difficult cases. Perhaps the answers to this "significant question of administrative law" have been within *Allied-Signal* all along.

Part I of this Essay describes the *Allied-Signal* test and its role in judicial review of environmental regulations. Surveying environmental cases that have applied *Allied-Signal*, Part II then draws out points of analytical instability in the threshold conditions for the test, its two factors, and the way the factors are balanced. Finally, Part III draws on the law of preliminary injunctions to suggest refocusing *Allied-Signal* as a framework for minimizing the costs of judicial uncertainty, offering some guideposts for how such an approach might account for the shifts in agency policy that are typical of environmental regulation.

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4. *See infra* Part II; *see also* Petition for Writ of Certiorari, *supra* note 1, at *16 ("Most circuits follow approaches nominally based on the *Allied-Signal* test, but those standards diverge from each other . . . .").

5. Petition for Writ of Certiorari, *supra* note 1, at *1.

6. *See infra* Part II.

7. *See* Stephanie J. Tatham, *The Unusual Remedy of Remand Without Vacatur*, ADMIN. CONF. OF THE U.S. 22, 24 (Jan. 3, 2014) (analyzing D.C. Circuit decisions), https://www.acus.gov/sites/default/files/documents/Remand%20Without%20Vacatur%20Final%20Report.pdf [https://perma.cc/KT2C-7GWE].

8. While decisions occasionally allude to this connection, *e.g.*, *In re* Clean Water Act Rulemaking, 568 F. Supp. 3d 1013, 1022-23 (N.D. Cal. 2021), *stay granted sub nom.* Louisiana v. Am. Rivers, 142 S. Ct. 1347 (2022), *appeal filed sub nom. In re* Am. Rivers v. Arkansas, No. 21-16961 (9th Cir. Nov. 22, 2021); *see also infra* note 108 (addressing the Supreme Court's stay in *American Rivers*), its implications appear to have received limited in-depth academic treatment. *See, e.g.*, Ronald M. Levin, *"Vacation" at Sea: Judicial Remedies and Equitable Discretion in Administrative Law*, 53 DUKE L.J. 291, 378-80 (2003); Kristina Daugirdas, Note, *Evaluating Remand Without Vacatur*, 80 N.Y.U. L. REV. 278, 293 & n.67 (2005); T. Alex B. Folkerth, Note, *The "Directive" Prong: Adding to the* Allied-Signal *Framework for Remand Without Vacatur*, 9 MICH. J. ENV'T & ADMIN. L. 483, 486 n.20 (2020).

I. THE *ALLIED-SIGNAL* TEST

This Part sets the stage by introducing the *Allied-Signal* test for remand without vacatur. The test responds to the way that judicial intervention in administration can inflict hardship on regulated parties and on the administrative process. It balances the deficiencies of an agency's action, which invite vacatur, against the disruptive effects of vacatur, which caution judicial restraint. Because environmental regulation lends itself to particularly assertive judicial review but deals in high costs, it can bring the *Allied-Signal* factors into conflict. And the novel risks of an increasingly unpredictable natural environment only make the balancing act more precarious.

Remand without vacatur began to emerge in the D.C. Circuit in the 1970s.[9] As agency action shifted to rulemaking[10] and a hard-look canon emerged that gave no quarter to trivial agency errors,[11] the combination of prospective agency rules and penetrating judicial review occasioned concern that vacatur of a minor mistake could derail an important regulatory scheme.[12] The ex ante objective of keeping agencies in line thus came into tension with an ex post interest in avoiding unreasonable outcomes.

In *Allied-Signal*, the D.C. Circuit formulated a two-factor standard for navigating that tension. *Allied-Signal* stated: "The decision whether to vacate depends on 'the seriousness of the order's deficiencies (and thus the extent of doubt whether the agency chose correctly) and the disruptive consequences of an interim change that may itself be changed.'"[13] Remand without vacatur has filtered into appellate decisions in at least the First, Second, Third, Fifth, Eighth, Ninth,

9. Daugirdas, *supra* note 8, at 290.

10. Levin, *supra* note 8, at 298.

11. Nicholas Bagley, *Remedial Restraint in Administrative Law*, 117 COLUM. L. REV. 253, 261-62 (2017); Daniel B. Rodriguez, *Of Gift Horses and Great Expectations: Remands Without Vacatur in Administrative Law*, 36 ARIZ. ST. L.J. 599, 602-07 (2004). Further doctrinal changes invigorated remand without vacatur following the development of hard-look review. *See* Richard J. Pierce, Jr., *Seven Ways to Deossify Agency Rulemaking*, 47 ADMIN. L. REV. 59, 75-76 (1995) (citing Bowen v. Georgetown Univ. Hosp., 488 U.S. 204 (1988)).

12. *See* Daugirdas, *supra* note 8, at 286-87; Bagley, *supra* note 11, at 314; Levin, *supra* note 8, at 302-04.

13. Allied-Signal, Inc. v. U.S. Nuclear Regul. Comm'n, 988 F.2d 146, 150-51 (D.C. Cir. 1993) (quoting Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 967 (D.C. Cir. 1990)).

Tenth, Eleventh, and Federal Circuits.[14] Many apply some variation of *Allied-Signal*.[15]

The test's first factor, "deficiency," reflects background uncertainty in judicial review. Remand without vacatur often responds to substantive failures like inadequate reasoning.[16] If an agency cannot ultimately justify its decision, then equity follows the law and will not preserve the agency's action. But if an agency might ultimately justify its decision on alternative grounds, or notwithstanding additional evidence, or even because the court misunderstood the record—a risk in complicated environmental litigation[17]—then vacatur might impose unnecessary inconvenience.

The test's second factor, "disruption," reflects the heavy costs that can result—on the agency, on regulated parties, and on third parties. While an improperly invalidated rule invites a new rulemaking and upsets reliance interests,[18] an improperly preserved rule can impose unnecessary costs on regulated parties. Concomitant regulatory gaps can inflict environmental damage. And over the long run, too much vacation might chill rulemaking,[19] although the costs of invalidation may help to restrain judicial review.[20]

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14. Nat. Res. Def. Council v. EPA, 808 F.3d 556, 584 (2d Cir. 2015); Black Warrior Riverkeeper v. U.S. Army Corps of Eng'rs, 781 F.3d 1271, 1289-90 (11th Cir. 2015); Tatham, *supra* note 7, at 27 (enumerating decisions in other circuits); *see also* Ctr. for Biological Diversity v. U.S. Forest Serv., No. 17-CV-372, 2021 WL 855938 (S.D. Ohio Mar. 8, 2021) (interpreting Sixth Circuit case law to permit the remedy). Although some scholars have viewed the remedy as unlawful, *see* Levin, *supra* note 8, at 306-07; Tatham, *supra* note 7, at 33, the Supreme Court has appeared to sanction remand without vacatur in passing, *see* Fla. Power & Light Co. v. Lorion, 470 U.S. 729, 744 (1985); *see also* Shinseki v. Sanders, 556 U.S. 396, 406-09 (2009) (discussing the Administrative Procedure Act's "harmless error rule" (quoting Nat'l Ass'n of Home Builders v. Defs. of Wildlife, 551 U.S. 644, 660 (2007))). The Court has also broadly tolerated the exercise of equitable discretion. *See* Levin, supra note 8, at 323-34; Samuel L. Bray, *The Supreme Court and the New Equity*, 68 VAND. L. REV. 997, 1036-38 (2015).

15. *See* Tatham, *supra* note 7, at 27 & n.167. *But see* Otter v. Salazar, No. 11-CV-00358, 2012 WL 12517198, at *3 (D. Idaho Dec. 4, 2012) (identifying statutory purpose as an additional factor in some Ninth Circuit case law); Folkerth, *supra* note 8, at 493-94; Nate Hausman, Monsanto Co. v. Geertson Seed Farms*: Breathing a Sigh of Equitable Relief*, 25 TUL. ENV'T L.J. 155, 192-94 (2011).

16. *See* Daugirdas, *supra* note 8, at 283; Rodriguez, *supra* note 11, at 616-18. Occasionally, courts also use the remedy for procedural deficiencies. *See* Daugirdas, *supra* note 8, at 283.

17. *See, e.g.*, Emily Hammond Meazell, *Deference and Dialogue in Administrative Law*, 111 COLUM. L. REV. 1722, 1768 (2011) (citing Appalachian Power Co. v. EPA, 251 F.3d 1026, 1032 (D.C. Cir. 2001)); Marla Nelson, *The Ripple Effect: Underlying Currents in the Short Opinion in "*LA County Flood Control District v. NRDC,*"* 28 NAT. RES. & ENV'T, Spring 2014, at 18, 21.

18. *See* Levin, *supra* note 8, at 300.

19. *See id.* at 301. *But see* Bagley, *supra* note 11, at 314 (suggesting limited evidence on the incentive effects of judicial review).

20. *See* Rodriguez, *supra* note 11, at 635.

These factors may be at odds with one another when agencies face a changing natural environment.[21] Environmental regulations depend upon complex information subject to continual scientific updating,[22] allowing reviewing courts to vacate such regulations upon finding flyspeck deficiencies in agency analysis.[23] Yet that high level of complexity also makes rulemaking costly for agencies,[24] raising the stakes of an improperly invalidated rule. And unwinding environmental damage from a vacated rule may be nearly impossible,[25] a grave risk in the age of climate change.[26] Such high stakes invite anxiety that vacatur may be out of measure with the agency's error. Accordingly, *Allied-Signal*'s guidance is especially important in such cases.

II. *ALLIED-SIGNAL* AND ENVIRONMENTAL REGULATION

As the aims of *Allied-Signal* have come into conflict in challenges to environmental regulations, ambiguity has clouded the test. A tour of environmental cases applying *Allied-Signal* reveals disagreement about when to apply the test, what its factors mean, and how its factors fit together.[27] These disputes are not just fact bound—they go to the doctrinal heart of the *Allied-Signal* test.

A. Threshold Questions

To begin with, courts considering remand without vacatur seem to disagree about even basic threshold questions. With some frequency, decisions characterize vacatur as the default remedy for invalid agency action.[28] But in voluntary-remand cases, where an agency requests a remand to reconsider a challenged action[29] (in a politicized context like environmental rulemaking, an agency may

21. *See* Pierce, *supra* note 11, at 76-77; Tatham, *supra* note 7, at 22, 29.

22. *See* RICHARD J. LAZARUS, THE MAKING OF ENVIRONMENTAL LAW 19-23 (2004).

23. *See* Thomas O. McGarity, *The Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld*, 75 TEX. L. REV. 525, 535-36, 549-50 (1997); Richard J. Pierce, Jr., *The Unintended Effects of Judicial Review of Agency Rules: How Federal Courts Have Contributed to the Electricity Crisis of the 1990s*, 43 ADMIN. L. REV. 7, 21-22 (1991).

24. *See* LAZARUS, *supra* note 22, at 16-21, 188, 191.

25. *See id.* at 23.

26. *See, e.g.*, David I. Armstrong McKay et al., *Exceeding 1.5°C Global Warming Could Trigger Multiple Climate Tipping Points*, 377 SCIENCE, art. no. eabn7950, at 1-2 (2022).

27. Levin, *supra* note 8, at 380.

28. Petition for Writ of Certiorari, *supra* note 1, at *15-16 (citing cases).

29. Joshua Revesz, *Voluntary Remands: A Critical Reassessment*, 70 ADMIN. L. REV. 361, 361 (2018).

readily admit its faults under a previous administration[30]), the presumption of vacatur occasionally seems to shift to a presumption of remand without vacatur.[31] Other voluntary-remand decisions have even viewed vacatur as an *impermissible* remedy.[32] And that just scratches the surface of a multifarious remedial landscape.[33] Against this backdrop, this Section foregrounds the question of whether vacatur is available when an agency requests a remand.

A recent decision in this area involved state water-quality certification requirements under Clean Water Act (CWA) § 401[34] narrowed by the Environmental Protection Agency (EPA) during the Trump Administration.[35] In the resulting litigation, *In re Clean Water Act Rulemaking*,[36] the Biden Administration's EPA moved for remand without vacatur.[37] The district court, noting a "split in authority" on its ability to vacate without reaching the merits and characterizing vacatur as "discretionary, equitable relief akin to an injunction," applied *Allied-Signal* and vacated the Trump-era regulations.[38] Although the Supreme Court stayed this judgment,[39] calling pre-merits vacatur into question, uncertainty remains as to whether the district court properly characterized vacatur as discretionary, and as to whether vacatur was even available on the merits in the first place.

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30. *See id.* at 378; *see also* Bethany A. Davis Noll & Richard L. Revesz, *Presidential Transitions: The New Rules*, 39 YALE J. ON REGUL. 1100, 1130-34 (2022).

31. *See, e.g.*, Safer Chems., Healthy Fams. v. EPA, 791 F. App'x 653, 656-57 (9th Cir. 2019); *In re* Clean Water Act Rulemaking, 568 F. Supp. 3d 1013 (N.D. Cal. 2021), *stay granted sub nom.* Louisiana v. Am. Rivers, 142 S. Ct. 1347 (2022), *appeal filed sub nom. In re* Am. Rivers v. Arkansas, No. 21-16961 (9th Cir. Nov. 22, 2021).

32. *See, e.g.*, Carpenters Indus. Council v. Salazar, 734 F. Supp. 2d 126, 135-36 (D.D.C. 2010); Nat'l Parks Conservation Ass'n v. Salazar, 660 F. Supp. 2d 3, 5 (D.D.C. 2009).

33. *E.g.*, Nw. Env't Advocs. v. EPA, No. C 03-05760, 2006 WL 2669042 (N.D. Cal. Sept. 18, 2006) (enjoining EPA to conform by timeframe set for vacatur); Nat. Res. Def. Council v. U.S. Dep't of Interior, 275 F. Supp. 2d 1136, 1143 (C.D. Cal. 2002) (framing remedy as a stay pending resolution of remand); *In re* Polar Bear Endangered Species Act Listing & 4(d) Rule Litig., 748 F. Supp. 2d 19, 23 (D.D.C. 2010) (remanding without ruling on lawfulness); Michigan v. EPA, 213 F.3d 663, 693 (D.C. Cir. 2000) (remanding but not vacating without analysis).

34. 33 U.S.C. § 1341(a)(1) (2018).

35. *In re* Clean Water Act Rulemaking, 568 F. Supp. 3d 1013, 1020 (N.D. Cal. 2021), *stay granted sub nom.* Louisiana v. Am. Rivers, 142 S. Ct. 1347 (2022), *appeal filed sub nom. In re* Am. Rivers v. Arkansas, No. 21-16961 (9th Cir. Nov. 22, 2021).

36. *Id.*

37. *Id.* at 1020.

38. *Id.* at 1022, 1025-28.

39. Louisiana v. Am. Rivers, 142 S. Ct. 1347, 1347 (2022).

Another recent set of CWA voluntary-remand cases exposed the same fault lines. A Trump Administration rule narrowed the definition of "navigable waters,"[40] a key but murky jurisdictional term in the CWA.[41] Reviewing the rule in 2021, the court in *Pascua Yaqui Tribe v. EPA*[42] applied the *Allied-Signal* factors and vacated based in part on the risk of environmental harm.[43] So did another district court.[44] Yet in *California v. Regan*,[45] a court considering the rule after *Pascua Yaqui*—with no cause even to consider vacatur—chose to state its disapproval of vacatur, noting that the agencies had requested remand "for policy reasons" and that "there ha[d] been no evaluation of the merits."[46]

Some decisions have put a gloss on this divide derived from the Administrative Procedure Act (APA). The 2010 case *Carpenters Industrial Council v. Salazar*[47] involved a 2008 habitat designation under the Endangered Species Act (ESA).[48] Although the government confessed error, the court stated: "To summarily grant . . . vacatur 'would allow the Federal defendants to do what they cannot do under the APA, repeal a rule without public notice and comment, without judicial consideration of the merits.'"[49] Yet in *Center for Native Ecosystems v. Salazar*,[50] a 2011 decision reviewing a 2008 partial delisting of a species as threatened, a different court applied *Allied-Signal* and vacated before reaching the merits, just as the government had asked.[51]

Those results are hard to reconcile. The deficiency in *Native Ecosystems*, the Department of the Interior's interpretation of its authority,[52] presented a straightforward legal question compared to *Carpenters Industrial Council*, where a political appointee's actions during rulemaking had "potentially jeopardized" a

40. Pascua Yaqui Tribe v. EPA, 557 F. Supp. 3d 949, 952-53 (D. Ariz. 2021).

41. *See* 33 U.S.C. §§ 1311(a), 1344(a), 1362(7), 1362(12) (2018); *see also* Sackett v. EPA, 8 F.4th 1075, 1079-80 (9th Cir. 2021), *cert. granted in part sub nom.* Sackett v. EPA, 142 S. Ct. 896 (2022).

42. 557 F. Supp. 3d at 954.

43. *Id.* at 954-56 (citing Ninth Circuit authority derived from *Allied-Signal*).

44. Navajo Nation v. Regan, 563 F. Supp. 3d 1164, 1168-70 (D.N.M. 2021).

45. No. 20-CV-03005, 2021 WL 4221583 (N.D. Cal. Sept. 16, 2021).

46. *Id.* at *1.

47. 734 F. Supp. 2d 126 (D.D.C. 2010).

48. *Id.* at 128.

49. *Id.* at 135-36 (quoting Nat'l Parks Conservation Ass'n v. Salazar, 660 F. Supp. 2d 3, 5 (D.D.C. 2009)).

50. 795 F. Supp. 2d 1236 (D. Colo. 2011).

51. *Id.* at 1242-43.

52. *Id.* at 1238-40. *But see id.* at 1242-43 (describing the consequences of this error as substantive in nature).

rule.[53] That made the case for *Allied-Signal* balancing weaker, if anything.[54] Yet many courts reviewing ESA rules appear to take the *Native Ecosystems* approach, citing habitat preservation when applying *Allied-Signal* to leave habitat designations in place.[55] Rather than operating against a presumption of vacatur, *Allied-Signal* seems at some times to license free-floating remedial discretion, and at others to shift presumptions based on the facts of each case.

B. The Deficiency Factor

Moving to the test itself, the first *Allied-Signal* factor instructs a court to consider "the seriousness of the order's deficiencies (and thus the extent of doubt whether the agency chose correctly)."[56] Although the latter part of this formulation has been interpreted to ask whether an agency might justify its choice with a second try,[57] agencies do not always rush to do so.[58] And even on the factor's own terms, its two parts—the action's defects and its justifiability—seem at odds with each other.[59] Many agency actions are deficient in some way.[60] But many such actions may be eventually justifiable.[61] A factor with capacity to tilt in both directions in this manner seems unlikely to provide courts with much guidance

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53. 734 F. Supp. 2d at 133 (quoting a report by Interior's Inspector General).

54. *See* Levin, *supra* note 8, at 308 & n.67.

55. Nat. Res. Def. Council v. U.S. Dep't of Interior, 275 F. Supp. 2d 1136, 1143, 1145-46, 1154 (C.D. Cal. 2002) (employing same factors); Coal. of Ariz./N.M. Cntys. for Stable Econ. Growth v. Salazar, No. 07-CV-00876, 2009 WL 8691098, at *3-4 (D.N.M. May 4, 2009). *But see* Nat'l Ass'n of Home Builders v. Norton, No. 00-CV-903, 2001 WL 1876349, at *3 (D. Ariz. Sept. 21, 2001) (declining to balance equities in light of evidentiary failure).

56. Allied-Signal, Inc. v. U.S. Nuclear Regul. Comm'n, 988 F.2d 146, 150 (D.C. Cir. 1993) (quoting Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 967 (D.C. Cir. 1990)).

57. Heartland Reg'l Med. Ctr. v. Sebelius, 566 F.3d 193, 198 (D.C. Cir. 2009) ("When an agency may be able readily to cure a defect in its explanation of a decision, the first factor in *Allied-Signal* counsels remand without vacatur."); WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 84 (D.D.C. 2019).

58. *In re* Core Commc'ns, Inc., 531 F.3d 849, 862 (D.C. Cir. 2008) (Griffith, J., concurring); *see* William S. Jordan, III, *Ossification Revisited: Does Arbitrary and Capricious Review Significantly Interfere with Agency Ability to Achieve Regulatory Goals Through Informal Rulemaking?*, 94 NW. U. L. REV. 393, 414 (2000).

59. At least one decision even appears to come close to analyzing the components of this factor separately. Am. Petrol. Inst. v. Johnson, 541 F. Supp. 2d 165, 185 (D.D.C. 2008).

60. Pierce, *supra* note 11, at 69 ("It is impossible for any agency to identify and to discuss explicitly and comprehensively each of the myriad issues, alternatives, and data disputes relevant to a major rulemaking.").

61. *Id.* at 75-76.

and liable to lead to conflicting outcomes.[62] This Section considers those problems in the context of National Environmental Policy Act (NEPA) litigation and the longstanding concern that NEPA deficiencies are too easily cured by post hoc justification.[63]

Some cases seem to respond to this concern by emphasizing the defects in agency action as reasons to vacate it. In *Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*,[64] the Corps had issued a Mitigated Finding of No Significant Impact (FONSI) for a pipeline easement.[65] Finding the FONSI deficient, the D.C. Circuit warned of the danger to "NEPA's purpose" from post hoc rationalization and stated that "failure to prepare a required [Environmental Impact Statement] should lead us to doubt that the ultimate action will be approved."[66] Put more formalistically, the action's past defects caused a presumption of doubt, which the court then used to resolve ambiguity as to whether the action could be justified in the future.

This doubt-presumption framework has been applied to substantive deficiencies, not just procedural ones.[67] *Friends of the Earth v. Haaland*[68] involved inadequate "consideration of total greenhouse gas emissions."[69] Allowing that this deficiency was not a procedural defect, the court nonetheless concluded that an "informed hard look" might change minds and vacated the rule.[70]

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62. This is true even for procedural deficiencies under the APA. *Compare* Nat. Res. Def. Council v. Wheeler, 955 F.3d 68, 83-85 (D.C. Cir. 2020) (vacating rule for notice-and-comment failure), *with* Appalachian Power Co. v. EPA, 251 F.3d 1026, 1039 (D.C. Cir. 2001) (remanding without vacatur for notice-and-comment failure).

63. *See* Kleppe v. Sierra Club, 427 U.S. 390, 416-18 (1976) (Marshall, J., concurring in part).

64. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs, 985 F.3d 1032 (D.C. Cir. 2021), *cert. denied sub nom.* Dakota Access, LLC v. Standing Rock Sioux Tribe, 142 S. Ct. 1187 (2022).

65. *Id.* at 1040-41.

66. *Id.* at 1052.

67. *See, e.g.*, League of Wilderness Defs./Blue Mountains Biodiversity Project v. Pena, No. 12-CV-02271, 2015 WL 1567444, at *5 (D. Or. Apr. 6, 2015) ("The remainder of the Forest Service's errors . . . render this Court unable to determine whether the 'agency chose correctly.' Accordingly, the Forest Service's errors in this case weigh in favor of vacatur." (citation omitted)).

68. 583 F. Supp. 3d 113 (D.D.C. 2022).

69. *Id.* at 140.

70. *Id.* at 157-58 ("Although this is not a situation in which 'an agency bypasse[d] a fundamental procedural step' altogether, the significance of [the agency]'s error to the decision at issue here . . . leaves the Court 'harbor[ing] substantial doubt that the agency chose correctly.'" (quoting Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs, 985 F.3d 1032, 1052 (D.C. Cir. 2021)).

By contrast, other decisions have emphasized an agency's ability to justify its action on remand.[71] *Black Warrior Riverkeeper, Inc. v. U.S. Army Corps of Engineers*[72] reviewed a CWA § 404 dredge/fill general permit.[73] The Corps' FONSI was deficient.[74] But rather than assuming that the deficiency would be fatal on remand, the Eleventh Circuit instead stated that "vacatur could suspend a substantial amount of surface mining . . . , all for an error that may well turn out to be inconsequential."[75] In the face of these high stakes, and despite the deficient agency action, the court contemplated that uncertainty about the action's justifiability might be resolved in favor of the Corps. Other courts have taken a similar tack.[76] The overall approach resonates with NEPA's "rule of reason," which rejects "looking for any deficiency" in NEPA analysis "no matter how minor"[77] in favor of a more pragmatic approach.[78]

But neither approach seems fully satisfactory. The approach taken by *Friends of the Earth* could risk unraveling any limits on vacatur. Presuming that *any* defect is determinative would seem to render *Allied-Signal* an empty exercise. On the other hand, while *Black Warrior Riverkeeper* steers clear of that danger, it imposes a burden of proof on plaintiffs that is challenging to reconcile with vacatur's ostensible role as the default remedy. The reasoning in some decisions, including *Black Warrior Riverkeeper*, also emphasizes the costs of disruption.[79] That raises the prospect that courts may be resolving tension between the components of

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71. At least one court has even reviewed agency action taken *without* error for justifiability. *See* All. for Wild Rockies v. Marten, No. CV 17-21-M, 2018 WL 2943251, at *3 (D. Mont. June 12, 2018) ("[T]he Court finds that there is no error attributable to the agency but that it is unlikely the [Record of Decision] will stand on remand.").

72. 781 F.3d 1271 (11th Cir. 2015).

73. *Id.* at 1275-76.

74. *Id.* at 1288.

75. *Id.* at 1289-90 & n.11.

76. *E.g.*, N. Coast Rivers All. v. U.S. Dep't of the Interior, No. 16-CV-00307, 2016 WL 8673038, at *12 (E.D. Cal. Dec. 16, 2016); WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 84-85 (D.D.C. 2019) (remanding without vacatur but enjoining the agency from "authoriz[ing] new drilling on the leased parcels").

77. Nevada v. Dep't of Energy, 457 F.3d 78, 93 (D.C. Cir. 2006).

78. *See also* Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139, 157 (2010) ("[T]he statements . . . appear to presume that an injunction is the proper remedy for a NEPA violation except in unusual circumstances. No such thumb on the scales is warranted.").

79. *See N. Coast Rivers All.*, 2016 WL 8673038, at *12 ("The present record simply does not permit a firm determination of the likelihood that the agency can cure the faulty alternatives analysis defect on remand. Although this failure of proof . . . weighs in favor of vacatur, the Court believes the actual evidence of harm that would be caused by vacatur outweighs the seriousness factor.").

the deficiency factor in light of the disruption factor, allowing the outcome of the *Allied-Signal* balance to dictate its premises.

C. The Disruption Factor

The second *Allied-Signal* factor instructs courts to consider "the disruptive consequences of an interim change that may itself be changed" before vacating a rule.[80] In the environmental context, that may mean costs to industry from compliance with an unsustainable rule, or damage to the environment from vacatur of a later-rehabilitated regulation. But courts have split over which costs should be considered under the disruption factor. This fissure surfaces in ESA cases, where inferences from statutory purpose sometimes—but not always—limit the extent to which courts are willing to consider costs other than species protection.[81]

Some ESA decisions have considered only endangered-species impacts under the disruption factor. In *Native Ecosystems*, parties arguing against vacating the partial delisting of a species pointed to the costs and delays to transportation, energy development, and agricultural projects that could be caused by reinstating protection for the species.[82] The reviewing court viewed such costs as "irrelevant": "Congress definitively skewed the balancing process in favor of species protection, and I cannot ignore this clear command."[83]

But other decisions have rejected that approach. In *Cook Inletkeeper v. Raimondo*,[84] the National Marine Fisheries Service had failed to consider takings of beluga whales from tug boats in an Environmental Assessment related to an oil

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80. Allied-Signal, Inc. v. U.S. Nuclear Regul. Comm'n, 988 F.2d 146, 150-51 (D.C. Cir. 1993) (quoting Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 967 (D.C. Cir. 1990)).

81. *Compare* Ctr. for Food Safety v. Vilsack, 734 F. Supp. 2d 948, 951 (N.D. Cal. 2010) ("[T]he Ninth Circuit has only found remand without vacatur warranted . . . in limited circumstances, namely serious irreparable environmental injury."), *and* N. Plains Res. Council v. U.S. Army Corps of Eng'rs, 460 F. Supp. 3d 1030, 1038 (D. Mont. 2020) ("A court largely should focus on potential environmental disruption, as opposed to economic disruption, under the second *Allied-Signal* factor." (citing *Ctr. for Food Safety*, 734 F. Supp. 2d at 953)), *with* Cook Inletkeeper v. Raimondo, 541 F. Supp. 3d 987, 993 (D. Alaska 2021) ("[T]he Ninth Circuit has explicitly considered the economic consequences of vacatur . . . ."), *and* AquAlliance v. U.S. Bureau of Reclamation, 312 F. Supp. 3d 878, 881 (E.D. Cal. 2018) ("In addition to environmental harm, it is appropriate to consider other practical concerns when weighing the consequences of vacatur.").

82. 795 F. Supp. 2d 1236, 1243 (D. Colo. 2011).

83. *Id.*

84. 541 F. Supp. 3d 987 (D. Alaska 2021).

and gas drilling project.[85] Although troubled by this deficiency in light of the threat to an endangered species, the court apparently rejected the plaintiffs' argument that it was required to give "paramount importance" to endangered species protection.[86] Instead, the court began its analysis of disruption with reference to "the natural gas needs of Southcentral Alaska."[87] Another opinion, *Otter v. Salazar*,[88] reviewing a deficient species listing,[89] even stated that remanding without vacatur "based solely on the purpose of the ESA . . . would be adopting a bright-line test in discord with the law of the Ninth Circuit."[90] On that view, *Native Ecosystems* would seem to have applied *Allied-Signal*'s disruption factor too narrowly.

D. Balancing the Factors

Finally, courts applying *Allied-Signal* must balance deficiency against disruption. But unlike with some balancing tests, where courts have reconciled multiple factors in light of guiding principles,[91] case law does not seem to shed much light on the deeper purpose of the *Allied-Signal* factors.[92] The failure to theorize the relationship between the two factors seems to have left courts adrift in balancing them, leading to a proliferation of approaches and raising the specter of ad hoc decision-making.

For example, courts occasionally appear to connect the factors to each other by requiring a litigant arguing against vacatur to show both modest deficiency and great disruption.[93] On this view, both factors are necessary to deviate from

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85. *Id.* at 988-89.

86. *Id.* at 991, 992-93 (quoting filings in case).

87. *Id.* at 993.

88. No. 11-CV-00358, 2012 WL 12517198 (D. Idaho Dec. 4, 2012).

89. *Id.* at *1.

90. *Id.* at *8. The opinion referred to *Allied-Signal* as well as the Ninth Circuit's test adopting its reasoning.

91. *See, e.g.*, Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 578 (1994) ("Nor may the four statutory factors [for fair use] be treated in isolation, one from another. All are to be explored, and the results weighed together, in light of the purposes of copyright.").

92. *See* Levin, *supra* note 8, at 380 ("[T]he case law does not disclose a consistent pattern regarding the way in which the two prongs of the *Allied-Signal* formula fit together.").

93. *E.g.*, Env't Def. Fund v. Fed. Energy Regul. Comm'n, 2 F.4th 953, 976 (D.C. Cir. 2021) ("[T]he second *Allied-Signal* factor is weighty only insofar as the agency may be able to rehabilitate its rationale." (quoting Comcast Corp. v. FCC, 579 F.3d 1, 9 (D.C. Cir. 2009)), *cert. denied sub nom.* Spire Mo., Inc. v. Env't Def. Fund, 142 S. Ct. 1668 (2022); North Carolina v. EPA, 531 F.3d 896, 929 (D.C. Cir. 2008) ("[T]he threat of disruptive consequences cannot save a rule when its fundamental flaws 'foreclose EPA from promulgating the same standards on remand.'" (quoting Nat. Res. Def. Council v. EPA, 489 F.3d 1250, 1262 (D.C. Cir. 2007)));

the presumptive remedy. Yet Section II.A shows disagreement about what the baseline remedy is in the first place. Since, as discussed, remedial presumptions sometimes seem to shift depending on preferred outcomes, such an approach might even risk becoming a circular one.

An alternative approach, perhaps the prevailing one, isolates the factors and weighs deficiency against disruption. But at present, courts seem to lack a method of comparing agency-action defectiveness with remedy disruptiveness. The need to weigh two unlike considerations can then leave the vacation inquiry "at sea."[94] For example, the *In re Clean Water Act Rulemaking* court wrote that economic disruption "d[id] not outweigh the significant doubts that EPA correctly promulgated the current certification rule."[95] Such cursory reasoning is common,[96] and—based on decisions striking the opposite balance between the factors[97]—it is far from clear what courts are using to measure their relative importance. Moreover, unsettled presumptions characterize this approach as well. Many decisions appear to start from equipoise. But some cases state that remand without vacatur is permissible "when vacatur would cause *serious and irremediable* harms that *significantly* outweigh the magnitude of the agency's error."[98]

This uncertainty may be why, in cases supposedly determined by one factor or the other, courts sometimes invoke exterior policy considerations to justify

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AquAlliance v. U.S. Bureau of Reclamation, 312 F. Supp. 3d 878, 882 (E.D. Cal. 2018) ("Even if, *arguendo*, the magnitude of the agency's error is slight, the scale still cannot swing away from vacatur if there will be no irremediable harm whatsoever caused by vacating the FEIS/R."); Nat'l Ass'n of Home Builders v. Norton, No. 00-CV-903, 2001 WL 1876349, at *3 (D. Ariz. Sept. 21, 2001) ("In the absence of any evidence that vacating the critical habitat designation pending remand is likely to result in harm to the Arizona population of the cactus ferruginous pygmy-owls, the Court cannot justify leaving a substantively defective rule in place.").

94. This turn of phrase is due to Levin, *supra* note 8.

95. *In re* Clean Water Act Rulemaking, No. C 20-04636, 2021 WL 4924844, at *9 (N.D. Cal. Oct. 21, 2021), *stay granted sub nom.* Louisiana v. Am. Rivers, 142 S. Ct. 1347 (2022), *appeal filed sub nom. In re* Am. Rivers v. Arkansas, No. 21-16961 (9th Cir. Nov. 22, 2021).

96. *E.g.*, Klamath-Siskiyou Wildlands Ctr. v. Nat'l Oceanic & Atmospheric Admin. Nat'l Marine Fisheries Serv., 109 F. Supp. 3d 1238, 1246 (N.D. Cal. 2015) (ESA and NEPA); Diné Citizens Against Ruining Our Env't v. U.S. Off. of Surface Mining Reclamation & Enf't, No. 12-cv-01275, 2015 WL 1593995, at *3 (D. Colo. Apr. 6, 2015) (NEPA); Puget Soundkeeper All. v. Wheeler, No. C15-1342, 2018 WL 6169196, at *7 (W.D. Wash. Nov. 26, 2018) (CWA).

97. *E.g.*, N. Coast Rivers All. v. U.S. Dep't of the Interior, No. 16-cv-00307, 2016 WL 8673038, at *12 (E.D. Cal. Dec. 16, 2016) (NEPA); *see* Sierra Forest Legacy v. Sherman, 951 F. Supp. 2d 1100, 1109 (E.D. Cal. 2013) (NEPA); Cook Inletkeeper v. Raimondo, 541 F. Supp. 3d 987, 992-95 (D. Alaska 2021) (ESA and NEPA); Cal. Cmtys. Against Toxics v. EPA, 688 F.3d 989, 993-94 (9th Cir. 2012) (per curiam) (Clean Air Act).

98. *E.g.*, *Klamath-Siskiyou*, 109 F. Supp. 3d at 1246 (quoting League of Wilderness Defs./Blue Mountains Biodiversity Project v. U.S. Forest Serv., 2012 U.S. Dist. LEXIS 190899, at *6 (D. Or. Dec. 10, 2012)) (emphasis added).

their decisions. For example, one decision completed its *Allied-Signal* analysis and *then* stated: "Furthermore, remanding without vacatur under these circumstances would give the [agency] incentive to allow 'build[ing] first and conduct[ing] comprehensive reviews later.'"[99] *Standing Rock* and *Native Ecosystems* used similar reasoning.[100] That exterior considerations are necessary to balance the *Allied-Signal* factors suggests that the test itself does not provide enough answers.

The most telling sign of *Allied-Signal*'s inadequacies may be that, when remanding but not vacating for serious failures, where the need for disproportionality analysis is most critical, courts sometimes fail to perform much analysis at all.[101] In cases where vacatur occasions little disruption, courts can balance the factors secure in the right answer.[102] But the same cannot be said when deficiency and disruption are both pressing. For example, one decision reviewed an ESA listing for the polar bear where the Fish and Wildlife Service misinterpreted its authority by stopping at *Chevron* step one.[103] Instead of weighing disruption and deficiency, the court simply declined to reach the action's lawfulness.[104] Similarly, another decision reviewed source definitions in a State Implementation Plan (SIP) Call under the Clean Air Act, finding notice and comment deficient.[105] The court remanded without vacatur, proffering as justification only that it did the same in previous litigation over the SIP Call—in a decision that also presented no remedial analysis.[106] Such decisions weigh disproportionality only tacitly, which implies that no reasoning at all is more helpful than using

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99. Env't Def. Fund v. Fed. Energy Regul. Comm'n, 2 F.4th 953, 976 (D.C. Cir. 2021) (quoting Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs, 985 F.3d 1032, 1052 (D.C. Cir. 2021)), *cert. denied sub nom.* Spire Mo., Inc. v. Env't Def. Fund, 142 S. Ct. 1668 (2022).

100. *See supra* Sections II.B and II.C.

101. *See, e.g.*, La. Env't Action Network v. EPA, 955 F.3d 1088, 1100 (D.C. Cir. 2020) (summarily remanding without vacatur "[i]n order to retain the protection of the existing rule").

102. *E.g.*, Nat'l Ski Areas Ass'n v. U.S. Forest Serv., 910 F. Supp. 2d 1269, 1287 (2012) ("These deficiencies, alone, would be enough to warrant the relief . . . . [A]ny disruptive effect would be minimal . . . .").

103. *In re* Polar Bear Endangered Species Act Listing & § 4(d) Rule Litig., 748 F. Supp. 2d 19, 25-27 (D.D.C. 2010) (citing Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842-43 (1984)).

104. *Id.* at 29-30. Notwithstanding suggested resonance with remands for additional explanation, *id.* at 30, vacatur may have been an option as well, *see, e.g.*, Noble Energy, Inc. v. Salazar, 671 F.3d 1241, 1246 n.5 (D.C. Cir. 2012) ("[W]hen an agency incorrectly concludes that Congress mandated a particular regulatory interpretation of a statute—and the agency therefore stops itself at *Chevron* step one—this court will vacate and remand."); *see also* Bagley, *supra* note 11, at 296-98.

105. Appalachian Power Co. v. EPA, 251 F.3d 1026, 1039 (D.C. Cir. 2001).

106. *Id.* (citing Michigan v. EPA, 213 F.3d 663, 692-93 (D.C. Cir. 2000)).

Allied-Signal. If these cases are any indication, *Allied-Signal* appears least useful when it is most necessary.

An open-ended test might not raise concerns if judicial decision-making were more transparent. These results, however, suggest that courts themselves struggle to channel the *Allied-Signal* factors into a principled basis for decisions. The next Part formulates a theoretical framework to explain this discrepancy and proposes a solution.

III. ACCOUNTING FOR UNCERTAINTY

Remand without vacatur is part of a regulatory dialogue between agencies and courts.[107] As *Allied-Signal* recognized, an agency's subsequent actions can undo a court's remedy. Accordingly, remand without vacatur can be characterized as equitably preserving the status quo in anticipation of future events, like a preliminary injunction.[108]

And in fact, *Allied-Signal* emerged out of the conceptual connection between remand without vacatur and preliminary relief. *Allied-Signal* appropriated its two-factor test from *International Union, United Mine Workers v. Federal Mine Safety & Health Administration*.[109] In turn, *International Union* located authority for its test in preliminary-injunction decisions, including *American Hospital Supply Corp. v. Hospital Products Ltd.*,[110] which addressed the information deficit faced by courts considering preliminary relief.[111]

But as courts applying *Allied-Signal* have focused on its bare text, this connection to preliminary relief has dissolved into the background. This Part proposes to bring the relationship between these two forms of relief back into focus. Reframing *Allied-Signal* to be more faithful to its roots could better reflect the information deficit faced by courts reviewing agency action. It could also enhance the test's coherence and improve long-term outcomes, particularly in litigation involving environmental rules with high-magnitude risks.

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107. *See generally* Meazell, *supra* note 17 (identifying dialogic characteristics of "serial litigation" in contexts including environmental regulation).

108. *See supra* note 8. Although the Supreme Court's recent stay in *Louisiana v. American Rivers*, 142 S. Ct. 1347 (2022), could suggest that vacatur might be impermissible without reaching the merits, this Essay argues for recognizing a prospective aspect of remand both with and without vacatur *even when* part of a decision on the merits.

109. Allied-Signal, Inc. v. U.S. Nuclear Regul. Comm'n, 988 F.2d 146, 150–51 (D.C. Cir. 1993) (citing Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 966–67 (D.C. Cir. 1990)).

110. *Int'l Union*, 920 F.2d at 966–67 (citing Am. Hosp. Supply Corp. v. Hosp. Prods. Ltd., 780 F.2d 589, 593–94 (7th Cir. 1986)).

111. *Am. Hosp. Supply Corp.*, 780 F.2d at 593.

A. The Leubsdorf-Posner Formula

In *American Hospital Supply*, Judge Posner, building on the work of Professor John Leubsdorf,[112] condensed preliminary-injunction case law into a formula to "grant the preliminary injunction if but only if $P \times H_p > (1 - P) \times H_d$," where P is the probability "that the plaintiff . . . will win at trial," H_p is "the harm to the plaintiff if the injunction is denied," and H_d is "harm to the defendant if the injunction is granted."[113] On the left side of the inequality is the plaintiff's risk of irreparable harm; on the right is the defendant's.

In drawing on this decision, the *International Union* court apparently noted the similarities between preliminary relief and remand without vacatur.[114] Like a preliminary injunction, remand without vacatur is equitable relief that preserves the status quo "for now." The decision to grant such relief requires a court to contemplate future events—how well the agency is positioned to rehabilitate its action—and the costs a court's remedy might visit upon the parties in the interim. Deficiency, in other words, and disruption.

B. Remand Without Vacatur and Error Minimization

Attending to the anticipatory aspect of the choice to vacate can help clarify *Allied-Signal*. To see this, consider the example of a court deciding whether to vacate an environmental rule.[115] Suppose that the agency issues the rule at time $t = 0$, that the reviewing court vacates or remands without vacatur at time $t = 1$, and that the agency responds with a valid rule at time $t = 2$. Let $R_t = 1$ if the agency's original rule, or a substantially equivalent one, is binding at time t, and otherwise let $R_t = 0$. Let $\boldsymbol{H_V}$ represent the error costs of vacatur, including third-party costs.[116] Similarly, let $\boldsymbol{H_{RWV}}$ represent the error costs of remand without

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112. *See* John Leubsdorf, *The Standard for Preliminary Injunctions*, 91 HARV. L. REV. 525, 533-34 (1978); Richard R.W. Brooks & Warren F. Schwartz, *Legal Uncertainty, Economic Efficiency, and the Preliminary Injunction Doctrine*, 58 STAN. L. REV. 381, 391 (2005).

113. *Am. Hosp. Supply Corp.*, 780 F.2d at 593-94.

114. The citation to *American Hospital Supply* referenced the specific pages in which Judge Posner discussed the formula. *Int'l Union*, 920 F.2d at 967 (citing *Am. Hosp. Supply Corp.*, 780 F.2d at 593-94); *see also id.* (describing, before citing *American Hospital Supply*, "analogous factors" in the analysis of Wash. Metro. Area Transit Comm'n v. Holiday Tours, Inc., 559 F.2d 841 (D.C. Cir. 1977), a decision that stated the importance of considering the entire "balance of equities" rather than imposing a "wooden 'probability' requirement" for the likelihood of success on the merits, *id.* at 844).

115. The term "rule" is used for concreteness, but this analysis could apply to orders as well.

116. *Cf.* Winter v. Nat. Res. Def. Council, Inc., 555 U.S. 7, 25-26 (2008) (assessing the equities of a preliminary injunction by balancing "the overall public interest" in national security against ecological harm). *But see* Daniel Mach, *Rules Without Reasons: The Diminishing Role of*

vacatur. If $R_2 = R_1$ (that is, if a vacated rule is abandoned, or an unvacated rule is rehabilitated), the court's relief properly anticipates the agency's action, so there is no error and these costs are zero. Conversely, if the court's relief errs, let the costs $\boldsymbol{H_V}$ of irreparable harm from vacatur be realized as H_V. For example, vacating an air-pollution rule might impose costs on the agency from the new rulemaking, and might increase pollution in the period before the new rule.[117] Likewise, when remand without vacatur is granted in error, let the costs $\boldsymbol{H_{\mathrm{RWV}}}$ of irreparable harm, such as regulated parties' compliance costs for a rule that cannot be sustained, be realized as H_{RWV}.

A court trying to minimize the error costs of its remedy will remand without vacatur when the expected ($\mathbf{E}[\cdot]$) error costs of vacatur ($R_1 = 0$) outweigh the expected error costs of remanding without vacatur ($R_1 = 1$):

$$\mathbf{E}[\boldsymbol{H_{\mathrm{RWV}}} \mid R_1 = 1] < \mathbf{E}[\boldsymbol{H_V} \mid R_1 = 0].^{118}$$

Assume that the agency will rescind its rule with probability ($\mathbf{P}(\cdot)$) of P regardless of the court's remedy, and likewise, that the agency will reissue the rule with probability $1 - P$. Because there are no error costs when the agency's action on remand matches the court's remedy, the expected costs of remanding without vacatur are:

$$\mathbf{E}[\boldsymbol{H_{\mathrm{RWV}}} \mid R_1 = 1] = \mathbf{P}(R_2 = 0 \mid R_1 = 1) H_{\mathrm{RWV}}.$$

Since $\mathbf{P}(R_2 = 0 \mid R_1 = 1)$ is the probability that the agency cannot rehabilitate its original rule following remand without vacatur, which is equal to P,[119]

$$\mathbf{E}[\boldsymbol{H_{\mathrm{RWV}}} \mid R_1 = 1] = P H_{\mathrm{RWV}}.$$

In other words, the expected cost of remanding without vacatur is the irreparable harm it will cause, weighted by the probability that the agency cannot rehabilitate its rule. Likewise, the expected costs of vacatur are

Statutory Policy and Equitable Discretion in the Law of NEPA Remedies, 35 HARV. ENV'T L. REV. 205, 244-45 (2011) (describing limits on third-party injury in the injunction analysis of Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139 (2010), although noting tension with "equitable principles," Mach, *supra*, at 245).

117. Environmental injury can also be a cost of remand without vacatur—for example, if vacatur reinstitutes a previous, more environmentally protective rule.

118. The notation indicates that the expectation of the quantity to the left of the vertical bar is taken conditional on the information to its right.

119. It has been assumed that the agency's action upon remand does not depend on the court's choice of remedy.

$$\mathbf{E}[\boldsymbol{H_V} \mid R_1 = 0] = \mathbf{P}(R_2 = 1 \mid R_1 = 0)H_V = (1 - P)H_V,$$

or the irreparable harm caused by vacatur, weighted by the probability that the agency can rehabilitate its rule.

A court seeking to minimize error will thus remand without vacatur when

$$P \times H_{\text{RWV}} < (1 - P) \times H_V,$$

or when the expected costs of vacatur outweigh those of remanding without vacatur. This formulation mirrors the Leubsdorf-Posner formula, with the strict inequality reflecting the presumption of vacatur—courts may resolve ambiguity according to this presumption,[120] particularly to the extent that remand without vacatur is viewed as exceptional relief. The expression finally relates the deficiency factor, P, and the disruption factor, split into components H_{RWV} and H_V.

C. Doctrinal Implications

Considering the *Allied-Signal* factors in this way clarifies some of the questions that emerge from the case law. This Section shows that the proposed test sheds light on vacating under uncertainty, the contours of the deficiency and disruption factors, and, critically, how the factors relate to one another. Of course, as the Seventh Circuit emphasized after *American Hospital Supply*, Judge Posner's formula was meant to assist judicial decision-making, not replace it.[121] In this context too, uncertainty makes a neat calculation impossible. But applying *Allied-Signal* in this way at least makes it clear what answers it does not contain. And the answers that are provided by this approach derive from a coherent theory that can focus judicial attention on the justifiable principle of minimizing irreparable harm.

To start, this approach suggests answers to some predicate questions about remand without vacatur. First, the presumption of vacatur should not shift based on perceived switches in administration policy. Such shifts are relevant only to the extent that they shed light on the prospect for irreparable injury from judicial

120. That is, the formal weight accorded to vacatur as the presumptive remedy may help channel decision-making in ambiguous cases. *Cf.* Douglas Laycock, *The Neglected Defense of Undue Hardship (and the Doctrinal Train Wreck in* Boomer v. Atlantic Cement*)*, 4 J. TORT L. art. no. 3, at 1, 23 (2012) (noting a similar effect in the injunction context); Mark P. Gergen, John M. Golden & Henry E. Smith, *The Supreme Court's Accidental Revolution? The Test for Permanent Injunctions*, 112 COLUM. L. REV. 203, 242 (2012) (discussing how "the structure of presumptions" in injunctive relief "reflects sensible design principles").

121. Lawson Prods., Inc. v. Avnet, Inc., 782 F.2d 1429, 1434-36 (7th Cir. 1986).

intervention. Second, as *International Union* hinted, remanding has an inevitably interlocutory character. Even when a reviewing court reaches the merits, the agency's discretion imbues the court's remedy with uncertainty. Hesitance about pre-merits vacatur may rest on a useful formal distinction that requires calling the remedy by another name, but on a substantive level, the principles motivating remand without vacatur may suggest a less formalistic, more flexible approach to remedial discretion.[122]

Similarly, the formulation improves decision-making by clarifying the meaning of the deficiency factor, P. The relevant question for minimizing harm is whether the agency can rehabilitate its decision.[123] The "order's deficiencies" component of P, in other words, is relevant for how it bears on the "chose correctly" component. Looking forward in this way provides an opportunity for the regulatory process to cure its minor mistakes, tracking a traditional facilitative role of equity[124] and avoiding undue hardship from vacatur.[125] Although some potential objections are discussed at the end of this Section, current instability might be better replaced by this consistent and predictable forward-looking approach.

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122. *See supra* Part I; *see also* Samuel L. Bray, *The System of Equitable Remedies*, 63 UCLA L. REV. 530, 570 (2016) ("[O]ne instance of an equitable remedy may vary from another instance of the same remedy along many different dimensions: what each party is required to do, what each party is prohibited from doing, what conditions are attached, what the beginning and end dates are, what the reporting requirements are, and so on."); Henry E. Smith, *Equity as Meta-Law*, 130 YALE L.J. 1050, 1073 (2021) [hereinafter Smith, *Meta-Law*] ("Despite a tendency to see it . . . as a property rule rather than a liability rule—the injunction is actually multidimensional (along time and activity) and responds to interdependent actors in a flow chart of decisionmaking that depends on the type of situation." (citation omitted)). Flexible judicial review of agency action might seem particularly appropriate in light of the adaptability that characterizes administrative action. *See* Henry E. Smith, *Equity and Administrative Behaviour*, *in* EQUITY AND ADMINISTRATION 326, 346-50, 355 (P.G. Turner ed., 2016) [hereinafter Smith, *Administrative Behaviour*] (describing this argument but suggesting limits).

123. A colleague's proposal to consider whether "the agency is likely to reach the same decision *via the same procedures* on remand" could provide one way of interpreting this inquiry. *See* Recent Case, Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, *985 F.3d 1032 (D.C. Cir. 2021)*, 135 HARV. L. REV. 1688, 1692 (2022). This option might be viewed as taking a forward-looking view of the deficiency factor, but as restraining remand without vacatur when the agency has exploited the remedy's availability—and thus requests a remand into unclean hands. *See* Smith, *Administrative Behaviour*, *supra* note 122, at 355, 363; Smith, *Meta-Law*, *supra* note 122, at 1055-56, 1127; *cf.* Joseph Landau, *Process Scrutiny: Motivational Inquiry and Constitutional Rights*, 119 COLUM. L. REV. 2147, 2190-95 (2019) (describing how review of legislative process might encompass "motivational analysis"). This justification would require an account of agency opportunism, however, which could conceivably sweep more broadly to include voluntary remands following transitions in administration. *See supra* Section II.A.

124. P.G. Turner, *Equity and Administration*, *in* EQUITY AND ADMINISTRATION 1, 2 (P.G. Turner ed., 2016).

125. *See supra* notes 21-26 and accompanying text.

As for the disruption factor, focusing on irreparable injury can help make sense of *Allied-Signal*'s language about "an interim change that may itself be changed,"[126] which shows a concern with whether a later change (the agency's action) can rectify the consequences of a previous one (the court's remedy).[127] The proposed approach leaves unresolved the weighing of disparate forms of cost in the disruption inquiry. It is plausible that statutory purposes should structure those judgments, as in *Native Ecosystems*, but those judgments would not derive from this framing of the disruption factor.

Finally, this formulation explains the relationship between the two *Allied-Signal* factors. At present, as described in Part II, many courts seem to isolate the factors, separately assessing deficiency, P against $1 - P$, and disruption, H_V against H_{RWV}. Isolating the factors like this leaves the inquiry indeterminate when one factor weighs in favor of vacatur but the other weighs in favor of remand without vacatur. For example, an agency may be likely to rehabilitate a rule, but the disruptive effects of remanding without vacatur may be significant. To impose one-dimensional order on this two-dimensional problem, it seems that courts attempt to compare the mismatch in each dimension—something like:

$$P - (1 - P) < \alpha(H_V - H_{\mathrm{RWV}}).$$

The lack of an exogenous scale parameter α (that is, the lack of a way to render deficiency and disruption comparable) then leaves the answer underdetermined, allowing for decision-making based on intuition instead of reasoning.

The proposed approach instead compares expectation with expectation, avoiding the need to balance dissimilar objectives. Doing so improves the conceptual coherence of the *Allied-Signal* test. It provides a more transparent orienting framework that can help channel uncertainty (and perhaps justify equitable discretion to the remedy's detractors). And in clarifying the sweep of judicial review, it may limit litigation risk for agencies and thereby diminish ossification.

In addition, the proposed approach better accounts for environmental risk. First, weighing the factors together forces courts to balance complex but high-magnitude risks. That can help counteract cognitive biases that underplay the

126. Allied-Signal, Inc. v. U.S. Nuclear Regul. Comm'n, 988 F.2d 146, 150-51 (D.C. Cir. 1993) (quoting Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 967 (D.C. Cir. 1990)).

127. *See* Leubsdorf, *supra* note 112, at 533-34.

relative significance of environmental harms like climate change.[128] Second, linking disruption to deficiency helps prevent courts from minimizing disruption as a wash when remand will impose costs both with and without vacatur—inevitable in environmental regulation given its "redistributive nature."[129] Finally, preventing irreparable harm from judicial error is of particular salience when environmental issues are at stake because "[n]ature's complexity" can make it immensely difficult to reverse ecological injury, warranting a "focus on . . . prevention, rather than redress."[130]

To be sure, some objections could be made to such an approach. One set of potential objections involves the deficiency factor. In the NEPA context, for example, this approach might appear to allow an agency to act first and to observe NEPA's requirements only if challenged. Yet the existing approach, which allows for shifts between backward- and forward-looking analysis of the deficiency factor, has the same problem, except at unpredictable times.[131] Perhaps this potential for instability helps explain why decisions like *Standing Rock* have overlaid the goal of "warding off post hoc rationalization" on the *Allied-Signal* calculus. But a more consistent alternative might be to consider the benefits of procedural regularity under NEPA[132] under the disruption factor,[133] or the information gaps generated by failure to observe NEPA as increasing the risk of severe disruptive effects.[134] In fact, this latter type of uncertainty might allow courts to avoid reaching the deficiency factor in some cases. When NEPA failures prevent appraisal of substantial environmental risks, the potential disruption costs of the options for relief may be asymmetric. Uncertainty about deficiency could then lead a court to adopt a precautionary stance against the disruption costs of

128. *See* ARDEN ROWELL & KENWORTHEY BILZ, THE PSYCHOLOGY OF ENVIRONMENTAL LAW 226 (2021); Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1173-79 (2009).

129. *See* LAZARUS, *supra* note 22, at 40.

130. *Id.* at 23.

131. *See supra* Section II.B.

132. *See* Richard Lazarus, *The National Environmental Policy Act in the U.S. Supreme Court: A Reappraisal and A Peek Behind the Curtains*, 100 GEO. L.J. 1507, 1519-20 (2012); *see also* Bradley C. Karkkainen, *Toward A Smarter NEPA: Monitoring and Managing Government's Environmental Performance*, 102 COLUM. L. REV. 903, 910-11 (2002) (discussing, through a critical lens, some potential "salutary effects" of NEPA requirements).

133. *Cf.* Mach, *supra* note 116, at 225 ("[T]he harm NEPA is most clearly designed to prevent is the risk of inadequately informed agency decisionmaking. Thus, a NEPA violation is itself the harm the statute aims to prevent.").

134. *Cf. id.*

significant environmental injury, in line with the traditional value of preserving the status quo.[135] Section III.D explains a similar result in more detail.

More fundamentally, however, one could argue that anticipating a future judicial remedy differs from anticipating future agency action, and that the proposed approach could improperly require a court to step into an agency's role. In considering that concern, the following might provide some tentative starting points.[136] First, as described in Part I, the enterprise of remand without vacatur is substantive. Inquiring into undue hardship — or, as *Allied-Signal* put it, "disruptive consequences" — seems to require at least some attention to outcomes.[137] Second, this aspect of remand without vacatur may not be so different from injunctive relief, since interpolation from legislative policy judgments may guide judicial discretion to enjoin.[138] Finally, viewed from the agency's perspective, looking forward to an action's rehabilitation may open space for agency activity, while it may be looking to the past that is more constraining.[139]

That is not to deny the significance of these issues. But perhaps accepting *Allied-Signal*'s structure as a provisional point of departure, and following that structure through to its logical conclusions, can at least provide a basis for further ventilation.

D. The Question of Agency Behavior

Changes in administration, and other changes that shift agency preferences, further complicate the *Allied-Signal* calculus. If a court ignores information that the agency has switched its policy preferences, its decision may be inaccurate. For example, in a voluntary-remand case where the agency confesses error, a court could underestimate the costs of hewing to a rule that will soon be changed. But is the alternative *always* to grant the agency's requested relief? When an agency has asked for vacatur, a court may know with near certainty that the agency intends to use vacatur as a repeal. On an error-minimizing view, since vacatur would seem to anticipate the agency's subsequent actions, it might be difficult to justify remand without vacatur. Perhaps the most that can be said

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135. *Cf.* O Centro Espirita Beneficiente Uniao Do Vegetal v. Ashcroft, 389 F.3d 973, 1012-17 (10th Cir. 2004) (McConnell, J., concurring) (describing the traditional "emphasis on preserving the status quo" in preliminary-injunction analysis, but distinguishing it from "tak[ing] whatever steps are necessary to prevent irreparable harm").

136. For more detailed discussion on this point, see Levin, *supra* note 8, at 363-70.

137. For example, a court may be unlikely to choose vacatur when it entails turning off a community's electricity. *See* Cal. Cmtys. Against Toxics v. EPA, 688 F.3d 989, 994 (9th Cir. 2012) (per curiam).

138. Levin, *supra* note 8, at 336-39.

139. *Id.* at 343-44.

is that, as with the problem of framing the deficiency factor, at least an uneasily fitting analytical structure may provide a more secure starting point than a fully freewheeling approach.

Although the problem is challenging, one reason to remain open to preserving the status quo when an agency asks for vacatur could be the limited nature of judicial knowledge. Suppose that an agency has requested vacatur of its rule. Recall that $R_t = 1$ if the original agency action or a substantial equivalent is binding at time t, that $R_t = 0$ otherwise, and that the court delivers its relief at time $t = 1$. Denote the probability of a particular outcome at time 2, given a particular remedy at time 1, as $\mathbf{P}(R_2 = j \mid R_1 = i) = p_{j|i}$. In particular, let $\mathbf{P}(R_2 = j, \text{no action} \mid R_1 = i) = p^-_{j|i}$ reflect the outcome where an agency fails to act at time 2, and let $\mathbf{P}(R_2 = j, \text{action} \mid R_1 = i) = p^+_{j|i}$ reflect the outcome where an agency takes action instead—for example, an unsustainable rule might be replaced with a new rule that is contrary in relevant part. Suppose that the reviewing court knows H_{RWV} and H_V (and that these values are positive), but that it must estimate probabilities. If a court considers its remedy to incur error costs only when the agency takes action that repudiates the remedy, the court will vacate when

$$p^+_{0|1} H_{\text{RWV}} \geq p^+_{1|0} H_V.$$

That is, a court will vacate unless the irreparable harm caused by vacatur, weighted by the probability that the agency reinstates its vacated rule, exceeds the irreparable harm caused by remand without vacatur, weighted by the probability that the agency rescinds the relevant part of its remanded rule.

Accordingly, a court that thinks an agency will decline to act upon vacatur, $p^-_{0|0} \approx 1$, might consider there to be little chance of the agency acting to rehabilitate its rule, $p^+_{1|0} \approx 0$. The court might then conclude that

$$p^+_{0|1} H_{\text{RWV}} \geq p^+_{1|0} H_V \approx 0,$$

and thus find that it must vacate due to vacatur's low costs. But suppose that the court's estimate of $p^+_{1|0}$ (which entails a prediction about the regulatory process) is unreliable. If its forecast of $p^+_{1|0}$ as zero is subject to error ε such that $\varepsilon > p^+_{0|1} \frac{H_{\text{RWV}}}{H_V}$,[140] then the calculus could become

$$p^+_{0|1} H_{\text{RWV}} = p^+_{0|1} \frac{H_{\text{RWV}}}{H_V} H_V < p^+_{1|0} H_V$$

140. Note that if this error is with respect to an estimated value of zero, then $p^+_{1|0} = \varepsilon$, hence $p^+_{1|0} > p^+_{0|1} \frac{H_{\text{RWV}}}{H_V}$.

such that the court should instead remand without vacatur. Of course, this is heuristic—the court cannot predict ε, and it would ordinarily need to estimate the other variables, notably $p^{+}_{0|1}$. And the question remains open whether an agency's failure to act upon remand should be treated as error.

That said, this formulation might indicate that the more one can forecast disparity in the disruptive effects of available remedies, the more uncertainties in the regulatory process counsel in favor of a precautionary approach.[141] This might be especially plausible when the agency is tackling a problem like climate change, where the magnitude of harm risked by one remedy may be disproportionately larger than that risked by the alternative. For example, risks to the public of grave environmental harm from vacatur may make $\frac{H_{\text{RWV}}}{H_V}$ (albeit ordinarily itself an estimate) very small in the expression above. Then, even a slight amount of uncertainty in forecasting rehabilitation of the rule could lead a court to emphasize environmental risk in its remedial analysis.

Courts might also refine relief to limit the potential sweep of such error. Setting deadlines for agency action on remand, as discussed in previous scholarship,[142] could reduce the impact of uncertainty. That would be particularly helpful in the context of environmental damage, where long timeframes can heighten the risks associated with complex and sometimes unclear causal chains.[143] The diminished uncertainty of such an approach might offer the benefits of regulation, like the technology-forcing effects of new rules,[144] while enabling industry planning. And while setting deadlines could encourage agencies to act, it could also enable challenges to improper action. In other words, it could promote a proactive and facilitative approach to the dialogue between agencies and courts.

To sum up, this Section has indicated a few starting points for filling in the contours of an error-minimizing approach to remand without vacatur. Even in these difficult cases, however, this Part's approach can guide analysis by unifying the *Allied-Signal* factors into a single overarching inquiry: averting irreparable harm due to judicial uncertainty. Additional interpretation may clarify the sweep

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141. And, in fact, this conclusion tracks reasoning in one of the preliminary-injunction precedents cited in *International Union*. Wash. Metro. Area Transit Comm'n v. Holiday Tours, Inc., 559 F.2d 841, 844 (D.C. Cir. 1977); *see* Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 967 (D.C. Cir. 1990) (citing *Wash. Metro.*, 559 F.2d at 844).

142. Daugirdas, *supra* note 8, at 310-11 & n.156 (proposing a tailored approach given the potential to "interfere with agencies' ability to choose the best allocations of their scarce resources," *id.* at 310).

143. LAZARUS, *supra* note 22, at 20, 23-24.

144. *See id.* at 199.

of that objective, but perhaps identifying a lodestar can at least provide some orientation in these challenging waters.

CONCLUSION

As the stability of our natural environment ebbs, environmental regulations become more critical even as they become more challenging to formulate. This Essay has attempted to set out a principled way for courts to recognize the significance of such regulations in considering whether to grant remand without vacatur. Refocusing the *Allied-Signal* framework on the costs of uncertainty can help reviewing courts account for the importance of environmental protection in a time of change, while at the same time improving the theoretical coherence and administrability of judicial remedies.

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