ARTICLES

WHITHER NEPA?

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INTRODUCTION

Since its enactment more than thirty years ago, the National Environmental Policy Act (NEPA)[1] has assumed quasi-constitutional status as one of the foundational laws of the modern administrative state.[2] NEPA's central procedural requirement—the obligation of every federal agency to produce an Environmental Impact Statement (EIS) prior to undertaking any action "significantly affecting the quality of the human environment"[3]—is as fundamental to contemporary administrative

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[1] National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370f (2000).

[2] *See* Thomas W. Merrill, *Capture Theory and the Courts: 1967-1983*, 72 CHI.-KENT L. REV. 1039, 1039-40 (1997) (listing NEPA and the APA among the framework statutes of modern administrative law, and drawing parallels between such framework statutes and the U.S. Constitution); *cf.* Kenneth W. Dam, *The American Fiscal Constitution*, 44 U. CHI. L. REV. 271, 272-73 (1977) (labeling the framework statutes "quasi-constitutional").

[3] 42 U.S.C. § 4332(2)(C)(i) ("all agencies of the Federal Government shall . . . include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on . . . the environmental impact of the proposed action . . ."). It is only a slight exaggeration to say that this very generally worded procedural obligation is the only provision in NEPA that matters, the courts having virtually read out of the statute a series of equally vague substantive standards. *See* Bradley C. Karkkainen, *Toward a Smarter NEPA: Monitoring and Managing Government's Environmental Performance*, 102 COLUM. L. REV. 903, 904 (2002) (stating that NEPA requires EISs but "little else, and therein lies both its singular genius and its fatal flaw"); Paul S. Weiland, *Amending the National Environmental Policy Act: Federal Environmental Protection in the Twenty-First Century*, 12 J. LAND USE & ENVTL. L. 275, 289 (1997) (stating that the Supreme Court has "decimated the substantive provisions of NEPA"); Philip Weinberg, *It's Time to*

practice as an agency's duty under the Administrative Procedure Act (APA)[4] to provide notice and opportunity for public comment prior to issuing rules.[5]

Yet NEPA's mythic status, like that of the Great Oz,[6] rests largely on the power of illusion. Pull back the curtain and NEPA stands revealed as just another statute, subject to repeal or revision at the will of Congress. Like other statutes, NEPA is also vulnerable to administrative reinterpretation—a vulnerability exacerbated in NEPA's case by a statutory text that is far from self-executing. NEPA's central provisions are framed in lofty generalities,[7] leaving much discretion to the Council on Environmental Quality (CEQ),[8] the federal courts,[9] and federal agencies to translate its broad mandates into specific operational requirements.[10]

Put NEPA Back on Course, 3 N.Y.U. ENVTL. L.J. 99, 99-108 (1994); *see also* Ohio Forestry Ass'n v. Sierra Club, 523 U.S. 726, 737 ("NEPA . . . simply guarantees a particular procedure, not a particular result.").

[4] Administrative Procedure Act, 5 U.S.C. §§ 551-559 (2000).

[5] *See* 5 U.S.C. § 553 (requiring publication of "[g]eneral notice of proposed rule making" in the Federal Register, followed by "opportunity [for interested persons] to participate in the rule making through submission of written data, views, or arguments with or without opportunity for oral presentation").

[6] *See* L. FRANK BAUM, THE WONDERFUL WIZARD OF OZ 183-86 (Dover Publications 1960) (1900).

[7] *See* Robert L. Fischman, *The EPA's NEPA Duties and Ecosystem Services*, 20 STAN. ENVTL. L.J. 497, 510 (2001) (stating that NEPA is written in "broad, sketchy terms" that offer "little specific instruction on how agencies are to comply"); *see also* Calvert Cliffs Coordinating Comm., Inc. v. U.S. Atomic Energy Comm'n, 449 F.2d 1109, 1111 (D.C. Cir. 1971) ("NEPA, like so much other reform legislation of the last 40 years, is cast in terms of a general mandate and broad delegation of authority to new and old administrative agencies.").

[8] *See* Dinah Bear, *NEPA at 19: A Primer on an "Old" Law with Solutions to New Problems*, [1989] 19 Envtl. L. Rep. (Envtl. L. Inst.) 10,061-62 (describing evolution of CEQ's role from source of non-binding guidance to assist agencies in NEPA implementation, to source of NEPA regulations made binding on agencies by presidential executive order).

[9] *Cf.* Bruce Ledewitz, *Establishing a Federal Constitutional Right to a Healthy Environment in Us and in Our Posterity*, 68 MISS. L.J. 565, 623-24 (arguing that NEPA is a "quasi-fundamental statute" such that courts can engage in "broad policymaking pursuant" to it, while Congress "retain[s] ultimate policy control").

[10] N.B. Dennis, *Can NEPA Prevent "Ecological Train Wrecks"?*, *in* ENVIRONMENTAL POLICY AND NEPA 139, 157 (Ray Clark & Larry Canter eds., 1997) (stating that "there are almost as many NEPAs as there are federal agencies," as widely varying "idiosyncratic" agency practices satisfy the general statutory and regulatory requirements).

Although CEQ's relatively detailed regulations have done much to constrain and regularize NEPA practice,[11] these regulations, too, hang by an unusually slender legal thread: they are made binding on federal agencies not by congressional delegation of rulemaking authority, but by a presidential executive order instructing federal agencies to follow CEQ's rules.[12] Thus, in principle, CEQ regulations could be revoked or revised in whole or in part by a countermanding executive order—an action that can be taken simply by the stroke of the presidential pen, without notice and comment and, in all likelihood, without judicial review.[13] As a legal matter, then, NEPA is subject to

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[11] *See* Fischman, *supra* note 7, at 510 ("CEQ regulations, which provide detailed instructions for fulfilling the NEPA procedural mandate, now dominate agency practice and litigation. The CEQ regulations provide the authoritative framework for NEPA compliance . . . because NEPA itself offers so little specific instruction on how agencies are to comply with the statute.").

[12] *See* Exec. Order No. 11,514, 3 C.F.R. 531 (1971), *reprinted as amended in* 42 U.S.C. §4321 (2000) (instructing federal agencies to "comply with the regulations issued by [CEQ] except where such compliance would be inconsistent with statutory requirements," and instructing CEQ to "[i]ssue regulations to Federal agencies for the implementation of the procedural provisions" of NEPA). *See also* Bear, *supra* note 8 (describing the historical transformation of CEQ's role through executive orders issued by Presidents Nixon and Carter).

[13] Because NEPA contains no independent judicial review provision, parties must generally rely on the APA to secure judicial review. *See, e.g.*, Florida Audubon Soc'y v. Bentsen, 94 F.3d 658, 665 (D.C. Cir. 1996) (stating that because NEPA does not provide a private right of action, plaintiffs must secure judicial review on some other basis, such as the APA). The Supreme Court has held that presidential actions are not subject to the APA (including its notice and comment requirements) and are not reviewable under that statute, although they remain subject to judicial review for constitutionality. *See* Franklin v. Massachusetts, 505 U.S. 788, 800-01 (1992) ("The President is not explicitly excluded from the APA's purview, but he is not explicitly included, either. Out of respect for the separation of powers and the unique constitutional position of the President, we find that textual silence is not enough to subject the President to the provisions of the APA."); *but cf.* Youngstown Sheet & Tube Co. v. Sawyer, 343 U.S. 579 (1952) (holding unconstitutional an executive order seizing steel mills during labor dispute). Many executive orders purport to preclude judicial review. *See, e.g.*, Exec. Order No. 12,866, 3 C.F.R. 638 (1994) (stating that the order "does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States . . ."). Courts generally have deferred to this stated intention, holding that "managerial" executive orders are not enforceable under the APA unless they explicitly create a private right of action. *See* Sidney A. Shapiro, *Administrative Law After the Counter-Reformation: Restoring Faith in Pragmatic Government*, 48 U. KAN. L. REV. 689, 710-11 (2000). *See also, e.g.*, Dong v. Slattery, 84 F.3d 82, 85-86 (2d Cir. 1996) (holding that executive orders directed toward federal

administrative reinterpretation on a potentially far more sweeping scale than more specific statutes that expressly delegate authority to agencies in narrower and more qualified terms.

Considering that NEPA rests upon such a shaky legal foundation, it is remarkable how stable the structure has remained over time. Congresses and presidents have come and gone, some of them environmentalists and others more skeptical of environmentalism's aims and methods. Yet NEPA endures—never significantly amended,[14] never drastically modified by administrative reinterpretation, a comfortable old shoe of a statute, wearing well the passage of time.

Now, for the first time in a generation, NEPA is at a crossroads.[15] Long-simmering dissatisfaction among agency officials and resource extraction industries has boiled over. Efforts to revise NEPA practice are proceeding on several fronts. In September, 2003, a CEQ-convened NEPA Task Force issued a detailed report, entitled *Modernizing NEPA Implementation*, which advocated a series of NEPA "reforms."[16] Some of the Task Force recommendations appear uncontroversial.[17] Others are too vaguely

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agencies and not derived from a congressional grant of lawmaking authority are not subject to judicial review under the APA); Independent Meatpackers Ass'n v. Butz, 526 F.2d 228, 236 (8th Cir. 1975), *cert. denied*, 424 U.S. 966 (1976) (declining to infer a private right of action to enforce an executive order directed toward federal agencies and intended as a "managerial tool").

[14] Minor amendments have been enacted at various points. For example, an amendment was added in 1975 to authorize agencies to delegate responsibility for preparing EISs to states, provided that the state agency has appropriate jurisdiction and the federal agency retains supervisory authority. See Pub. L. 94-83, 89 Stat. 424 (Aug. 9, 1975), codified at 42 U.S.C. § 4332(2)(D).

[15] Arguably, the last major legal development in NEPA implementation was CEQ's promulgation of binding NEPA regulations in the late 1970s in response to President Carter's Executive Order. *See* Dinah Bear, *The National Environmental Policy Act: Its Origins and Evolutions*, 10 NATURAL RES. & ENVT. 3, 70-71 (Fall 1995) (stating that the regulations introduced "scoping" to the EIS process, codified understandings of crucial terms such as "major federal action" and "significantly affecting," authorized Categorical Exclusions, provided for increased uniformity in the Environmental Assessment process, and required a Record of Decision explaining the rationale for the agency's final decision)*; id.* at 71 (stating that following adoption of the 1978 CEQ regulations, recent NEPA cases have produced "[f]ew new points of NEPA law").

[16] NEPA TASK FORCE, THE NEPA TASK FORCE REPORT TO THE COUNCIL ON ENVIRONMENTAL QUALITY: MODERNIZING NEPA IMPLEMENTATION (2003), http://ceq.eh.doe.gov/ntf/report/finalreport.pdf [hereinafter TASK FORCE REPORT].

[17] For example, the Task Force has recommended that agencies make better use of new information technologies. *See id*. at 5-23.

stated at present to evaluate or put into operation.[18] Some, however, represent significant and potentially far-reaching departures from established NEPA practice.[19]

On a separate track, leading administration officials and members of Congress are seeking streamlined NEPA procedures in connection with President Bush's "Healthy Forests Initiative."[20] This program is intended to accelerate "forest thinning" and "fuels reduction"—euphemisms for logging—in federally owned forests said to pose a high risk of fire.[21] NEPA's analytical requirements are blamed for slowing the pace of these forest management initiatives.[22]

In addition to these White House initiatives, a number of agencies have undertaken significant revisions of their own agency-specific NEPA compliance procedures.[23] While it is too

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[18] For example, the Task Force recommends improvements in interagency, intergovernmental, and public-private collaboration in the environmental assessment process, but offers few concrete details or examples. *See id*. at 24-34.

[19] These include, inter alia, proposals to expand the use of Categorical Exclusions, "adaptive management" of an undefined flavor, and exemptions of broad categories of activity from NEPA review and disclosure under the rubric of "information security." *See infra* Parts IV.A – IV.C.

[20] *See* OFFICE OF THE PRESIDENT, HEALTHY FORESTS: AN INITIATIVE FOR WILDFIRE PREVENTION AND STRONGER COMMUNITIES (2002), http://www.whitehouse.gov/infocus/healthyforests/Healthy_Forests_v2.pdf [hereinafter HEALTHY FORESTS INITIATIVE].

[21] *Cf.* Paul Trachtman, *Fire Fight*, SMITHSONIAN, Aug. 2003, at 42 (describing the clash between U.S. officials and environmentalists over how best to reduce the risk of forest fires).

[22] *See, e.g.*, Memorandum from James L. Connaughton, CEQ Chairman, to Ann M. Veneman, Secretary of Agriculture, and Gale Norton, Secretary of Interior, Guidance for Environmental Assessments of Forest Health Projects (Dec. 9, 2002), http://www.fire.blm.gov/ea_sites/guidance/g_CEQmemo.pdf [hereinafter CEQ Memorandum] (recommending streamlined Environmental Assessments of no more than ten to fifteen pages for Healthy Forests Initiative projects, following a standard template outlined in the memorandum). *See also* HEALTHY FORESTS INITIATIVE, *supra* note 20, at 13-14 (attributing forest fires in part to "administrative delays" in the implementation of forest "thinning and other fuels reduction projects," occasioned by "red tape" and "excessive analysis" associated with environmental planning).

[23] For example, the Federal Highway Administration (FHWA) in the Department of Transportation has undertaken an "environmental streamlining" initiative, seeking to accelerate the pace of NEPA-mandated environmental reviews. The initiative is supported by an executive order issued by George W. Bush. Exec. Order No. 13,274, 3 C.F.R. 250 (2003) (directing federal agencies to "expedite environmental reviews of high-priority transportation infrastructure projects"). FHWA also claims that its streamlining efforts are authorized in the 1998 federal transportation bill. *See* Transportation Equity Act for the 21st

early as of this writing to predict what package of NEPA revisions, if any, will emerge from the current ferment, it is timely to examine the general direction of changes now being discussed.

This Article concludes that NEPA does need significant restructuring to make it a more effective tool in environmental management. But the general thrust of the proposals now being circulated in Washington is, in the author's judgment, misguided. NEPA has some critical shortcomings, but not because it demands too much information of federal agencies, as the present administration contends.[24] Instead, NEPA is falling short because it demands the wrong types of information at the wrong time. The administration's NEPA reform proposals do little to address this problem and would add new problems to the mix.

I
A VIEW OF NEPA'S EFFECTIVENESS: FOUR CARICATURES

Observers hold divergent views on NEPA's effectiveness and its value as an environmental policy tool. As a baseline, we might describe one prevalent view as that of the "NEPA optimist." The optimist argues that NEPA is working reasonably well to achieve the objectives set out by Congress. By forcing agencies to confront information they otherwise might not have considered, the environmental impact assessment process as set out by NEPA[25] leads straightforwardly to better informed, more rational, and

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Century ("TEA-21"), Pub. L. 105-178, § 1309, 112 Stat. 107, 232 (1998) (mandating "environmental streamlining" through project-specific "coordinated environmental review process[es]" providing time limitations and concurrency requirements for all required environmental reviews). Environmentalists acknowledge that transportation projects often face delays but dispute that NEPA is the culprit, pointing to funding shortfalls, low priority, project complexity, and local opposition as the causes of most delays. *See Transportation Project Delays: Why Environmental "Streamlining" Won't Solve the Problem*, DECODING TRANSP. POLICY & PRACTICE (Surface Transp. Policy Project, Washington, D.C.), Sept. 18, 2002, http://www.transact.org/library/decoder/streamliningdecoder3.pdf (stating that only two percent of highway projects require an EIS, and even in those cases non-EIS-related factors account for sixty-nine percent of all delays).

[24] *See, e.g.*, Healthy Forests Initiative, *supra* note 20, at 13 (stating that "environmental analysis" contributes to "frequent and often considerable administrative delays" in administration of "fuels reduction" programs).

[25] *See* 42 U.S.C. §4332 (2000).

environmentally enlightened decision-making.[26] At the same time, the optimist argues, NEPA-mandated procedures have the democracy-enhancing virtue of opening the policy process to greater public scrutiny and public participation, thus enhancing transparency and democratic accountability.[27] The twin goals of better-informed decision-making and enhanced public oversight seem to have been the original public policy justifications for NEPA,[28] and the Act's most ardent defenders insist it has largely succeeded on both fronts.[29]

The optimist's rosy assessment can be distinguished from the darker, more cynical view of the "NEPA monkey wrencher."[30] The monkey wrencher is often critical of the quality of the information generated by environmental impact assessments and skeptical that agencies compelled to observe the rituals of NEPA procedure are actually influenced by the information thus generated. The monkey wrencher nonetheless places a high value on NEPA because it affords extraordinary opportunities to throw up procedural roadblocks that may delay or kill projects the monkey wrencher opposes. A full-scale environmental impact

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[26] *See* SERGE TAYLOR, MAKING BUREAUCRACIES THINK: THE ENVIRONMENTAL IMPACT STATEMENT STRATEGY OF ADMINISTRATIVE REFORM 251 (1984) (stating that NEPA has forced agencies to confront and anticipate environmental concerns, leading to environmental mitigation); *see also* Karkkainen, *supra* note 3, at 904.

[27] *See id.* at 125, 131, 183; Paul J. Culhane, *NEPA's Impacts on Federal Agencies, Anticipated and Unanticipated*, 20 ENVTL. L. 681, 687 (1990).

[28] *See* JOHN FELLEMAN, DEEP INFORMATION: THE ROLE OF INFORMATION POLICY IN ENVIRONMENTAL SUSTAINABILITY 1-2 (1997) (stating that NEPA embraces an "elitist versus populist dualism," mandating the production of scientific information for use by technocratic experts and simultaneously opening decision-making processes to public participation); Michael Herz, *Parallel Universes: NEPA Lessons for the New Property*, 93 COLUM. L. REV. 1668, 1709 (1993).

[29] See COUNCIL ON ENVTL. QUALITY, THE NATIONAL ENVIRONMENTAL POLICY ACT: A STUDY OF ITS EFFECTIVENESS AFTER TWENTY-FIVE YEARS, at iii (1997), *available at* http://ceq.eh.doe.gov/nepa/nepa25fn.pdf [hereinafter NEPA EFFECTIVENESS STUDY] ("Overall, what we found is that NEPA is a success—-it has made agencies take a hard look at the potential environmental consequences of their actions, and it has brought the public into the agency decision-making process like no other statute").

[30] The term is borrowed from Edward Abbey's colorful and controversial 1975 novel *The Monkey Wrench Gang*, in which the protagonists sabotage machinery, dams, highways, billboards, logging and mining operations, and other perceived threats to wilderness. *See* EDWARD ABBEY, THE MONKEY WRENCH GANG (1975). Environmentalists' use of NEPA as an obstructionist tool is a milder (and perfectly legal) procedural analog of "monkey wrenching."

statement (EIS), in particular, is usually costly and time-consuming to produce.[31]

NEPA litigation—either to decide whether an EIS is required[32] or to determine its adequacy once it is produced—adds further costs and delays. Fear of judicial review pushes agencies toward ever-lengthier and more elaborate EISs, responding to all major comments received in the public notice and comment period.[33] NEPA thus becomes a highly effective tool that environmental NGOs and others can use to raise the financial and political costs of projects they oppose and stretch out decisions over an extended time frame, giving time to rally political opposition. In some cases these delays and associated financial and political costs may be enough to derail the project entirely.[34] In other cases, their ability to erect procedural obstacles may give project opponents leverage in the larger political bargaining that surrounds the decision, which they may use to force desired modifications in project design.

When used in this way, NEPA is largely a negative weapon—an obstructionist tool. Its use is predicated upon an understanding

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[31] *See, e.g.*, NAT'L ACAD. OF PUB. ADMIN., MANAGING NEPA AT THE DEPARTMENT OF ENERGY IV.C (July 1998), *available at* http://tis.eh.doe.gov/nepa/process/napa_rep/napa_rep.html [hereinafter MANAGING NEPA] (stating that Department of Energy EISs produced prior to 1994 had a mean cost of $6.3 million and a median cost of $1.2 million; following an aggressive effort to reduce costs, after 1994 the mean cost fell to $5.1 million, but the median cost rose to $2.7 million); *id.* at III.A. (reporting a median completion time of thirty-three months for EISs produced between 1989 and 1994); FED. HIGHWAY ADMIN., EVALUATING THE PERFORMANCE OF ENVIRONMENTAL STREAMLINING: DEVELOPMENT OF A NEPA BASELINE FOR MEASURING CONTINUOUS PERFORMANCE, *available at* http://environment.fhwa.dot.gov/strmlng/baseline (last modified Jan. 7, 2004) (stating that on a thirty-year average, FHWA EISs took 3.6 years to complete, with mean completion time rising from 2.2 years in the 1970s to five years in the 1990s).

[32] Under NEPA, an EIS is required only for "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C) (2000). The "threshold requirement" for EIS production, then, is that the action "significantly affect" the environment. *See generally* DANIEL R. MANDELKER, NEPA LAW AND LITIGATION ch. 8 (2d ed. Supp. 2002).

[33] *See* NEPA EFFECTIVENESS STUDY, *supra* note 29, at iii.

[34] Perhaps the most famous example is the proposed Westway superhighway on the west side of Manhattan, a $2 billion project delayed and ultimately killed by mounting political opposition and changing economic calculations, after being tied up by years of NEPA litigation. *See generally* Daniel Ackman, *Highway to Nowhere: NEPA, Environmental Review and the* Westway *Case*, 21 COLUM. J.L. & SOC. PROBS. 325 (1988).

that the EIS process is by its very nature so inefficient and cumbersome that it may be used to thwart or constrain agency decision-making through selective, tactical application of extreme transaction costs. Environmental NGOs often deploy NEPA in this way, producing environmentally beneficial outcomes in particular cases; some NGOs justify NEPA's continued utility on these grounds.[35] In the aggregate, however, a decision-making process that depends upon high transaction costs and tactical obstructionism looks like a sub-optimal way to run a government. As to particular applications, there is no way to sort the good cases from the bad; anyone with an obstructionist agenda, a skilled lawyer, and constitutional standing can wield the procedural monkey wrench to try to block or delay government projects, making NEPA (and state-level "little NEPAs"[36]) a favorite tool of NIMBY-ism[37] as well as environmentalism.

A third position, roughly reflecting the longstanding view of some agency officials and many in the extractive industries operating on federal lands, is that of the "NEPA skeptic." This view is roughly the flip-side of the monkey wrencher's. For all the reasons environmental NGOs love NEPA, agency managers and affected industry parties tend to hate it. They see it as a tool of unprincipled obstructionism, a roadblock to progress, and a pointless and burdensome paperwork exercise that leads to delays and adds to project costs.[38] Some NEPA skeptics also see its

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[35] *See* James Dao, *Environmental Groups to File Suit over Missile Defense*, N.Y. TIMES, Aug. 28, 2001, at A10 (quoting an environmental activist as stating "the hope is that delay [occasioned by NEPA litigation] will lead to cancellation. . . . That's what we always hope for in these suits.").

[36] *See, e.g.*, California Environmental Quality Act (CEQA), CAL. PUB. RES. §§ 21000-21178.1 (West 1996); New York State Environmental Quality Review Act (SEQRA), N.Y. ENVTL. CONSERV. §§ 8-0101-8-0117 (McKinney 1997).

[37] "Not In My Back Yard"—phrase used to define movements to relocate, rather than eliminate, environmental harms.

[38] *See, e.g.*, *Process Gridlock on the National Forests: Oversight Hearing Before the Subcomm. on Forests and Forest Health of the House Comm. on Res.*, 107th Cong. 15-19 (2002) (statement of Dale Bosworth, Chief, USDA Forest Service) (stating that NEPA leads to "excessive analysis," "unproductive public involvement," and "management inefficiencies" that leave Forest Service employees "frustrated" and "unable to do the work that [they] know needs to be done" to "[protect] and improv[e] the quality of our land, our water, our wildlife, and our air") [hereinafter Bosworth Statement]; Ray Clark, *NEPA: The Rational Approach to Change*, *in* ENVIRONMENTAL POLICY AND NEPA, *supra* note 10, at 15, 23 (stating that many agency officials regard NEPA as a "rigid paperwork exercise" rather than a way to achieve environmental objectives).

obstructionist potential as a fundamentally undemocratic device that gives "special interest lobbies" (the monkey wrenchers) undue influence over governmental decision-making.[39] The skeptics' underlying analysis of NEPA's operative mechanisms is in important respects quite similar to that of the monkey wrenchers, yet, as the parties who bear the costs of delay, they are on the other side of the fence with respect to the desirability of tactical obstructionism.

A fourth view, prevalent in the legal academic literature, is that of the "legalist critic." The legalist's view of NEPA is also generally negative, but her complaint here is not that NEPA is too robust, but rather that it is too anemic. Legalists charge that although NEPA was intended to have substantive as well as procedural requirements, the statute has been eviscerated by the courts and especially by the Supreme Court—a forum in which environmental NGOs have never won a NEPA case. The Court held that NEPA's substantive requirements[40] were merely precatory and not judicially enforceable; NEPA's requirements, the Court said, are "essentially procedural."[41] Mandatory procedure without substantive legal standards is held in low regard

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[39] *See* Frank B. Cross, *The Judiciary and Public Choice*, 50 HASTINGS L.J. 355, 375 (1999) (stating that NEPA is "notorious for special interest abuse" because it "can be used by anyone interested in frustrating or delaying a major government action").

[40] The statutory language of NEPA appears to be aimed at substantive improvements in environmental results. For example, § 101(a) states that the goal of NEPA is "to create and maintain conditions under which man and nature can exist in . . . harmony." 42 U.S.C. § 4331(a) (2000). In addition, § 101(b) asserts that it is "the continuing responsibility of the Federal Government to use all practicable means . . . to attain the widest range of beneficial uses of the environment without degradation. . . ." 42 U.S.C. § 4331(b). Some early lower court cases held that these requirements imposed judicially enforceable substantive duties on federal agencies. *See, e.g.*, Envtl. Def. Fund, Inc. v. Army Corps of Eng'rs, 470 F.2d 289, 297 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973) (stating that NEPA "is more than an environmental full-disclosure law" and is "intended to effect substantive changes in decisionmaking" by "set[ting] out specific environmental goals to serve as a set of policies to guide agency action affecting the environment").

[41] *See* Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 333 (1989) ("NEPA itself does not . . . mandat[e] particular results, but simply prescribes the necessary process for preventing uninformed . . . agency action."); Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227 (1980) (stating that although NEPA establishes "significant substantive goals for the Nation," it "imposes upon agencies duties that are 'essentially procedural,'" designed to ensure fully informed decision-making).

by the legalist critics.[42] In addition, the Court has eliminated even the more detailed procedures that lower courts had begun to require.[43] The effect of these decisions, in the view of the legalist critic, is to expand the range of agency discretion and weaken NEPA's influence.

This brief inventory does not exhaust the range of views concerning NEPA's effectiveness. Nor are the four positions caricatured here mutually exclusive. Some environmental NGOs, for example, may simultaneously hold optimist and monkey wrencher views, valuing NEPA both because it produces better-informed and more environmentally enlightened agency decisions, and because it allows them to intervene to block especially undesirable projects. Other monkey wrenchers may share the legalist critic's view that judicially enforceable substantive standards would make for a stronger and more effective NEPA, but in the meantime they are willing to use the procedural tools at their disposal. Precisely because they think that procedure without substance is likely to be ineffective, some legalist critics may share the skeptic's view that observance of NEPA's procedural formalities is dilatory, costly, and a waste of scarce agency resources.

Nor are these various positions always held in such stark terms as I pose them here; actual views extend across a continuum of intensity. Still, the caricatures depicted here roughly capture the principal poles in the debate.

II
NEPA'S EFFECTIVENESS: AN ALTERNATIVE VIEW

In a recent article, I came down somewhere between NEPA's

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[42] As one prominent critic colorfully put it: "I think the emphasis on the redemptive quality of procedural reform is about nine parts myth and one part coconut oil." Joseph L. Sax, *The (Unhappy) Truth About NEPA*, 26 OKLA. L. REV. 239, 239 (1973). Sax later moderated his views. *See* Joseph L. Sax, *The Search for Environmental Rights*, 6 J. LAND USE & ENVTL. L. 93, 98 (1990) ("There has been much debate and controversy over so-called NEPA litigation. But this process is one of the very few means by which the obligation to gather adequate information and then to subject it to careful and detailed consideration can be enforced.").

[43] *See* Vermont Yankee Nuclear Power Corp. V. NRDC, 435 U.S. 519, 548 (1978) (holding that courts may not impose additional procedural duties upon agencies beyond those "stated in the plain language of [NEPA]").

enthusiasts and its critics, but with a twist.[44] I argued that NEPA has accomplished a good deal—certainly more than its most vociferous critics acknowledge. These results have not come about, however, through the mechanisms usually identified by NEPA's supporters. Instead, progress has been achieved mainly through a back-handed and unintentional incentive mechanism, one that is poorly understood and deserves a good deal more scholarly attention than it has received to date.

NEPA demands of the reporting agency a great deal of information all at once: a one-time-only, purely *ex ante*, panoptic assessment of all the environmental consequences of a proposed action; all reasonably foreseeable alternatives to that action; and any reasonably foreseeable mitigation measures necessary to reduce the adverse environmental impacts.[45] That's quite a mouthful even to say, but stating it that way suggests the enormous burden that such an open-ended information production requirement places on the agency.

Another critical feature of NEPA is that its environmental impact assessment requirements are purely predictive in character.[46] Simply put, NEPA asks reporting agencies to tell us everything that's going to happen. It does not ask for subsequent verification that the agency's predictions were accurate. The emphasis is not on actual impacts, but on predicted impacts. This may seem puzzling, but NEPA—written in the latter stages of an era when we had great confidence in "comprehensive bureaucratic rationality"[47]—apparently assumes that expert bureaucrats armed with sharp pencils and green eyeshades will have the capacity to predict, accurately and comprehensively, how things will turn out, given a particular course of action and taking all relevant factors into account.

We have subsequently learned that the world is more complicated than that. Ecological systems are complex, dynamic, and non-linear, consisting of numerous mutually interdependent

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[44] *See generally* Karkkainen, *supra* note 3.

[45] *See id*. at 906-07.

[46] *See id*. at 925-26.

[47] *See* Colin S. Diver, *Policymaking Paradigms in Administrative Law*, 95 Harv. L. Rev. 393, 409-11 (1981)(in NEPA "Congress endorsed the idea of comprehensive analysis for a broad class of administrative decisions," thereby buoying the "comprehensive rationality" model of bureaucratic decision-making).

components and processes, interacting in complex and hard-to-calculate ways, and exhibiting numerous threshold effects and high levels of "inherent stochasticity."[48] Our scientific understanding of basic ecosystem components and processes is riddled with gaps and uncertainties, and even the most thoroughly studied and best understood ecosystems tend to produce surprises—sometimes quite large surprises—over time.[49]

This background of ecological complexity and interconnectedness contributes to the burdensomeness of the EIS requirement. Comprehensive assessments of environmental impacts are costly and time-consuming, as the monkey wrenchers well recognize; it is precisely for this reason that the EIS has become the favorite tool of those seeking to kill or delay projects.[50] The background of ecological complexity also creates opportunities for monkey wrenchers to challenge the substantive adequacy of the EISs that are produced, since they can often find some impact, alternative, or mitigation measure that the agency has failed to consider.[51] This, predictably, drives agencies to try to

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[48] *See* REED F. NOSS ET AL., THE SCIENCE OF CONSERVATION PLANNING: HABITAT CONSERVATION UNDER THE ENDANGERED SPECIES ACT 64 (1997) (stating that "[s]cientists recognize that we will never be able to predict with great accuracy the outcome of conservation decisions" due to the "inherent stochasticity or chaos of nature," combined with the fact that "planners rarely if ever have the luxury of sufficient information on species and natural communities to foresee the future"); C.S. Holling et al., *Science, Sustainability and Resource Management*, *in* LINKING SOCIAL AND ECOLOGICAL SYSTEMS: MANAGEMENT PRACTICES AND SOCIAL MECHANISMS FOR BUILDING RESILIENCE 342, 352-54 (Fikret Berkes et al. eds., 1998) ("A general characteristic of resource management problems is that they are fundamentally non-linear in causation . . . demonstrat[ing] multi-stable states and discontinuous behavior in both time and space."); *id*. at 352 ("[Natural resource] problems tend to be systems problems, where aspects of behavior are complex and unpredictable and where causes, while at times simple (when finally understood), are always multiple."); *id*. at 354 ("The linear, equilibrium-centred view of nature no longer fits the evidence, and is being replaced by a non-linear, multi-equilibrium view.").

[49] *See* Holling et al., *supra* note 48, at 346-47 (describing the emerging scientific understanding of the "complexity of . . . behaviour of complex [natural] systems" in which "uncertainty is high," "knowledge of the system we deal with is always incomplete," "[s]urprise is inevitable," and "the system itself is a moving target").

[50] *See* Culhane, *supra* note 27, at 700 (stating that NEPA-induced "decisional gridlock" is an "acceptable outcome" to opponents of agency projects because "interminable delay" and "protracted NEPA litigation" lead to project suspensions and cancellations).

[51] *See* Karkkainen, *supra* note 3, at 917-18 nn. 56-61, and cases cited therein.

write even more comprehensive "kitchen sink" EISs so as to preempt the possibility of judicial reversal, further adding to the length of the process, the size of the EIS document, and the costs of EIS production.[52]

This leads to the further perverse consequence that EISs tend to be quite uninformative. No one can wade through hundreds or thousands of pages of mind-numbing detail.[53] Few people inside or outside the agency actually read the EIS, and those who attempt to do so may find it difficult to separate the good information from the junk. Contrary to conventional wisdom, more information is not always better. Over-inclusiveness may dilute the overall quality of information, as good information is swamped by bad.[54] The EIS itself, then, turns out not to be a particularly good device for informing anyone—not key agency decision-makers, and certainly not the public. Due to the time it takes to produce, the EIS will also typically arrive too late in the process to inform and influence the agency's decision.[55] Typically, agencies will commit resources to producing an EIS only if they have already determined that it is unavoidable; that is, if the project is so environmentally damaging than an EIS will be required, but the agency calculates that project benefits outweigh the costs and delay added by EIS production.[56] Consequently, we tend to get EISs only for the most environmentally harmful projects, after the agency has already decided (though not as a formal legal matter) to proceed despite the adverse environmental consequences.

As an unintended corollary, agencies have a strong incentive to avoid EIS production in the first instance if at all possible. For the vast majority of projects, avoiding EIS production turns out to

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[52] *See* Bosworth Statement, *supra* note 38, at 17 (testifying that "[t]o minimize the risk of adverse judicial opinions, land managers are advised to fully document within the body of the NEPA document their detailed consideration of each and every paper or article" referenced in NGO comments, including unpublished and non-peer-reviewed works that the agency considers to be of dubious scientific value); MANAGING NEPA, *supra* note 31, at III.B

[53] *See* MANAGING NEPA, *supra* note 31, at III.B ("Ironically, the very completeness of [EISs] makes them so large and technical that they are less readable by most citizens or DOE managers, and thus of less utility to both.").

[54] *See* Karkkainen, *supra* note3, at 922.

[55] *See* NEPA EFFECTIVENESS STUDY, *supra* note 29, at 11 (stating that the NEPA impact assessment process is often "too late to be fully effective" because agency planning begins long before its NEPA compliance efforts, so that "alternatives and strategic choices are foreclosed").

[56] *See* Karkkainen, *supra* note 3, at 920-21.

be reasonably easy. NEPA requires that an agency produce an EIS only if its proposed action "significantly affects the quality of the human environment."[57] The term "significantly affects" is not defined in the statute or in the CEQ regulations,[58] leaving that judgment to agency discretion—albeit policed by the possibility of NGO lawsuits and judicial intervention.[59] Most NEPA compliance effort these days goes not into producing full-scale EISs, but into producing slimmed-down documents called environmental assessments (EAs), designed to produce just enough information to justify a "Finding of No Significant Impact" (FONSI) to get the agency off the hook.[60]

The numbers tell the story: each year federal agencies produce about 50,000 EAs leading to FONSIs.[61] In contrast, across the

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[57] 42 U.S.C. § 4332(2)(C) (2000).

[58] *See* Bear, *supra* note 8, at 10,064 ("CEQ's regulations do not define what particular federal actions are 'significant'," but instead list factors that agencies should consider such as effects on public health and safety, unique geographical characteristics, cumulative effects, and effects on historic, scientific, or cultural resources).

[59] *See id*. (noting that disputes as to whether a proposed action has "significant effects" is the source of most NEPA litigation, but stating that courts have refrained from supplying a general definition of significance, relying instead on case by case, fact specific determinations). An early and influential example is *Hanly v. Kleindienst*, in which the Second Circuit held that agencies are vested with broad discretion to interpret the "vague and amorphous term 'significant'," but required further procedures and explicit factual findings before the agency would be entitled to find no significant impact. *See* Hanly v. Kleindiesnt, 471 F.2d 823, 830-32, 836 (2d Cir. 1972). In dissent, Judge Henry Friendly noted the "chameleon"-like character of the term that "covers a spectrum ranging from 'not trivial' through 'appreciable' to 'important' and even 'momentous'" and presciently warned that the majority's approach would subvert the purposes of NEPA by inviting agencies to avoid EIS production through environmental assessment procedures leading to findings of no significant impact. *See id.* at 836-38.

[60] The CEQ regulations authorize agencies to issue a FONSI "presenting the reasons why an action . . . will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared." 40 C.F.R. § 1508.13 (2003). The FONSI must "include the environmental assessment or a summary of it." *Id*. NEPA compliance officers in federal agencies indicate that, when possible, they elect to produce EAs, if necessary, coupled with mitigation measures, rather than undertake the more detailed, costly, and time consuming information burdens of an EIS. *See* R.M. Solomon et al., *Public Involvement Under NEPA: Trends and Opportunities*, *in* ENVIRONMENTAL POLICY AND NEPA, *supra* note 10, at 261, 265-67.

[61] *See* COUNCIL ON ENVTL. QUALITY, ENVIRONMENTAL QUALITY: 25TH ANNIVERSARY REPORT 51 (1994-1995), *available at* http://ceq.eh.doe.gov/nepa/reports/1994-95/25th_ann.pdf [hereinafter CEQ ANNIVERSARY REPORT].

entire federal government only about 500 EISs are produced annually,[62] and since every Final EIS must be preceded by a Draft EIS (and may be followed by a Supplemental EIS), this figure really represents approximately 250 federal actions per year that trigger the EIS production process—a vanishingly small number given the scale and scope of federal operations.[63]

Many of the 50,000 FONSIs are so-called "mitigated FONSIs," in which the proposed project is redefined at an early stage to include some mitigation measures that, if implemented, will bring the expected environmental impacts below the EIS-triggering threshold of "significant."[64] To enthusiasts of the EIS process, the mitigated FONSI looks like an unprincipled evasion of NEPA's core requirement.[65] If the agency starts out expecting the project to have "significant" impacts, a full-scale EIS is ordinarily required to compel the agency to examine environmental impacts, reasonable alternatives, and the full range of mitigation measures, so that a "fully informed" agency can reassess its alternatives and mitigation options in light of the information thus revealed. With a mitigated FONSI, the agency takes a procedural shortcut, short-circuiting the prescribed decision-making path by choosing mitigation measures before the results of a full EIS analysis are in, and on that basis redefining the project so it is no longer expected to have "significant effects." To the mitigated FONSI's critics, this looks like cheating.[66]

I say, "Bravo!" to the use of mitigated FONSIs—at least, up to a point. The widespread use of the mitigated FONSI is the best evidence we have that NEPA is actually altering agency decision-making and improving environmental performance. Agencies are redefining projects to include mitigation measures that reduce adverse environmental impacts below the "significant" threshold.

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[62] *See id*.

[63] *See* Karkkainen, *supra* note 3, at 920.

[64] *See* CEQ ANNIVERSARY REPORT *supra* note 61, at 52; Elizabeth Blaug, *Use of the Environmental Assessment by Federal Agencies*, 15 Envtl. Prof. 57, 59 (1993) (citing figures from a CEQ survey that showed widely varying use of mitigated FONSIs by federal agencies, ranging from a low of eleven percent to a high of ninety-five percent).

[65] *See* Eric Glitzenstein, *Project Modification: Illegitimate Circumvention of the EIS Requirement or Desirable Means to Reduce Adverse Environmental Impacts?*, 10 ECOL. L.Q. 253, 271-72 (1982).

[66] *See* WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 893-94 (2d ed. 1994) (noting the "suspiciously circular" nature of mitigated FONSIs).

Moreover, through use of the mitigated FONSI, they are presumably achieving these environmentally beneficial results at a lower cost and in less time than would be required if they went through the full-blown EIS process.[67] That is a positive outcome, not a negative one. It is evidence that NEPA works. Of course, it may not be working in quite the way it was intended to work. Rather than serving as the vehicle for fully informed agency decision-making, the EIS operates as a penalty-default rule, creating an incentive for agencies to avoid its onerous requirements by upgrading environmental standards at an earlier stage of project design.

III
A SMARTER NEPA?

I said "Bravo!" to the mitigated FONSI, but only up to a point. The missing elements here are verification, transparency, and accountability—shortcomings in the entire NEPA system, but especially in the netherworld of FONSIs and mitigated FONSIs, where most NEPA compliance efforts occur outside the glare of public scrutiny.[68]

Environmental impact assessment should be reoriented toward monitoring and reporting on actual outcomes, rather than relying exclusively on *ex ante* predictions. We should begin by recognizing that agency experts do not have perfect information, and consequently we cannot trust that their predictions will turn out to be accurate. If we want to ensure that mitigation measures are achieving environmentally beneficial results, at some point we need to see what has actually happened and to know whether the predictions were correct.

Without question, there is value in a pre-project analytical exercise that generates science-based predictions concerning the expected environmental consequences of a proposed action.

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[67] *See* Albert I Herson, *Project Mitigation Revisited: Most Courts Approve Findings of No Significant Impact Justified by Mitigation*, 13 ECOL. L.Q. 51, 68-69 (1986) (noting that the cost differential is the principal motivation for agencies to choose mitigated FONSIs over EISs).

[68] *See* NEPA EFFECTIVENESS STUDY, *supra* note 29, at 19-20 (noting the increased use of EAs and mitigated FONSIs and the limited public input associated with these devices). Unlike EISs, EAs are neither published in the Federal Register nor reported to CEQ or EPA.

However, because ecological processes are complex and typically less than fully understood, such predictions are often highly uncertain, as are expectations concerning the effectiveness of mitigation measures that might be included in the project. Yet no follow-up monitoring or verification of the accuracy of pre-project predictions is required once the project is in place.[69] NEPA thus assumes an unattainable level of clairvoyance at the pre-project stage, and naively relies on the uncertain information thus generated. My first proposal is simply that we require follow-up monitoring to verify the accuracy of any predictions we can identify at the pre-project analytical stage as resting on uncertain foundations.[70] Follow-up monitoring would produce multiple benefits. It would provide baseline data that should allow us to improve scientific understanding of ecological processes and human impacts, and thereby improve our predictive capacity over time.[71] In addition, it would create the possibility of post-project adjustments in mitigation measures, enhancing their prospects for success.[72] Finally, it would give the political branches and the public a better opportunity to hold agencies accountable for actual, as opposed to merely predicted, environmental performance.

Second, in recognition of the uncertainty embedded in the NEPA analytical process, I have urged the creation of a new category of NEPA disposition, which I have dubbed the "Contingent FONSI."[73] To the extent that an agency's FONSI rests on uncertain predictions about the environmental impacts of the proposed action or the effectiveness of included mitigation measures, we should treat that finding as contingent, pending subsequent verification or reversal on the basis of post-project monitoring. So, for example, if the agency reaches a Finding of No Significant Impact predicated upon the expected (but uncertain) effectiveness of mitigation measures, and follow-up

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[69] *See* Karkkainen, *supra* note 3, at 938.

[70] *See id*.

[71] *See* Bram F. Noble, *Strengthening EIA Through Adaptive Management: A Systems Perspective*, 20 ENVTL. IMPACT ASSESSMENT REV. 97, 102 (2000).

[72] *See* PAUL J. CULHANE ET AL., FORECASTS AND ENVIRONMENTAL DECISIONMAKING: THE CONTENT AND PREDICTIVE ACCURACY OF ENVIRONMENTAL IMPACT STATEMENTS 143-44 (1987) (stating that post-project monitoring "serves an . . . important management function" by ensuring that "each outcome conforms to the level predicted during the predecision analysis, and thus that the project actually achieves its intended net benefits").

[73] *See* Karkkainen, *supra* note 3, at 942-45.

monitoring later reveals that the mitigation is less effective than anticipated, the contingent FONSI would be reversed, and the NEPA analytical process would be re-triggered. To avoid a full-scale EIS at that point, the agency would need to devise additional mitigation measures, coupled with further monitoring, to justify a "Round Two" FONSI. Thus, we would build into NEPA an ongoing, dynamic process of learning and adjustment of mitigation plans in light of actual revealed impacts.

My third NEPA reform proposal, which I call "Adaptive Mitigation," is closely related to the first two.[74] Currently, mitigation plans are typically fixed and inflexible. The agency simply adds a mitigation component to its project proposal, relying on the expected effectiveness of the mitigation measures to justify a FONSI (a so-called "mitigated FONSI").[75] Since this is all that NEPA requires, the agency then proceeds full speed ahead with the project as mitigated, more or less blind to actual environmental outcomes. Under Adaptive Mitigation, agencies would be authorized and encouraged to design more responsive mitigation plans that provide for a range of alternative mitigation measures and subsequent upward or downward adjustments in the scale and intensity of mitigation efforts, to be triggered in response to information produced by follow-up monitoring. This flexible approach to mitigation should have better prospects of success than fixed mitigation measures and, where appropriate, could provide an important part of the justification for a FONSI.

IV
THE CEQ TASK FORCE REPORT

How do the Administration's NEPA Task Force proposals compare with this diagnosis of NEPA's shortcomings? The Task Force report is short on specifics, but it recommends several broad categories of changes. Two of these appear to be relatively

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[74] *See id*. at 945-46.

[75] *See, e.g.*, Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson, 685 F.2d 678 (D.C. Cir. 1982) (upholding Forest Service mitigated FONSI to allow exploratory mineral drilling in habitat of an endangered population of grizzly bears, based on a series of mitigation measures that included seasonal limitations on drilling, seasonal or permanent road closures in the area, and rescheduling or elimination of certain scheduled timber sales that would have adversely affected grizzly bear habitat).

uncontroversial, at least as presently stated. First, without offering details, the Task Force urges that agencies improve their use of information technologies in the NEPA process.[76] Second, in similarly imprecise terms, the Task Force urges enhanced interagency, intergovernmental, and public-private collaboration in the environmental assessment process.[77] This Article will not address these recommendations, which at least on a facial level appear reasonable, necessary, and timely—although the goals may be harder to implement than they are to state at this level of generality. Other Task Force recommendations, however, are more controversial.

A. *Categorical Exclusions*

Current CEQ regulations permit agencies to define "Categorical Exclusions," entire classes of agency action that are deemed exempt from NEPA's EA and EIS requirements because they "do not individually or cumulatively have a significant effect on the human environment and . . . have been found to have no such effect."[78] As part of its overall NEPA "streamlining" agenda, the Task Force proposes to "improve and modernize" the use of Categorical Exclusions,[79] but there can be little doubt that what the Task Force really has in mind is to expand their use.[80]

The use of Categorical Exclusions is not problematic when the excluded category is routine and has only a trivial environmental impact.[81] That the Task Force should be urging

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[76] *See* TASK FORCE REPORT, *supra* note 16, at 5-23 (urging that NEPA compliance efforts "accommodate and respond to developing information technologies" in the interest of enhanced public information, improved interagency data sharing, improved information quality, and efficiency in NEPA analysis).

[77] *See id*. at 24-34 (recommending creation of an advisory committee to recommend improvements in interagency, intergovernmental, and public-private collaboration).

[78] 40 C.F.R. § 1508.4 (2003).

[79] *See* TASK FORCE REPORT, *supra* note 16, at 57.

[80] *See id*. at 58 (stating that "some agencies choose to continue to prepare EAs when a categorical exclusion would suffice" and urging CEQ to "support agency efforts to efficiently establish new categorical exclusions").

[81] For a representative list see, e.g., 23 C.F.R. § 771.117c (2003) (listing twenty categorical exclusions for the Federal Highway Administration, including, inter alia, approval of utility installations along or across roadways, addition of bicycle or pedestrian lanes, installation of noise barriers, landscaping, emergency repairs, improvements to existing rest areas, retrofitting vehicles or

expanded use of Categorical Exclusions at this time is more troubling, however. Categorical Exclusions have been authorized for a very long time under CEQ's NEPA regulations.[82] Their ready availability, coupled with agencies' understandable desire to avoid costly and potentially lengthy case-by-case environmental reviews, should cause us to expect that agencies would have already placed most categories of genuinely uncontroversial and *de minimis* actions under Categorical Exclusions. What, then, is to be gained by recommending their expanded use now?

A clue may be found in one recent and highly controversial foray into expansion of Categorical Exclusions. In connection with the President's Healthy Forests Initiative, the Departments of Interior and Agriculture have promulgated new Categorical Exclusions for "hazardous fuels reduction activities" and post-fire rehabilitation projects,[83] categories that extend to forest "thinning" (ostensibly to reduce fire risk).[84] The soundness of these practices as a matter of public policy is hotly debated, with environmental NGOs contending that the Healthy Forests Initiative is motivated less by a genuine concern for fire prevention than by the desire to promote accelerated logging under the rhetorical smokescreen of fire safety.[85] In no small measure, these public policy disputes revolve around competing claims about the environmental impacts of thinning and salvage logging. Against that background, creation of the new Categorical Exclusions appears to be a preemptive strike by the Administration, with the dual aim of accelerating the pace of forest thinning and salvage logging by eliminating environmental review and taking the underlying public policy disputes off the table by categorically declaring

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facilities to make them handicapped-accessible, and the purchase of vehicles that can be accommodated by existing facilities).

[82] 40 C.F.R. § 1508.4 (originally published in 43 Fed. Reg. 56,003 (Nov. 29, 1978)).

[83] National Environmental Policy Act Documentation Needed for Fire Management Activities; Categorical Exclusions, 68 Fed. Reg. 33,814 (June 5, 2003).

[84] *See* U.S. DEPT. OF AGRIC., U.S. DEPT. OF INTERIOR, HEALTHY FORESTS INITIATIVE FACT SHEET, RELEASE NO. FS-0177.03 (May 30, 2003), *available at* http://www.fs.fed.us/projects/hfi/May-2003/docs/admin-fact-sheet.pdf (announcing new categorical exclusions for "priority fuel treatments" that include forest "thinning").

[85] *See* Glen Martin, *New Forestry Bill Has Environmentalists Worried: Some Fear Law Will Increase Commercial Logging and Cutting of Old-Growth Timber*, S.F. CHRON., Nov. 3, 2003, at A1.

environmental impact analysis off-limits. This arguably constitutes an abuse of the Categorical Exclusion concept, contrary to the spirit, if not the letter, of NEPA. Such moves will inevitably tend toward reducing the number and frequency of environmental reviews, subjecting large classes of governmental action to cursory categorical review framed at a high level of generality. In this way the fine-grained impacts of particular cases can be safely ignored and remaining uncertainties can be interred in a once-off, never-to-be reopened categorical inquiry.

The general thrust of the Task Force proposal on Categorical Exclusions is diametrically opposed to my own earlier NEPA reform proposals, which generally aim at expanding and improving the quality of information produced in the environmental review process through expanded monitoring and post-project adjustment of mitigation factors. Additional Categorical Exclusions would also tend to reduce accountability and transparency in a NEPA process that is currently not transparent enough.

Finally, the Task Force Categorical Exclusion proposal would adjust longstanding boundaries at the least transparent and least visible end of the NEPA compliance spectrum. We can think of NEPA review as consisting of three tiers. EISs stand at the most visible and transparent end of the spectrum; although fewest in number, they provide the most information and garner the greatest attention from the public and academic commentators. EAs are in the middle (generally leading to FONSIs), which provide less information than full-scale EISs and tend to receive far less scrutiny from the public and the academy. This category is critically important because it is where the bulk of agencies' real NEPA compliance efforts now occur.[86] At the far end of the spectrum stand Categorical Exclusions, which provide virtually no information and lie almost wholly outside the view of the public and the academy.

My NEPA reform proposals aim principally to improve the quality and quantity of information produced at the middle tier. In my judgment, the decades-long trend toward increased agency

[86] *See supra* notes 57-66 and accompanying text; *see also* Blaug, *supra* note 64, at 57 (stating that commentator's continued focus on the EIS is "misplaced . . . since the EA is by far the most frequently employed tool in NEPA implementation").

reliance on EAs and FONSIs would not be problematic if we could be confident that FONSIs were predicated upon sound information. In that case, a reliable FONSI would be a good indication that NEPA was having a salutary effect on environmental outcomes, insofar as it would show that environmental impacts were being kept below the threshold of "significant." The goal of NEPA reform, then, should be to improve the quality and transparency of the information upon which FONSIs are predicated.

In contrast, the Task Force proposals would do nothing to improve the quality of information produced in this middle tier. Instead, the Task Force would push more agency actions off the NEPA radar screen entirely by downgrading them from the middle Environmental Assessment tier to the almost wholly invisible Categorical Exclusion tier.

B. *Adaptive Management*

The Task Force also proposes to expand the use of "adaptive management" in connection with NEPA environmental reviews,[87] a proposal that at first blush appears to resonate with my own recommendations. In principle, adaptive management has much to recommend it, both as a general approach to natural resources management and as a way of structuring environmental impact analysis. Indeed, the adaptive management concept initially developed out of recognition on the part of leading scientists that conventional, one-time-only, and purely predictive approaches to environmental impact assessments, did not adequately take into account ecological complexity and associated uncertainties.[88] Ecologist C.S. "Buzz" Holling, who had participated in a number of environmental impact assessments, recommended an "adaptive" approach to environmental impact assessment and management. Interdisciplinary teams of scientists would produce an initial assessment using the best scientific information currently available and then carefully monitor results in the implementation phase of the project to test hypotheses and generate data that could be used to refine and adjust ecological models over time. The overall effect, then, would be to treat projects as large-scale field

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[87] *See* TASK FORCE REPORT, *supra* note 16, at 44-56.

[88] *See generally* C.S. HOLLING ET AL., ADAPTIVE ENVIRONMENTAL ASSESSMENT AND MANAGEMENT (C.S. Holling ed. 1978).

experiments, generating rolling improvements in ecological understanding and the predictive models upon which future assessments would be based.[89] That challenge, however, has never been taken up by NEPA practice.[90]

To be effective, adaptive management must be carefully structured, with information production tied to rigorous and disciplined processes for revision of decisions as better information becomes available. But the term "adaptive management" is left undefined in the Task Force proposals.[91] This is problematic because in the absence of a workable definition and clearly delineated procedures, "adaptive management" could become an excuse not to adequately analyze or fully disclose environmental impacts in advance of the decision, thereby giving agencies license to delay or avoid such inquiries by asserting a lack of *ex ante* scientific certainty.

Experience in other contexts teaches that agencies have already learned to use the notion of "adaptive management" as rhetorical cover for requests for blanket preauthorization to reverse or revise policies should the agency later decide to change its mind.[92] The specific concern in the environmental impact context is that "adaptive management" could simply become an excuse not to conduct rigorous, scientifically defensible environmental reviews, and consequently, a perversion of a valuable scientific concept. Framed at a high level of generality, the Task Force Report does not explicitly embrace that kind of abuse of the adaptive management concept, but neither is such an approach precluded, and some of the report's language is unsettling. The Task Force Report makes virtually no reference to the role

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[89] *See id.* at 135-137.

[90] In a 1997 study, CEQ acknowledged the limitations of the current purely predictive approach under NEPA and recommended adoption of an adaptive management model. *See* NEPA EFFECTIVENESS STUDY, supra note 2~~933~~, at 31-35. That study generated little or no follow-up action.

[91] The closest the Task Force comes to defining "adaptive management" is to state that it "goes beyond the traditional 'predict-mitigate-implement' model [of environmental review] and incorporates the 'predict-mitigate-implement-monitor-adapt'" model. *See* TASK FORCE REPORT, *supra* note 16, at 45. Elsewhere, the Task Force recommends convening an "adaptive management work group" that would be responsible for "[e]stablishing a definition for adaptive management in the NEPA process." *Id*. at 55.

[92] *See* Bradley C. Karkkainen, *Adaptive Ecosystem Management and Regulatory Penalty Defaults: Toward a Bounded Pragmatism*, 87 MINN. L. REV. 943, 953-56 (2003).

adaptive management might play in improving the quality of information upon which environmental management is predicated. Instead it focuses on the use of adaptive management to enhance agency "flexibility,"[93] to "make cost saving adjustments,"[94] and to satisfy NEPA's analytical requirements under conditions of "incomplete information."[95] This language suggests that the Task Force's principal concern here, as elsewhere, is to unshackle agencies from the constraints of the NEPA process.

To be sure, the current NEPA process reflects naive assumptions about the capacity of agency managers to fully discover all relevant environmental information in advance of the decision. Consequently, my proposals, like those of the Task Force, embrace adaptive management. The principal difference is that my proposals are more tightly structured and narrowly tailored to achieve adaptive management's information-enhancing objectives. Under my proposals, agencies would be required to study and identify uncertainties, monitor actual results, and undertake adaptive mitigation measures in response to what is subsequently learned through post-decision monitoring and analysis. All of this should be done in the context of efforts to keep adverse environmental impacts below the threshold level of "significant."[96] Thus once again, the overall thrust of my

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[93] *See, e.g.*, TASK FORCE REPORT, *supra* note 16, at 46 ("Integrating adaptive management and the NEPA process gives agencies a tool that provides them with the flexibility to address unanticipated results of project implementation and to adjust decisions for practical reasons."); *id.* at 47 (Adaptive management might "provide managers with the flexibility to adjust the proposed action based on the original NEPA review, without needing new or supplemental NEPA analyses . . . . Additionally, the ability to adjust provides management flexibility when unforeseen opportunities occur.").

[94] *Id.* at 47.

[95] *See id.* at 48 ("Adaptive management might . . . be useful when practitioners have incomplete information or when the information needed to make accurate predictions is unavailable. . . . Agencies could use adaptive management to compensate for incomplete or unavailable information."); *id.* at 55 (CEQ should consider "[u]sing adaptive management instead of some or all of the agency's evaluation of significant adverse impacts using theoretical approaches or research methods to address incomplete or unavailable information when the means to obtain the data for such evaluation are not known").

[96] The Task Force Report does briefly acknowledge this use of adaptive management, but only in a passing reference. *See* TASK FORCE REPORT, *supra* note 16, at 48 ("[A]daptive management might be appropriate when adaptive mitigation measures are the basis for a FONSI, and a mechanism is needed to ensure that the mitigation measures work as predicted.").

proposals is to increase transparency and accountability through the generation of higher-quality information than is produced under the current NEPA scheme. These goals are not advanced, and arguably may be impaired, if the Task Force proposals end up granting agencies additional open-ended discretion and freeing them from information production constraints.

C. *"Information Security"*

In a brief and cryptic, but disturbing passage, the Task Force recommends additional measures to protect "information security" in the NEPA compliance process.[97] Here, as elsewhere, it is not entirely clear what the Task Force has in mind, but the general idea seems to be to put some categories of "sensitive" information off-limits to public disclosure. Under some circumstances, the information might not be produced at all, on grounds that if produced it could fall into the wrong hands. Under other circumstances, information that is required for agencies to comply with NEPA might be produced but then shielded from public disclosure to protect private interests—such as the privacy rights of individuals,[98] proprietary interests (i.e., trade secrets), or state interests (for example, national security[99] or even environmental values where the government asserts that it can better carry out its mission in secret than through full public disclosure).[100]

The examples cited in the Task Force Report suggest that protected categories of "sensitive" information could be quite broad, embracing a great deal of information now readily accessible to the public. For example, the Department of Defense's definition of "sensitive" information includes any information, whether classified or unclassified, "that could be used by someone to harm the health and safety of the public or

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[97] *See id*. at 17-18.

[98] *See id*. at 17 ("The task force believes that the security of sensitive information should include consideration of property owners' privacy rights when information is gathered on their property.").

[99] *See id*. at 17, nn.28 & 29 (stating that at the Task Force's behest, the Defense Department had screened agencies' treatment of "sensitive" but unclassified information, defining as "sensitive" any information "that could be used by someone to harm the health and safety of the public or to otherwise undermine U.S. security interests").

[100] *See id*. at 17 (urging that protections for the "security of sensitive information" extend to "sensitive resources such as archaeological sites and threatened and endangered species and habitat locations").

otherwise undermine U.S. security interests."[101] This could include information on major infrastructure projects like dams, bridges, ports, airports, nuclear facilities, and public drinking water supply systems, as well as information on various kinds of hazardous materials and activities, including chemical production, biomedical research, and toxic waste treatment or disposal facilities.

The Task Force Report does not recommend blanket exemption of these categories of information from public disclosure, and it acknowledges that protection of "sensitive" information must be balanced against countervailing interests in informed agency decision-making and public participation.[102] But disclosure and non-disclosure are fundamentally incompatible aims; the Task Force can't have it both ways. The public policy question then becomes one of line-drawing—establishing criteria to determine which categories of information will be exempted from public disclosure. Once the question is framed that way, the unavoidable implication of the Task Force Report, especially in the post-September 11 security climate, is that larger categories of information will be placed off-limits to the public.

These proposals seem to run squarely against the original aims of NEPA, which, whatever its deficiencies or excesses, has certainly contributed to a larger and more predictable flow of information to the public.[103] As part of a broader assault on the public's right-to-know, the Task Force proposals are ultimately at odds with the goal of informed, democratic decision-making, and to that extent they should be viewed as problematic at best, highly dangerous at worst. On principle, the public ought to be extremely skeptical of the impulse to immunize governmental action from public review, public accountability, and public transparency that is reflected in the Task Force proposals.

V
THE "HEALTHY FORESTS INITIATIVE": A STALKING-HORSE FOR NEPA "REFORM"?

Perhaps the best clue to the direction of NEPA reforms is to

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[101] *See id*. at 17 n.28.
[102] *See id*. at 17.
[103] *See* NEPA EFFECTIVENESS STUDY, *supra* note 29, at 17.

be found in the Administration's "Healthy Forests Initiative"—an effort to promote accelerated logging of federal lands in the name of fire prevention,[104] which some environmentalists have dubbed President Bush's "No Tree Left Behind" policy.[105] On December 3, 2003, President Bush signed into law the Healthy Forests Restoration Act,[106] providing legislative authorization for "hazardous fuel reduction projects" on up to twenty million acres of federal forest lands.[107] The statute contains several provisions that significantly alter the NEPA review process. It exempts certain authorized hazardous fuel reduction projects from NEPA "alternatives" analysis entirely[108] and limits such analysis to consideration of a single alternative for other categories of fuel reduction projects.[109] Thus, although an agency might be required to evaluate the environmental impacts of its proposed action, its obligations to identify and consider alternatives—a step that many NEPA proponents consider the heart of the environmental impact assessment process—are severely curtailed.

The Healthy Forests Initiative is also proceeding on an administrative track. On June 5, 2003, the Departments of Interior and Agriculture gave joint notice of revisions to their respective NEPA handbooks. The agencies create new Categorical Exclusions for "post-fire rehabilitation activities" of up to 4,200 acres and "mechanical methods" of hazardous fuels reduction activities – that is, logging or mechanical brush clearing – up to 1,000 acres.[110] In addition, CEQ issued guidance in December,

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[104] *See* HEALTHY FORESTS INITIATIVE, *supra* note 20.

[105] *See* Hil Anderson, *Feds Launch Speed-up of Forest Treatments*, UPI, May 30, 2003, LEXIS, Nexis Library, UPI File (quoting Wilderness Society analyst Mike Anderson); Maura Reynolds, *Bush Gets Firsthand Look at Fire Devastation in Oregon*, L.A. TIMES, Aug. 22, 2003, at A16 (quoting Sen. Joe Lieberman, a candidate for the 2000 Democratic presidential nomination).

[106] Healthy Forests Restoration Act of 2003, Pub. L. No. 108-148, 117 Stat. 1887.

[107] *See id*. § 102(a), (c), 117 Stat. at 1892-93.

[108] *See id*. § 104(d)(2), 117 Stat. at 1898 (exempting hazardous fuel reduction projects "in the wildland-urban interface . . . no further than 1.5 miles from the boundary of an at-risk community" from NEPA alternatives analysis).

[109] *See id.* § 104(d)(1), 117 Stat. at 1898 (limiting alternatives analysis to consideration of a single alternative for all other hazardous fuel reduction projects "in the wildland-urban interface"; *id*. § 104 (c)(1), 117 Stat. at 1897 (generally limiting NEPA alternatives analysis to consideration of a "no action" alternative and one "action alternative" in addition to the proposed action).

[110] *See* National Environmental Policy Act Documentation Needed for Fire Management Activities; Categorical Exclusions, 68 Fed. Reg. 33,814, 33,824

2002, instructing the Forest Service to develop a simplified standard template for streamlined EAs of "no more than 10 to 15 pages" for fuel reduction projects, and to select projects for a pilot program to test the new template.[111]

Separately, the Forest Service is considering proposals to expand existing Categorical Exclusions for small-scale timber sales.[112] Under these proposals, any sale under fifty acres and any "salvage" sale under 250 acres would automatically be exempt from NEPA review.[113] The Forest Service has also announced that it is considering amendments to its planning rule to create new Categorical Exclusions for certain categories of amendments to Forest Plans required under the National Forest Management Act.[114]

Jointly, these proposals add up to a fairly aggressive effort to prune NEPA's analytical and information disclosure requirements. It should be noted that these administrative modifications do not represent a frontal assault on the high-visibility but low-volume EIS process, which most of the public and many academic commentators continue to regard as the heart of the NEPA compliance process.[115] Instead, they trim away at low-visibility but high-volume corners of NEPA compliance, downgrading significant categories of activities from EAs to Categorical Exclusions and simplifying and standardizing EAs where still required. The net effect is certain to be less NEPA-generated information and analysis across large categories of activity with potentially significant cumulative environmental consequences.

Together with new Healthy Forests legislation curtailing the

(June 5, 2003).

[111] CEQ Memorandum, *supra* note 22, at 1-2.

[112] *See* National Environmental Policy Act Documentation Needed for Limited Timber Harvest, 68 Fed. Reg. 1026 (Jan. 8, 2003).

[113] *See id.* at 1027 (proposing new Categorical Exclusions for sales of up to fifty acres of live trees, up to 250 acres of "salvage harvest" for fire-, wind-, or insect-damaged trees, and up to 250 acres for removal of trees to prevent the spread of insects or disease). The term "salvage harvest" is derived from the National Forest Management Act, which authorizes "salvage or sanitation harvesting of timber stands which are substantially damaged by fire, windthrow, or other catastrophe, or which are in imminent danger from insect or disease attack." 16 U.S.C. § 1611(b).

[114] *See* National Forest System Land and Resource Management Planning, 67 Fed. Reg. 72,770, 72,779 (Dec. 6, 2002).

[115] *See, e.g.*, HOLLING, *supra* note 88.

consideration of alternatives in both EAs and EISs,[116] the modifications to administrative procedure already underway in the Healthy Forests Initiative signal a major shift in NEPA compliance. The administration has also signaled its intention to "streamline" the NEPA process for transportation projects[117] and to "expedite" development of energy resources,[118] suggesting a coordinated strategy to limit NEPA's reach as it applies to resource extraction and infrastructure development—precisely those areas of federal activity that generate the most NEPA reviews and the most environmental controversy.[119]

CONCLUSION

Control of and access to information have always mattered. As the old adage puts it, "information is power." That statement has never been more true than today. We live in an age when the sheer volume of information and the technological means to distribute it are unprecedented. At the same time, the means to manipulate, filter, and conceal information have also grown increasingly sophisticated. Battles over access to and control of information increasingly occupy center stage on the public policy agenda.

In a recent article I characterized EPA's Toxics Release Inventory (TRI) as the "first regulatory statute of the contemporary 'information age.'"[120] In important respects, NEPA was TRI's

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[116] *See supra* notes 104-109 and accompanying text.

[117] *See* Exec. Order No. 13,274, 3 C.F.R. 250 (2003) (directing federal agencies to "expedite environmental reviews of high-priority transportation infrastructure projects").

[118] *See* Exec. Order No. 13,212, 3 C.F.R. 769 (2002) (directing federal agencies to "expedite their review of permits or take other actions as necessary to accelerate the completion of" energy-related projects).

[119] According to EPA figures, the Federal agencies generating the most EISs in 1999 were the Departments of Transportation (117), Interior (109), Agriculture (ninety-five), Energy (twenty-one), and Commerce (twenty), along with the Army Corps of Engineers (fifty-two). 1999 ENVIRONMENTAL IMPACT STATEMENTS FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY (unpublished document, on file with author), available at: http://ceq.eh.doe.gov/nepa/1999EPAEISData.pdf.

[120] Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J 257, 289 (2001).

precursor.[121] NEPA's aim from the outset was to improve environmental performance by compelling the production and disclosure of information on expected environmental outcomes. As currently formulated, however, NEPA has proven to be a somewhat awkward and inefficient vehicle. We face both a need and an opportunity to revise and update NEPA, making it more compatible with contemporary information management capability and with contemporary scientific understanding of the complexity of NEPA's task. If we do it right, we can make NEPA an even more effective environmental management tool than it has been over the first thirty years of its existence. If we do it wrong, we run the risk of setting environmental management back a generation, or more. The stakes are high. Let us choose wisely.

[121] *See id.* at 296, n.173 (noting parallels and differences between NEPA and TRI).