

ECOLOGY COMES OF AGE: NEPA'S LOST MANDATE

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Twenty-first century challenges are testing the resiliency of our nation's environmental programs. The common law, the Clean Air Act, the Clean Water Act, the Endangered Species Act and the National Environmental Policy Act ("NEPA") are all being examined as tools for averting, minimizing, and adapting to changing climatic conditions precipitated by increased greenhouse gas ("GHG") emissions.¹ But climate change is not our solitary concern: The world is confronting the "New Population Bomb,"² rising affluence but insufficient infrastructure, and an increasingly fragile food delivery system.³ So too the traditional assumption that western

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1. See, e.g., James Salzman & David B. Hunter, *Negligence in the Air: The Duty of Care in Climate Change Litigation*, 155 U. PENN. L. REV. 101 (2007); Memorandum from Nancy H. Sutley, Chair, Council on Env'tl. Quality, to Heads of Federal Departments and Agencies, Re: Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (Feb. 18, 2010), available at http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_of_GHG_Draft_NEPA_Guidance_FINAL_02182010.pdf; U.S. Fish & Wildlife Serv., Final Rule, *Determination of Threatened Status for the Polar Bear (Ursus Maritimus) Throughout Its Range*, 73 Fed. Reg. 28,212 (May 15, 2008) (effect of climate change on polar bears); Ctr. for Biological Diversity, *Petition for Water Quality Criteria for Black Carbon on Sea Ice and Glaciers Under Section 304 of the Clean Water Act*, 33 U.S.C. § 1314 (Feb. 22, 2010) available at http://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_what_how_why/black_carbon/pdfs/EPA_CWA_Black_Carbon_Petition_2-22-10.pdf.

2. Jack A. Goldstone, *The New Population Bomb: The Four Megatrends that Will Change the World*, 89 FOREIGN AFF. 31 (2010).

3. The author of the widely read *THE END OF OIL: ON THE EDGE OF A PERILOUS NEW WORLD* (2004) cogently traces the threat to our food supply. PAUL ROBERTS, *THE END OF FOOD* (2008). See also Carlisle Ford Runge & Carlisle Piehl Runge, *Against the Grain: Why Failing to Complete the Green Revolution Could Bring the Next Famine*, 89 FOREIGN AFF. 8

civilization-style economic growth is tied to energy development and production is not necessarily a modernist mantra;⁴ many politicians and academics talk, instead, about what Thomas L. Friedman has described as a new "Energy-Climate Era."⁵ Some in the environmental community, such as Ted Nordhaus and Michael Shellenberger, further suggest that "environmentalism," too, must embrace a greater appreciation for how human aspirations and economic development can coalesce within a new environmental paradigm.⁶ In this new era, then, we must address how to balance (a) the need to generate jobs and stimulate our economy, (b) vastly reduce our fossil fuel consumption and GHG emissions while maintaining geopolitical stability, and (c) imbue sustainability into the national agenda.

No environmental program, no matter how well designed, can *solve* the multi-dimensional aspects of the supra-national, national and sub-national environmental challenges of today. A solution is dependent on collective human creativity and commitment. Programs nevertheless may articulate, within the limits of our language, a shared societal vision and proffer mechanisms for promoting that vision. Two dominant themes permeate modern rhetoric and arguably reflect a shared vision: a recognition of the interrelatedness of systems—air, water, land, wildlife, and humans; and an appreciation that human domination over nature ought to be animated by less dominance, more parity, and an overriding goal of sustainability. These themes are now foundational principles in modern ecology.⁷ When defending his *Gaia* theory that the earth is a

(2010); H. Charles J. Godfray et al., *Food Security: The Challenge of Feeding 9 Billion People*, 327 *SCIENCE* 812 (2010); cf. TRISTRAM STUART, *WASTE: UNCOVERING THE GLOBAL FOOD SCANDAL*, at xix (2009) ("This book argues that the world's mountain of surplus food is currently an environmental liability—but it is also a great opportunity.").

4. See generally J.R. McNEILL, *AN ENVIRONMENTAL HISTORY OF THE TWENTIETH-CENTURY WORLD: SOMETHING NEW UNDER THE SUN* (2000) (describing a history of energy and economic growth). Gus Speth nevertheless poignantly warns that economic activity—or, more precisely, modern capitalism—and environmental protection are not easily compatible. JAMES GUSTAVE SPETH, *THE BRIDGE AT THE EDGE OF THE WORLD: CAPITALISM, THE ENVIRONMENT, AND CROSSING FROM CRISIS TO SUSTAINABILITY* 6–7 (2008).

5. THOMAS L. FRIEDMAN, *HOT, FLAT, AND CROWDED: WHY WE NEED A GREEN REVOLUTION AND HOW IT CAN RENEW AMERICA* 49 (2008).

6. See generally TED NORDHAUS & MICHAEL SHELLENBERGER, *BREAK THROUGH: FROM THE DEATH OF ENVIRONMENTALISM TO THE POLITICS OF POSSIBILITY* (2007) (recognizing the need for a rebirth of "environmentalism" and renewed political strategy).

7. See generally CAROLYN MERCHANT, *ECOLOGY: KEY CONCEPTS IN CRITICAL THEORY* 15–39 (2d ed. 2008).

dynamic, self-regulating interrelated system,⁸ the eminent English scientist James Lovelock refers to this paradigm as "holistic system science."⁹ In both the academic and some governmental communities of today, this idea of interrelated systems predominates.¹⁰ And perhaps more than any other federal statute, NEPA—heralded as the *Magna Carta* of environmental laws¹¹—exemplifies the need to view systems through a wider-angle lens that captures the dynamic of ecological principles and promotes sustainability.

Unfortunately, the procedural aspect of NEPA, the section 102(2)(C) process, has eclipsed the primary goals and objectives—that is, the congressional intent—animating the passage of NEPA. As Lynton Caldwell, a principal actor in NEPA's history, observed only three years after its passage, "[t]he ultimate effectiveness of the Act is being threatened by underemphasis on its intended ends and overemphasis on one of several means to those ends."¹²

NEPA, a relatively short statute, contains three principal parts. First, Title I of the Act declares a national environmental policy and establishes goals.¹³ Second, the Act contains an "action-forcing"

8. See JAMES LOVELOCK, *THE REVENGE OF GAIA: EARTH'S CLIMATE CRISIS & THE FATE OF HUMANITY* 15 (2006).

9. JAMES LOVELOCK, *THE VANISHING FACE OF GAIA: A FINAL WARNING* 198 (2009). See also JAMES N. GARDNER, *BIOSM: THE NEW SCIENTIFIC THEORY OF EVOLUTION: INTELLIGENT LIFE IS THE ARCHITECT OF THE UNIVERSE* (2003) (applying complexity theory, and thus extending the *Gaia* approach, to the cosmos).

10. A systems approach to science thrived between the 1950's and 1970s, and a past president of the Ecological Society of America notes that it "seeks to understand nature in the way we observe it, as a whole made up of many interacting parts. It uses systems analytic language and concepts to show how the parts interact in forming whole systems." FRANK B. GOLLEY, *A PRIMER FOR ENVIRONMENTAL LITERACY* 1 (1998). Many legal commentators, for instance, now employ complexity theory (or the term complexity) to describe how environmental law must address often chaotic and difficult to discern temporal and spatial relationships in scaled ecosystems. See RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* 16–24 (2004).

11. See LAZARUS, *supra* note 10, at 68.

12. Lynton K. Caldwell, *The National Environmental Policy Act: Status and Accomplishments, Transactions of the Thirty-Eighth Wildlife and Natural Resources Conference* (1973), in LYNTON K. CALDWELL, *ENVIRONMENT AS A FOCUS FOR PUBLIC POLICY* 167, 167–69 (1995).

13. 42 U.S.C. § 4331 (2006). Congress also *required* that all policies, regulations and laws of the United States be interpreted and administered in accordance with the policies of the Act, and separately that agencies are required to "identify and develop methods and procedures" for ensuring that "presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations." *Id.* § 4332(2)(B). Agencies are further instructed to "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact

mechanism, requiring the preparation of a "detailed statement," now referred to as an Environmental Impact Statement (EIS), for any "proposals for legislation" or "other major Federal actions significantly affecting the quality of the human environment."¹⁴ Finally, Title II authorizes the establishment, in the Executive Office, of a Council on Environmental Quality (CEQ).¹⁵

Most discussions about NEPA are dominated by the "action-forcing" mechanism—the NEPA document preparation process.¹⁶ This is perhaps understandable in light of the Supreme Court's "assumption" that NEPA is merely a procedural statute.¹⁷ The Academy often accepts with too little questioning the Court's admonition that NEPA only mandates procedures designed to ensure an informed decision-making process,¹⁸ and those who do question

on man's environment." *Id.* § 4332(2)(A). For resource-oriented projects, Congress added that agencies "initiate and utilize ecological information in the planning and development" stages. *Id.* § 4332(2)(H). In § 103 of the Act, Congress directed that agencies review their statutory authorities and policies to determine if any "deficiencies or inconsistencies" existed with the NEPA and those authorities or policies which might "prohibit full compliance with the purposes and policies" of the Act; if so, those agencies were directed to report to the President by July 1, 1971 "such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures" in the Act. *Id.* § 4333.

14. National Environmental Policy Act § 102(2)(C), 42 U.S.C. § 4332(2)(C) (2006). As part of any such EIS, the agency must address:

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

Id. Prior to any EIS, Congress directed that agencies consult with and solicit the views of Federal, State and local environmental agencies, and provide any such comments to the public and to the Council on Environmental Quality, with any statement and comments "accompany[ing] the proposal through the existing agency review process." *Id.* Independent of any EIS, agencies also must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." *Id.* § 4332(2)(E).

15. *Id.* § 4341.

16. See, e.g., ROGER W. FINDLEY & DANIEL A. FARBER, ENVIRONMENTAL LAW 28 (2008) ("The most significant provision of NEPA is undoubtedly § 102(2)(C)").

17. Quoting from *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989), the Court recently observed that "'NEPA itself does not mandate particular results.' Instead, NEPA imposes only procedural requirements." *Winter v. Natural Res. Def. Council*, 129 S. Ct. 365, 376 (2008).

18. E.g., Karin P. Sheldon, *Eight Lessons in Search of the Future: Observations on the Occasion of the Silver Anniversary of the Virginia Environmental Law Journal*, 25 VA. ENVTL. L.J. 37, 41 (2007) ("NEPA is designed to be an environmental full disclosure law.").

the Court's assumption only marginally explore the congressional history surrounding NEPA's passage.¹⁹

The assumption that NEPA only mandates procedures is not beyond rebuke. The Supreme Court's NEPA opinions never confront basic questions about the Act and how it should be interpreted; instead, the Court's opinions during NEPA's nascent years reflect an overemphasis on the need to establish modern principles of judicial review under the Administrative Procedure Act and jostling with the D.C. Circuit, rather than any meaningful effort to discern how and what Congress intended when it passed NEPA.²⁰ Each of the Court's NEPA precedents are vulnerable, with its decision in *Strycker's Bay Neighborhood Council, Inc. v. Karlen*²¹ being perhaps the least worthy of the application of *stare decisis*.²²

19. *E.g.*, JAMES MCELISH, ENVIRONMENTAL LAW INSTITUTE RESEARCH REPORT, REDISCOVERING THE NATIONAL ENVIRONMENTAL POLICY ACT: BACK TO THE FUTURE (2005); Jason J. Czarnecki, *Revisiting the Tense Relationship Between the U.S. Supreme Court, Administrative Procedure, and the National Environmental Policy Act*, 25 STAN. ENVTL. L.J. 3 (2006) (addressing how the Administrative Procedures Act may require affording sufficient weight to environmental values); Joel A. Mintz, *Taking Congress's Words Seriously: Towards a Sound Construction of NEPA's Long Overlooked Interpretation Mandate*, 38 ENVTL. L. 1031 (2008) (focusing primarily on the plain language and case law). *See also* Nicholas C. Yost, *NEPA's Promise—Partially Fulfilled*, 20 ENVTL. L. 533, 534–36 (1990) (briefly reviewing the legislative history and the plain language to indicate that the courts have given insufficient weight to Congress's intent).

20. Sam Kalen, *The Devolution of NEPA: How the APA Transformed the Nation's Environmental Policy*, 33 WM. & MARY ENVTL. L. & POL'Y REV. 483 (2009).

21. 444 U.S. 223 (1980).

22. *Strycker's Bay* often serves as the seminal decision eliminating any substantive mandate from NEPA. *See infra* note 34 and accompanying text (Alyson Flournoy et al., describing *Strycker's Bay* as the seminal decision eliminating any substantive mandate from NEPA). *See also* Mathew J. Lindstrom, *Procedures Without Purpose: The Withering Away of the National Environmental Policy Act's Substantive Law*, 20 J. LAND RESOURCES ENVTL. L. 245, 260 (1992) (the Court in *Strycker's Bay* “effectively squashed any possibility of judicial enforcement of NEPA’s substantive goals”); HOLLY DOREMUS, ALBERT C. LIN, RONALD H. ROSENBERG & THOMAS J. SCHOENBAUM, ENVIRONMENTAL POLICY LAW: PROBLEMS, CASES, AND READINGS 238 (2008) (“The Supreme Court, beginning with the *Strycker's Bay* decision, has consistently refused to permit substantive judicial review of agency decisions under NEPA.”); RICHARD L. REVESZ, ENVIRONMENTAL LAW AND POLICY 795, 808 (2008) (invoking *Strycker's Bay* to argue for NEPA being a procedural statute). Yet, the *Strycker's Bay* Court issued only a *per curiam* opinion on summary disposition. The Court had before it a petition for writ of certiorari, without briefing or oral argument, and the paltry nine pages of argument in the writ petition contained only block quotes from a few earlier cases. *See* Petition for Writ of Certiorari at 3, 17–26, *Strycker's Bay*, 444 U.S. 223 (No. 79-168). The Court's resulting analysis is equally meager, with one paragraph of analysis and mere quotes from earlier cases that a court should not second guess an agency's choice of action. *See* 444 U.S. at 227–28. Robert Percival aptly informs us that the opinion secured a majority of the justices the day after circulation of a draft opinion. *See* Robert V. Percival, *Environmental Law in the Supreme Court: Highlights from the Marshall Papers*, 23 ENVTL. L. REP. 10,606, 10,611 (1993). The Court's decision, moreover,

The ever-fading history surrounding NEPA's passage reveals much more than the exclusively procedural statute assumed in *Strycker's Bay*. Increasing public appreciation that Congress expected the Act to have a substantive mandate requires a better understanding by the academy—as well as the judiciary—of what Congress intended when it passed the *Magna Carta* of environmental laws. That such little attention has been paid to a paradigm shifting statute is unfortunate. Few existing histories of NEPA do justice to the Act or the participants in the drama that unfolded around its passage. Many commentators, including some of the principal participants, merely reference the "highlights" without affording the reader sufficient context.²³ Only one historical account, an unpublished dissertation by Terrance Finn, chronicles in any depth the development of NEPA.²⁴ This article, therefore, attempts to provide a fuller picture of NEPA's history and the substantive intent behind the statute.

The importance and continuing relevance of NEPA's history cannot be overstated. Congress did not intend that NEPA would serve only an information disclosure function. Rather, Congress more significantly intended to embrace and employ ecology—however it understood the concept—and expected that its policy statement and

overlooks the merits of the Department of Housing and Urban Development's decision, even though the case had as much to do with the agency's arguable violation of Fair Housing policy as with NEPA. See Kalen, *supra* note 20, at 543.

23. FREDERICK R. ANDERSON, NEPA IN THE COURTS: A LEGAL ANALYSIS OF THE NATIONAL ENVIRONMENTAL POLICY ACT 1-14 (1973); RICHARD N. L. ANDREWS, ENVIRONMENTAL POLICY AND ADMINISTRATIVE CHANGE 7-14 (1976); Nicholas C. Yost, *The Background and History of NEPA*, in THE NEPA LITIGATION GUIDE (Karin P. Sheldon & Mark Squillace eds., 1999); William L. Andreen, *In Pursuit of NEPA's Promise: The Role of Executive Oversight in the Implementation of Environmental Policy*, 64 IND. L.J. 205 (1989); Daniel A. Dreyfus & Helen M. Ingram, *The National Environmental Policy Act: A View of Intent and Practice*, 16 NAT. RES. J. 243 (1976). Two of the better published accounts of NEPA's history are MATHEW J. LINDSTROM & ZACHARY A. SMITH, THE NATIONAL ENVIRONMENTAL POLICY ACT: JUDICIAL MISCONSTRUCTION, LEGISLATIVE INDIFFERENCE, & EXECUTIVE NEGLIGENCE 22-51 (2001) and RICHARD A. LIROFF, A NATIONAL POLICY FOR THE ENVIRONMENT: NEPA AND ITS AFTERMATH 10-31 (1976). For an active participant's brief overview, see LYNTON K. CALDWELL, THE NATIONAL ENVIRONMENTAL POLICY ACT: AN AGENDA FOR THE FUTURE (1998) and Lynton K. Caldwell, *Implementing NEPA: A Non-Technical Political Task*, in ENVIRONMENTAL POLICY AND NEPA: PAST, PRESENT, AND FUTURE 25 (Ray Clark and Larry Canter eds., 1997).

24. Terrance T. Finn, *Conflict and Compromise: Congress Makes A Law, The Passage of the National Environmental Policy Act (July 1973)* (unpublished Ph.D. dissertation, Georgetown University), ProQuest Doc. No. 759122101. Lynton Caldwell described Finn's dissertation as the "most detailed account of the enactment of NEPA." LYNTON K. CALDWELL, THE NATIONAL ENVIRONMENTAL POLICY ACT, *supra* note 23, at 25.

declaration would serve as a substantive mandate for federal agencies. Congress further expected that CEQ would perform a proactive role in both environmental management and coordination of federal decisionmaking.

Probing Congress's intent in passing NEPA remains acutely relevant today. To begin with, aside from the pedagogical goal of ensuring that what Congress accomplished in NEPA does not remain relegated to a fading past, emphasizing NEPA's fundamental objective of incorporating ecological principles into public administration highlights the statute's flexibility to adapt to modern ecological concerns. Two implicit and related assumptions existed when many of the modern environmental laws were first passed: first, there was a presumption that the natural environment encompassed a static ecological unit free from human interference—that is, we can identify and describe a stable geographic area in equilibrium over time and not influenced by human development.²⁵ Second is a corollary presumption; that we can effectively take a snapshot of the environment—that is, describe an environmental baseline both spatially and temporally—and predict how human actions might alter that picture. But ecosystems are not in equilibrium; they are complex, dynamic and quite possibly chaotic.²⁶ Predicting the precise impact of

25. See FRANK B. GOLLEY, *A PRIMER FOR ENVIRONMENTAL LITERACY* 5 (1998). In 1965, “concepts such as ‘balance of nature’” were “widely accepted.” Lynton K. Caldwell, *The Environmental Factor in Development Planning*, in LYNTON K. CALDWELL, *THE ENVIRONMENT AS A FOCUS OF PUBLIC POLICY* 65, 71 (1995). Ecologists, however, did appreciate that “the environment is ever changing.” Letter from Maurice D. Arnold, U.S. Dep’t of Interior, Bureau of Outdoor Recreation, to M. W. DeGeer, Chief, Eng’g Div., Dep’t of the Army, Tulsa Div. 2 (Aug. 18, 1970) (on file with the DUKE ENVTL. L. & POL’Y F.) (commenting on an early draft environmental impact statement). Our first generation environmental laws, moreover, often focus on particular environmental stressors or resource-specific management objectives, instead of embracing the underlying tenet of ecology. Karin Sheldon observes that our media-oriented laws “ignore[] the fundamental principle of ecology that everything is connected to everything else.” Sheldon, *supra* note 18, at 44. The Clinton Administration attempted to rectify this problem by promoting ecosystem management, but with uncertain success. See Bradley C. Karkkainen, *Bottlenecks and Baselines: Tackling Information Deficits in Environmental Regulation*, 86 TEX. L. REV. 1409, 1439–42 (2008).

26. See Fred P. Bosselman & A. Dan Tarlock, *The Influence of Ecological Science on American Law: An Introduction*, 69 CHI.-KENT L. REV. 847, 863–69 (1994); Judy L. Meyer, *The Dance of Nature: New Concepts in Ecology*, 69 CHI.-KENT L. REV. 875, 877 (1994); Timothy H. Profeta, *Managing Without A Balance: Environmental Regulation in Light of Ecological Advances*, 7 DUKE ENVTL. L. & POL’Y F. 71 (1996); Karin P. Sheldon, *Upstream of Peril: The Role of Federal Lands in Addressing the Extinction Crisis*, 24 PACE ENVTL. L. REV. 1, 6 (2007); Sheldon, *supra* note 18, at 44, 46; Amy Sinden, *The Tragedy of the Commons and the Myth of a Private Property Solution*, 78 COLO. L. REV. 533, 593 (2007); A. Dan Tarlock, *The Nonequilibrium Paradigm in Ecology and the Partial Unraveling of Environmental Law*, 27 LOY. L.A. L. REV. 1121 (1994); Julie Thrower, Comment, *Adaptive Management and NEPA:*

decisions, therefore, is problematic and, absent an ability to employ adaptive management techniques, our judgments are but educated and statistically driven guesses that may risk unanticipated effects.²⁷

Yet many of our modern environmental and natural resource programs presume such predictive ability. Robert Glicksman, for example, describes how our public land management laws all assumed a "natural equilibrium" and that since these laws were passed "the science of ecology experienced a 'paradigm shift.'"²⁸ Bradley Karkkainen similarly writes that "[w]e continue to muddle through with statutory and regulatory frameworks predicated upon outdated and erroneous mid-twentieth-century assumptions about the ease of acquiring and processing the information required for sound environmental decision making."²⁹ Both NEPA and the Endangered Species Act ("ESA"), in particular, are presently administered under the classic paradigm. The ESA, for instance, assumes that we can predict from a snapshot of an "environmental baseline" what the

How a Nonequilibrium View of Ecosystems Mandates Flexible Regulation, 33 *ECOLOGY L. Q.* 871 (2006); Jonathan B. Weiner, *Beyond the Balance of Nature*, 7 *DUKE ENVTL. L. & POL'Y F.* 1 (1996). "This new understanding of natural systems makes it evident that the objective of environmental managers and regulators should not be to achieve and maintain a 'fixed' condition, but rather to seek to keep man-made perturbations within the range of types, magnitudes, and durations that will not result in the system flipping to a different state, or at a minimum, such that if a system does flip to a different state, it is not a permanent irreversible condition." Mary Jane Angelo, *Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience*, 87 *NEB. L. REV.* 950, 960–61 (2009).

27. Hydrological models, for instance, that rely on past trends to predict future scenarios may prove less reliable as the effects of climate change unfold. See Bruce A. McCarl, Xavier Villavicencio & Ximing Wu, *Climate Change and Future Analysis: Is Stationarity Dying?*, 90 *AM. J. AGRIC. ECON.* 1241, 1247 (2008) (questioning the stationarity assumption). See also P.C.D. Milly et al., *Stationarity is Dead: Whither Water Management?*, 319 *SCIENCE* 573 (2008). Arguably, as one of the environmental law textbooks observes, "[i]n many respects scientific uncertainty is the defining feature of environmental policy." J.B. RUHL, JOHN COPELAND NAGLE & JAMES SALZMAN, *THE PRACTICE AND POLICY OF ENVIRONMENTAL LAW* 15 (2008). J.B. Ruhl further observes that "[m]any ecologists believe we face a no-analog future—one for which we have no experience on which to base projections of ecosystem change, and for which models designed to allow active management decisions as climate change takes effect are presently rudimentary and imprecise." J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, 88 *B.U. L. REV.* 1, 11 (2008).

28. Robert L. Glicksman, *Ecosystem Resilience to Disruptions Linked to Global Climate Change: An Adaptive Approach to Federal Land Management*, 87 *NEB. L. REV.* 833, 836 (2009).

29. Bradley C. Karkkainen, *supra* note 25, at 1411. Richard Lazarus aptly explains that "information disclosure not only marked the commencement of modern environmental law [with the passage of NEPA], but it also turned out to be among the most hardy of environmental law's elements during the subsequent decades." LAZARUS, *supra* note 10, at 187. See generally Douglas A. Kysar & James Salzman, *Symposium: Harnessing the Power of Information for the Next Generation of Environmental Law: Foreword: Making Sense of Information for Environmental Protection*, 86 *TEX. L. REV.* 1347 (2008).

direct and indirect effects of an action will be when "added" to that baseline.³⁰ And Karkkainen argues that NEPA requires too much clairvoyance and we need to focus on follow-up monitoring, empirical testing, and adaptive management to mitigate unanticipated or incorrectly assumed impacts.³¹

If we accept that those who orchestrated the passage of NEPA intended that the Act would mandate environmentally sound decisions and enshrine ecology into the national agenda, the Act can be administered flexibly to respond to evolving ecological and other principles. To begin with, to the extent that modern ecology recognizes the difficulty with predicting the impact of decisions on continually changing ecosystems, NEPA can employ adaptive management as urged by Karkkainen, or provide the ability to continuously monitor, assess, and readjust decisions based on the cycling of new information.³² CEQ recently nudged in this direction, when it recognized that our "environment . . . is evolving and not static" and, as such, "monitoring can help decision-makers adapt to changed circumstances."³³

Moreover, elevating NEPA to the status intended by Congress diminishes the need for pursuing alternative creative legal or political solutions, which are often difficult to achieve. Alyson Flournoy, Heather Halter, and Christina Storz, for instance, suggest that, in lieu of pursuing NEPA's flexibility, we explore passing a National

30. See 50 C.F.R. § 402.02 (2009) (defining "[e]ffects of the action").

31. Bradley C. Karkkainen, *Toward a Smarter NEPA: Monitoring and Managing Government's Performance*, 102 COLUM. L. REV. 903, 970–72 (2002). CEQ has offered a similar observation. COUNCIL ON ENVIRONMENTAL QUALITY, THE NATIONAL ENVIRONMENTAL POLICY ACT: A STUDY OF ITS EFFECTIVENESS AFTER TWENTY-FIVE YEARS 32–33 (1997). See also Robert W. Adler, *Restoring the Environment and Restoring Democracy: Lessons from the Colorado River*, 25 U. VA. ENVTL. L.J. 55, 102 (2007) ("Environmental law, in short, has not followed suit with the flexibility needed to implement restoration programs effectively under an adaptive management rubric."). Although the principle of adaptive management is widely recognized, both in the literature and by agencies, our present laws are weak at translating the principle into practice. See generally Sandra Zellmer & Lance Gunderson, *Why Resilience May Not Always Be a Good Thing: Lessons in Ecosystem Restoration from Glen Canyon and the Everglades*, 87 NEB. L. REV. 893, 911–12 (2009). See also Angelo, *supra* note 26, at 955 ("Both the legal and scientific scholarly literature of the past several years is rife with calls for the increased use of adaptive management in a variety of environmental regulatory, management and restoration contexts.").

32. Holly Doremus refers to this as learning while doing, accepting that science is often incapable of making *ex ante* judgments. Holly Doremus, *Precaution, Science, and Learning While Doing in Natural Resources Management*, 82 WASH. L. REV. 547, 550 (2007).

33. Memorandum from Nancy H. Sutley to Heads of Federal Departments and Agencies, *supra* note 1.

Environmental Legacy Act with a substantive mandate to protect legacy resources for future generations.³⁴ The realities of politics unfortunately make this difficult to achieve. And the authors' dialogue about NEPA's shortcomings arguably overlooks the fact that NEPA *can* be administered in a manner similar to their proposed Legacy Act. Similarly, Mary Wood, for instance, opines that our 1970's-era environmental laws cannot cope with our present crises and calls for a revolutionary change in our legal approach to environmental issues. She suggests that a principle of "Nature's Trust," imbued with constitutional overtones, serve as the foundation for a paradigm shift toward a legal regime whose goal will mandate protecting our common natural resources.³⁵ But again, this is, in part, what Congress expected to accomplish when, in the fall of 1969, it delivered NEPA to President Nixon.

Additionally, Congress's decision to make ecology part of the national agenda offers the necessary latitude for agencies to incorporate modern scientific tools for better decision-making.³⁶ Agencies already regularly employ Geographic Information Systems ("GIS") in their analyses, allowing them to better identify ecological resources. The development of "ecosystem services" as an approach to ascribe value to natural systems is gaining sufficient currency that it could soon prove fundamental in the NEPA process³⁷ and be

34. Alyson C. Flournoy, Heather Halter & Christina Storz, *Harnessing the Power of Information to Protect Our Public Natural Resource Legacy*, 86 TEX. L. REV. 1575, 1587–98 (2008). See also Alyson C. Flournoy, *Protecting a Natural Resource Legacy While Promoting Resilience: Can It Be Done?*, 87 NEB. L. REV. 1008 (2009).

35. Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part I): Ecological Realism and the Need for a Paradigm Shift*, 39 ENVTL. L. 43, 88 (2009). See also Mary Christina Wood, *Nature's Trust: Reclaiming an Environmental Discourse*, 25 VA. ENVTL. L.J. 243 (2007).

36. See NEPA § 102(2), 42 U.S.C. § 4332(2) (2006) (providing that agencies are to “utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts,” as well as “identify and develop methods and procedures . . . which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration”).

37. See generally NATURE'S SERVICES: SOCIETAL DEPENDENCE ON NATURAL ECOSYSTEMS (Gretchen C. Daily ed., 1997); GEOFFREY HEAL, NATURE AND THE MARKETPLACE: CAPTURING THE VALUE OF ECOSYSTEM SERVICES (2000); J.B. RUHL, STEVEN E. KRAFT & CHRISTOPHER L. LANT, THE LAW AND POLICY OF ECOSYSTEM SERVICES (2000); J.B. Ruhl, *Ecosystem Services: The Nature of Valuing Nature*, in CONSERVATION FOR A NEW GENERATION: REDEFINING NATURAL RESOURCES MANAGEMENT 155 (Richard L. Knight & Courtney White eds., 2009); J.B. Ruhl & James Salzman, *The Law and Policy Beginning of Ecosystem Services*, 22 J. LAND USE & ENVTL. L. 157 (2007); J.B. Ruhl & James Salzman, *Ecosystem Services and the Public Trust Doctrine: Working Change from Within*, 15 SOUTHEASTERN ENVTL. L. J. 223 (2006); James Salzman, *Creating Markets for Ecosystem*

particularly helpful in ensuring that agencies make environmentally sound—and not merely informed—decisions. Robert Fischman, for instance, suggests that the Environmental Protection Agency could use its section 309 Clean Air Act authority to provide guidance on incorporating ecosystem services into NEPA documents.³⁸ Of course, CEQ could accomplish this as well and receive deference in any subsequent judicial arena.³⁹ As these and other new ideas surface, we need to appreciate NEPA's resilience for addressing our society's evolving threats.

Part I of this article traces the emergence of ecology into the public policy arena. Part II taps Finn's dissertation, and other contemporary sources, to examine the coalescing forces of the ecological movement and Congress's desire to legislate on environmental quality that ultimately produced NEPA. In part III, I offer some brief observations about why NEPA's mandate perhaps faded as NEPA began to unfold in both the agencies and courts. I also suggest that it is not too late to deploy the paradigmatic shift contemplated by Congress when it accepted ecology into the public arena.

I. THE RISE OF ECOLOGY

In September 1969, a group of lawyers, professors, conservation leaders, as well as Senate Interior Committee staff gathered at the Airlie House in Warrenton, Virginia to talk for two days about potential and evolving legal tools for protecting and enhancing the environment.⁴⁰ By the end of that year, Congress passed NEPA.⁴¹

Services: Notes From the Field, 80 N.Y.U. L. REV. 870 (2005); James Salzman, *A Field of Green? The Past and Future of Ecosystem Services*, 21 J. LAND USE & ENVTL. L. 133 (2006); James Salzman et al., *Protecting Ecosystem Services: Science, Economics, and the Law*, 20 STAN. ENVTL. L.J. 309 (2001). Robert Percival suggests that employing ecosystem services may entice environmentalists into the use of cost-benefit analysis—or, stated differently, balancing. Robert V. Percival, *Environmental Law in the Twenty-First Century*, 25 VA. ENVTL. L.J. 1, 29 (2007). My singular reference to ecosystem services is not to discount other emerging concepts, such as “emergy” synthesis, ecological (carbon) footprint assessment, or sustainability impact assessments. See Mary Jane Angelo, *Harnessing the Power of Science in Environmental Law: Why We Should, Why We Don't, and How We Can*, 86 TEX. L. REV. 1527 (2008).

38. Robert L. Fischman, *The EPA's NEPA Duties and Ecosystem Services*, 20 STAN. ENVTL. L.J. 497, 508–10 (2001).

39. See *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979).

40. See MALCOLM BALDWIN & JAMES K. PAGE, JR., *LAW AND THE ENVIRONMENT* (1970) (transcription of conference discussion and papers).

41. Other major developments to come out of Airlie include the formation of the Environmental Law Institute and the prospectus for the Environmental Law Reporter. See

David Sive, a prominent example of the new environmental lawyer who had attended the Airlie Conference, predicted that NEPA would "broaden significantly the scope of judicial review in environmental cases."⁴²

Soon after NEPA's passage, environmental issues increasingly captured the popular attention.⁴³ A January 1970 cover of *Newsweek*, entitled *The Ravaged Environment*, evoked the general sentiment that environmental issues had captured the public's attention;⁴⁴ only six months earlier, *Time* had dubbed 1969 the "Year of Ecology," and called ecologists the "New Jeremiahs;"⁴⁵ the magazine *Mother Earth News* published its first issue in January 1970;⁴⁶ the February 2, 1970 issue of *Time Magazine* carried a cover story on *Environment: Nixon's New Issue*, with Barry Commoner on the cover; in April, the United States held its first Earth Day celebration, following a series of environmental teach-ins; and in December 1970, *National Geographic* published an issue entitled *Our Ecological Crisis*, followed a year later by a special hardbound book titled *As We Live and Breathe: The Challenge of Our Environment*. In short, by the time of NEPA's passage, the science of "Ecology" or the "study of biological systems of interdependence"⁴⁷ had been welcomed into the popular arena.⁴⁸ And so it is no surprise that, in 1970, Robert

History, ENVTL. LAW INST., <http://www.eli.org/about/history.cfm> (last visited Jan. 29, 2011).

42. David Sive, *Some Thoughts of an Environmental Lawyer in the Wilderness of Administrative Law*, 70 COLUM. L. REV. 612, 649 (1970).

43. For an excellent study chronicling the events prior to and immediately after the passage of NEPA, see Ronald Lee Shelton, *The Environmental Era: A Chronological Guide to Policy and Concepts, 1962–1972* (Apr. 1974) (unpublished Ph.D. dissertation, Cornell University), ProQuest Doc. No. 757711961.

44. See *The Ravaged Environment*, NEWSWEEK, Jan. 26, 1970.

45. *Ecology: The New Jeremiahs*, TIME, Aug. 15, 1969, at 38.

46. *The Mother Earth News*, NATIONMASTER.COM, <http://www.nationmaster.com/encyclopedia/the-mother-earth-news> (last visited Nov. 14, 2010). In Great Britain, the first issue of *The Ecologist* was published in July 1970. *40 Year Magazine Archive*, THE ECOLOGIST, http://www.theecologist.org/back_archive/19701999/ (last visited Dec. 20, 2010).

47. ALAIN C. ENTHOVEN & A. MYRICK FREEMAN III, POLLUTION, RESOURCES, AND THE ENVIRONMENT, at ix (1973) ("The ecologist's view of man focuse[d] on the dependence of the human community on the natural environment and the exchanges and flows of food, materials, energy, and waste products between man and nature—or the interdependence and exchange relationships between man and nature.")

48. See COUNCIL ON ENVTL. QUALITY, ANNUAL REPORT 6–7 (Aug. 1970) ("*Ecology* is the science of the intricate web of relationships between living organisms and their living and nonliving surroundings. These interdependent living and nonliving parts make up *ecosystems*. Forests, lakes, and estuaries are examples. Larger ecosystems or combinations of ecosystems, which occur in similar climates and share a similar character and arrangement of vegetation are *biomes*. The Arctic tundra, prairie grasslands, and the desert are examples. The earth, its

Heilbroner wrote in the *New York Review of Books*, that "Ecology has become the Thing."⁴⁹

Understanding NEPA's history requires appreciating how ecology arrived at this level of social prominence. The science of ecology had emerged much earlier. "[B]y the time of the 1930s and '40s, ecology was being hailed as a much-needed guide to a future motivated by an ethic of conservation."⁵⁰ Eugene P. Odum's seminal work, *The Fundamentals of Ecology*, surfaced in 1953.⁵¹ Odum's historic text outlined the now classic approach to ecosystems and emphasized that nature could be managed for the human benefit and that ecologists should play an important role in shaping public policy.⁵² Odum even urged law schools to establish "landscape law" departments to assist in this endeavor.⁵³ It was this emerging science of ecology that laid the groundwork for Aldo Leopold to write *A Sand County Almanac*.⁵⁴

surrounding envelope of life-giving water and air, and all its living things comprise the *biosphere*. Finally, man's total *environmental system* includes not only the biosphere but also his interactions with his natural and manmade surroundings.").

49. Robert Heilbroner, *Ecological Armageddon* (1970), reprinted in ENTHOVEN & FREEMAN, *supra* note 47, at 176.

50. DONALD WORSTER, *THE WEALTH OF NATURE: ENVIRONMENTAL HISTORY AND THE ECOLOGICAL IMAGINATION* 157 (1993). See generally SHARON E. KINGSLAND, *THE EVOLUTION OF AMERICAN ECOLOGY 1890–2000* (2005).

51. EUGENE P. ODUM, *THE FUNDAMENTALS OF ECOLOGY* (1953). Other historical figures in the ecology movement also played a critical role; Odum, for instance, credited Victor E. Shelford for converting him into a "holistic ecologist." ROBERT A. CROKER, *PIONEER ECOLOGIST: THE LIFE AND WORK OF VICTOR ERNEST SHELFORD 1877–1968*, at 101 (1991). Emerging in the ecological movement during the Theodore Roosevelt Progressive era, Shelford had urged ecologists to become engaged in public policy—which then translated into conservation efforts. *Id.* at 122–25, 128–31. And he aggressively sought to have the Ecological Society of America become active in that endeavor. *Id.* at 138–41. The Society's reticence led him in the mid-1940s to establish the Ecologists Union (later called The Nature Conservancy), which actively participated in lobbying Congress. *Id.* at 145. He was named by the Society as the Eminent Ecologist of 1968, and he unfortunately passed away approximately one year before NEPA became law. *Id.* at 158.

52. See WORSTER, *supra* note 50, at 159–61. Plant ecologist Arthur Tansley is credited with developing the term "ecosystem" in 1935. See BEN A. MINTTEER, *THE LANDSCAPE OF REFORM: CIVIC PRAGMATISM AND ENVIRONMENTAL THOUGHT IN AMERICA* 123 (2006).

53. Eugene P. Odum, *The Strategy of Ecosystem Development*, 164 *SCIENCE* 262, 269 (1969).

54. Only four years before Odum published his text, Aldo Leopold published his monumental work urging the establishment of a land ethic based on principles of ecology. ALDO LEOPOLD, *A SAND COUNTY ALMANAC* (1949).

After World War II, several evolving factors coalesced to shift the focus from conservation to "ecology."⁵⁵ Roderick Nash observes that,

[a]fter 1960, old-style utilitarian or resource-oriented conservation decreased in importance relative to environmental quality. Americans expanded their understanding of this idea to include not only scenic and recreational amenities but also the health of the habitat. As an indicator of this change, the term *conservation* lost favor to *environmentalism*. *Ecology* also became a household word.⁵⁶

While the science of ecology was crystallizing in the academy during the 1950s and 1960s, the American public was becoming acutely aware of the growing environmental crisis as it learned about the problems attendant with our dominance over nature.⁵⁷ Preceded by the earlier publication of chapters in the *New Yorker*, Rachel Carson's 1962 publication *Silent Spring* became an immediate best seller, warning the populace about the persistent problem with toxic pesticides in our environment.⁵⁸ Secretary of the Interior Stewart Udall published *The Quiet Crisis* the following year,⁵⁹ championing stewardship and the need to address anthropogenic impacts on the environment and our landscape. Our increasing population, consumption of resources, and concomitant disposal of wastes

55. The eminent historian Samuel P. Hays explains that the conservation movement focused on the particular use of our natural resources, while the environmental (and for our purposes the emerging emphasis on ecology) focused more broadly on an interdisciplinary understanding of our relationship with the environment. *See generally* SAMUEL P. HAYS, *BEAUTY, HEALTH AND PERMANENCE: ENVIRONMENTAL POLITICS IN THE UNITED STATES, 1955-1985* (1987); SAMUEL P. HAYS, *CONSERVATION AND THE GOSPEL OF EFFICIENCY: THE PROGRESSIVE CONSERVATION MOVEMENT, 1890-1920* (1959).

56. RODERICK FRAZIER NASH, *AMERICAN ENVIRONMENTALISM: READINGS IN CONSERVATION HISTORY* 187 (3d ed. 1990).

57. *See generally* RICHARD N.L. ANDREWS, *MANAGING THE ENVIRONMENT, MANAGING OURSELVES: A HISTORY OF AMERICAN ENVIRONMENTAL POLICY* (1999). A rise in public awareness of our acute ability to shape our environment and health occurred worldwide. *See generally* J.R. MCNEILL, *SOMETHING NEW UNDER THE SUN: AN ENVIRONMENTAL HISTORY OF THE TWENTIETH-CENTURY WORLD* (2000). NEPA's preamble, in fact, discusses the need to protect the "biosphere," a concept that surfaced in international meetings, including the biosphere conference in Paris in 1968. *See* LYNTON K. CALDWELL, *BETWEEN TWO WORLDS: SCIENCE, THE ENVIRONMENTAL MOVEMENT AND POLICY CHOICE* 52 (1992).

58. JOHN MCCORMACK, *RECLAIMING PARADISE: THE GLOBAL ENVIRONMENTAL MOVEMENT* 55-56 (1989).

59. STUART UDALL, *THE QUIET CRISIS* (1963). Malcolm Baldwin observed that Udall's book "clearly stated" the "new conservation agenda for the country." Malcolm Forbes Baldwin, *The Federal Government's Role in the Management of Private Rural Land*, in *GOVERNMENT AND ENVIRONMENTAL POLITICS: ESSAYS ON HISTORICAL DEVELOPMENTS SINCE WORLD WAR TWO* 183, 190 (Michael J. Lacey ed., 1991).

became topics widely discussed.⁶⁰ Paul Ehrlich's publication of *The Population Bomb*⁶¹ is a prime example of the growing literature on the carrying capacity of the Earth and its resemblance to a spaceship

60. See, e.g., FAIRFIELD OSBORNE, *OUR PLUNDERED PLANET* (1948); FAIRFIELD OSBORNE, *THE LIMITS OF THE EARTH* (1953); WILLIAM VOGT, *ROAD TO SURVIVAL* (1948); KENNETH E.F. WATT, *ECOLOGY AND RESOURCES MANAGEMENT: A QUANTITATIVE APPROACH* (1968). Professor Robert Reich described how the activities of government, whether through building new highways or other projects, were affecting the daily lives of ordinary people, with little popular input. And he observed that several disputes, such as Storm King, pointed the way toward a new trend in citizen involvement. See generally Robert Reich, *The Law of a Planned Society*, 75 *YALE L.J.* 1227 (1966). It would be a mistake, moreover, to underestimate the effect that the post WWII focus on urban planning (emerging from the early century pre-war developments) had on the development of an interdisciplinary approach toward land use planning and the environment. When Lynton Caldwell called for environmental issues to become part of public policy, he noted that “[t]he first effort toward a formulation of comprehensive environmental policy has been through the medium of public planning.” Lynton K. Caldwell, *Environment: A New Focus for Public Policy*, 23 *PUBLIC ADMIN. REV.* 132, 136 (1963). Not surprisingly, therefore, one of the nation’s premier scholars in land use planning, Daniel Mandelker, also helped usher in the discipline of “environmental law.” E.g., DANIEL R. MANDELKER, *NEW DEVELOPMENTS IN LAND AND ENVIRONMENTAL CONTROLS* (1974); DANIEL R. MANDELKER, *CASE STUDIES IN LAND USE PLANNING* (1968); DANIEL R. MANDELKER, *GREEN BELTS AND URBAN GROWTH: ENGLISH TOWN AND COUNTRY PLANNING IN ACTION* (1962). Indeed, Professor Mandelker authors the most definitive text on NEPA’s case law. See DANIEL R. MANDELKER, *NEPA LAW AND LITIGATION* (2004). And it was this emphasis on coordinated and more informed planning that forged the basis for several of the congressional efforts surrounding the passage of NEPA. See *REPORT OF THE COMMISSION ON MARINE SCIENCE ENGINEERING AND RESOURCES, OUR NATION AND THE SEA: A PLAN FOR NATIONAL ACTION 17–19* (1969), available at <http://www.lib.noaa.gov/noaainfo/heritage/stratton/contents.html> (urging better coordination and a national policy). See also Jayne E. Daly, *A Glimpse of the Past—A Vision for the Future: Senator Henry M. Jackson and National Land-Use Legislation*, 28 *URB. LAW.* 7 (1996) (describing Senator Jackson’s effort to develop national land use legislation).

61. PAUL EHRLICH, *THE POPULATION BOMB* (1968). A dominant theme during this period emphasized population pressure on the environment. Subcommittee Chairman Henry S. Reuss opened a hearing on population growth, with a venerable list of witnesses including Garrett Hardin, Preston E. Cloud Jr., chairman on Resources and Man of the National Academy of Sciences, Richard A. Falk of Princeton, Jean Mayer of Harvard, Roger Revelle of Harvard, and Kenneth E. F. Watt of U.C. Davis, with the following somber note:

Whatever the population of the United States is a generation hence—whether the present 203 million or the projected 300 million, or a frightening 400 million—we need the most vigorous methods of ending the pollution of our air, water, and land; better preservation of our wildlife; greater earmarking of open spaces; and improved utilization of our natural resources, including minerals, forests, et cetera. But will even such heroic methods end the threat of growing population disaster?

Effects of Population Growth on Natural Resources and the Environment, Hearings Before a Subcomm. of the Comm. on Gov’t Operations, 91st CONG. 2 (1969) (statement of Henry S. Reuss, Chairman, Conservation & Natural Res. Subcomm. of the Comm. on Gov’t Operations). Not surprisingly, therefore, one of the proposals for increased coordination suggested having the Department of the Interior re-designated as the Department of Resources, Environment, and Population. H.R. 12,000, 91st CONG. (1969) (introduced by Congressmen Daddario and Mosher), 115 *CONG. REC.* 361.

(a biome).⁶² This new paradigm reflected the growing awareness that we live in a world with interconnected and interdependent "environments", and that technological advances and the human impact on our resources affect our daily health, the environment, and wildlife.

The emerging discipline of *ecology* also swept through the political branches of the government. In the policy arena, ecology often became part of a larger discussion about the need for better-coordinated federal decision-making.⁶³ Numerous suggestions for new agencies or a reorganized government surfaced. President Kennedy, for instance, delivered a report to Congress on the importance of protecting our natural resources, and urged the creation of a Council of Natural Resource and Environmental Quality Advisors.⁶⁴ Just three years later, President Johnson announced the Natural Beauty campaign.⁶⁵ When discussing this campaign, President Johnson

62. The idea of the Earth as a spaceship surfaced in HENRY GEORGE, *PROGRESS AND POVERTY* (1879), but became more popularized later. In 1965, Adlai Stevenson, as ambassador to the U.N., delivered memorable words in Geneva shortly before his death when he declared that "[w]e travel together, passengers on a little space ship, dependent upon its vulnerable reserves of air and soil." *Quoted in* CALDWELL, *BETWEEN TWO WORLDS*, *supra* note 57, at 38. *See also* Kenneth E. Boulding, *The Economics of the Coming Spaceship Earth*, in *ENVIRONMENTAL QUALITY IN A GROWING ECONOMY* 3 (Henry Jarrett ed., 1966); BUCKMINSTER FULLER, *OPERATING MANUAL FOR SPACESHIP EARTH* (1963); BARBARA WARD, *SPACESHIP EARTH* (1966). Garrett Hardin countered the metaphor, arguing that Earth was more like a lifeboat. *See* Garrett Hardin, *We Live on a Spaceship*, XXIII *BULL. ATOMIC SCIENTISTS* (1972). Buckminster Fuller discussed the spaceship metaphor in his comments to Congress. *See generally* *Joint House Senate Colloquium to Discuss A National Policy for the Environment, Hearing Before the S. Comm. on Interior and Insular Affairs and the H. Comm. on Science and Astronautics*, 90th Cong. 189–202 (1968) (statement of R. Buckminster Fuller).

63. *See* ENVTL. POLLUTION PANEL, U.S. PRESIDENT'S SCI. ADVISORY COMM., *RESTORING THE QUALITY OF OUR ENVIRONMENT* 13 (1965) ("[I]t is not surprising that the current organization is a hodge-podge, with responsibilities widely separated among government agencies, and some unassigned."). Odum later echoed this concern in a 1969 article. *See* Eugene P. Odum, *Air-Land-Water-An Ecological Whole*, 24 *J. SOIL & WATER CONSERVATION* 4 (1969). When considering NEPA, Congress identified better coordination as one of the Act's goals. *See, e.g.*, S. Rep. No. 91-926, at 14 (1969) ("The present problem also involves the need to rationalize and better coordinate existing policies and to provide means by which they may be continuously reviewed to determine whether they meet the overall goal of quality life in a quality environment for all Americans.").

64. Finn explains that Kennedy's proposal provided that the council would be under the Council of Economic Advisors, and this suggestion prompted opposition and ultimately doomed the idea. Finn, *supra* note 24, at 54.

65. *See generally* 111 *CONG. REC.* 2,085, 2,085–89 (1965) (message from President Lyndon B. Johnson) [hereinafter Johnson Message]. Senator Jackson would later comment that a report prepared for President Johnson on the status of the environment, entitled *Restoring the Quality of Our Environment*, 1965, was a significant document confirming the need for a national environmental policy. 113 *CONG. REC.* 36,854, 36,855 (1967) (reproducing a Sept. 3, 1967 speech

indicated that a "new conservation," or a "creative conservation," was necessary, one that examined "the total relation between man and the world around him."⁶⁶ These efforts illustrate the evolving awareness that our natural resources are interrelated and cannot be examined in isolation or through a fragmented analysis.⁶⁷ Paul Weiss, an eminent biologist and author of a 1962 report advocating the need to develop an agency capable of exploring ecological consequences, during one of NEPA's hearings addressed the consensus

that national planning and action in matters of environmental control require (a) the application of systems methodology to the man-environment continuum in its unitary totality, and (b) a corresponding organizational framework for the continual assessment from an unfactioned overall perspective of the totality of factors that influence the steadily evolving ecology of many in modern society.⁶⁸

Congress responded. Parroting the theme emanating from the Executive branch, members of Congress similarly began exploring how best to promote greater coordination among their own committees and within the various executive departments.⁶⁹ Congress established, for instance, the Water Resources Council and

delivered in Portland, Oregon).

66. See Johnson Message, *supra* note 65, at 2,085 (discussing the federal government's need to take an active role in addressing the problems animating the new conservation).

67. A 1962 National Academy of Sciences study discussed the need to look at activities from an ecological perspective, and suggested the use of what ecologists then referred to as systems analysis. To do this, it recommended, for instance, a natural resources group capable of conducting such an inquiry. See Shelton, *supra* note 43, at 40–44, 85 (discussing COMM. ON NATURAL RES., U.S. NAT'L ACAD. OF SCIS.—NAT'L RESEARCH COUNCIL, NATURAL RESOURCES: A SUMMARY REPORT TO THE PRESIDENT OF THE UNITED STATES (1962)). A similar effort occurred when examining how best to address the Nation's marine resources. See Donna R. Christie, *From Stratton to US COP: Environmental Law Floundering at Sea*, 82 WASH. L. REV. 533, 533–36 (2007).

68. *Joint House Senate Colloquium to Discuss A National Policy for the Environment, Hearing Before the S. Comm. on Interior and Insular Affairs and the H. Comm. on Science and Astronautics*, 90th Cong. 222 (1968) (statement of Paul Weiss, Professor Emeritus). Vice President Hubert Humphrey would observe, in August 1968, that "[w]e need not only *more* ecologists, but a new breed of professional ecologists who are prepared to act as broad-ranging 'environmental specialists' in ecology, planning, political science, sociology, engineering, and other disciplines which relate to the totality of our environment." Letter from Hubert H. Humphrey, Vice President, to F. Herbert Bormann 2 (Aug. 9, 1968) (on file with the DUKE ENVTL. L. & POL'Y F.).

69. These efforts to re-organize the congressional committees are aptly captured in Finn's dissertation. Finn, *supra* note 24, at 40. See also *The Case for a Department of Natural Resources*, 1 NAT. RES. J. 197 (1961) ("Our growing population, our industrial demands for raw materials and our commitments abroad all put pressure on our natural resource base Yet United States public policy towards natural resources is developed and administered by a complex confusing, and conflicting array of agencies, offices, and departments.").

commissioned the Public Land Law Review Commission.⁷⁰ As early as 1958, Congressmen John Dingell had secured amendments to the Fish and Wildlife Coordination Act that required agencies to coordinate with state and federal fish and wildlife agencies and to include in any "report prepared or submitted by any agency of the Federal Government" an assessment of the impact of any water resource project on wildlife resources.⁷¹ Congress considered other more generic legislation, with a bill introduced in 1959 by Senator James E. Murray entitled the "Resources and Conservation Act of 1959," which would have announced a national environmental policy, created an advisory council in the White House to address environmental policy, and required the submission of annual environmental reports to Congress.⁷² Bill Van Ness, a principal actor in the development of NEPA, would later observe that Senator Murray's bill served as the "first expression of the need for a unified and comprehensive statement of conservation, resource and environmental policy," and the "need for a high level Council."⁷³

Thereafter, a variety of bills surfaced promoting the need for a greater understanding of ecology and the relationship between people and the environment, with some bills focusing on better coordination of natural resource policies and others seeking to establish an office of Ecological Research. Several members even introduced resolutions

70. 42 U.S.C. § 1962a (2006).

71. Pub. L. 85-624, 72 Stat. 563, 564 (codified as amended at 16 U.S.C. § 661-66 (2006)). For an account of the Fish and Wildlife Coordination Act, see generally KARL BOYD BROOKS, *BEFORE EARTH DAY: THE ORIGINS OF AMERICAN ENVIRONMENTAL LAW, 1945-1970* (2009). Although Brooks focuses primarily—and perhaps too myopically—on the post-World War II era, he helps deflate the myth that environmental law simply emerged in the 1970s.

72. LIDA LUTHER, *CRS REPORT FOR CONGRESS: THE NATIONAL ENVIRONMENTAL POLICY ACT: BACKGROUND AND IMPLEMENTATION*, at CRS-3 (2008). Three years earlier, Senator Humphrey had introduced the "first modern wilderness bill," and it too would have created a presidential advisory board for wilderness matters. WILLIAM L. GRAF, *WILDERNESS PRESERVATION AND THE SAGEBRUSH REBELLIONS 200* (1990). Murray's bill appeared shortly after several noted efforts to address the need for greater coordination in natural resource and environmental policy. In 1949, the Minority Report to the Hoover Commission, with Dean Acheson as a Vice Chairman, commented on the need for coordinated review and management. The 1955 President's Advisory Committee on Water Resources Policy echoed a similar sentiment. "By 1957, after fifty years of relatively futile effort to coordinate natural resources administration, there was a growing belief among students of the problem that something was wrong." Lynton K. Caldwell, *Administrative Possibilities for Environmental Control*, in F. FRASER DARLING & JOHN P. MILTON, *FUTURE ENVIRONMENTS OF NORTH AMERICA: TRANSFORMATION OF A CONTINENT* 648, 663 (1966).

73. Memorandum from William Van Ness to Senator Henry M. Jackson 7 (Sept. 25, 1969) (discussing status of S. 1075, the "National Environmental Policy Act") (on file with DUKE ENVTL. L. & POL'Y F.).

proposing a constitutional amendment establishing a constitutional right to a healthful environment.⁷⁴

II. ECOLOGY BECOMES A PUBLIC POLICY ISSUE

By the early 1960s, concerns provoked by greater ecological awareness had become ripe for political action.⁷⁵ Congress's principal, yet often overlooked, success in passing NEPA was its ability to translate ecology and an integrative approach to resource administration into public policy. Lynton Caldwell, professor of Public and Environmental Affairs at Indiana University, and a prominent participant in this endeavor, later observed "[t]hat Congress intended more in NEPA than impact analysis is evident not only in its text but in its legislative history."⁷⁶ That science and technology could effect dramatic change in our environment became accepted, but ensuring that national policy would be coordinated and promote an environmental ethic was less certain. Too many incidents demonstrated that the federal agencies had not acted with the objective of ensuring sustainability (i.e., protecting our future generations). The true "heart" of NEPA, therefore, is not its requirement of an environmental impact statement or an alternatives analysis, but rather its acceptance of ecology and promotion of an environmental ethic in public policy. As Senator Muskie's Public Works Committee would later observe, "[t]he message which has emerged from these investigations and from all studies of environmental problems . . . is essentially the message of ecology—that we, and all our activities, are integral parts of a natural system."⁷⁷

74. See Shelton, *supra* note 43, at 15-150.

75. According to Finn, "[t]he activity of the Subcommittee on Science, Research, and Development during 1965-1968 is important to understanding the origin of [NEPA] because the [committee] dealt with concepts in these years that would be discussed in 1969 and enacted in 1970." Finn, *supra* note 24, at 128. A contemporary participant suggests that it was in 1968 that "Federal policy-makers in both the Legislative and Executive Branches began to perceive the compromise nature of environmental management." DANIEL A. DREYFUS, PAPERS ON THE IMPLEMENTATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT, INTRODUCTION AND SUMMARY 1 (1972) (on file with the DUKE ENVTL. L. & POL'Y F.).

76. CALDWELL, THE NATIONAL ENVIRONMENTAL POLICY ACT, *supra* note 23, at 78-79.

77. S. REP. 91-351, 37 (1969). In 1974, one of NEPA's drafters would tell Yale students that "inherent in modern attitudes toward natural resource management, is a belated realization of the interrelationships among environmental systems." Daniel A. Dreyfus, Presentation at Yale University: The Changing Nature of Natural Resources Policymaking 12 (Apr. 1974) (on file with DUKE ENVTL. L. & POL'Y F.).

A. Lynton Keith Caldwell—Advocate

Caldwell became the professorial advocate who alerted Congress about the need to appreciate the new ecology. From 1963 on, "the published output of the field of environmental policy and politics research consisted largely of" Caldwell's work.⁷⁸ In 1963, Caldwell began his campaign to merge the developing field of ecology, and its interdisciplinary focus, with public policy by publishing *Environment: A New Focus for Public Policy*.⁷⁹ Caldwell recognized that, at the time, "widespread skepticism regarding the rationality of having environment as a focus of public policy" existed among his colleagues in the academic community.⁸⁰ Caldwell's actions would underscore his message.⁸¹

Following up on his earlier article, Caldwell delivered yet another plea for better governmental decision-making, this time at the September 1969 Conservation Foundation meeting at Airlie House. He suggested that "[p]resent ecological and environmental knowledge could enable us to make more and better environmental decisions,"⁸² and observed that decisions were often at cross-purposes and uncoordinated, with no "well-defined and generally accepted

78. Robert V. Bartlett & James N. Gladden, *Lynton K. Caldwell and Environmental Policy: What Have We Learned?*, in LYNTON K. CALDWELL, *ENVIRONMENT AS A FOCUS OF PUBLIC POLICY* 3, 4 (1995).

79. Caldwell, *A New Focus*, *supra* note 60. A senior science specialist for the Library of Congress recommended at this same time the centralization of ecological research in a single agency. Finn, *supra* note 24, at 90–95.

80. Lynton K. Caldwell, *Environmental Policy and Research in the "Crisis" of Our Times: 1994*, in CALDWELL, *supra* note 78, at 290. The concept, however, gained traction inside the Administration: Henry Caulfield, for instance, urged Secretary Udall to establish an ecology task force. Finn, *supra* note 24, at 134.

81. In 1967, Caldwell participated in a congressional seminar on technology assessment and discussed how science could better shape federal policy. Finn, *supra* note 24, at 176–77. The following year Caldwell edited a symposium on environmental policy and federal action in *Public Administration Review*, where he addressed both the need for incorporating environmental policy into public administration and the necessity of governmental reorganization. Symposium, *Environmental Policy: New Directions in Federal Action: Restructuring For Coordinative Policy and Action*, 28 PUB. ADMIN. REV. 301 (1968). In a November 1968 report to the Citizen's Advisory Committee on Recreation and Natural Beauty, Caldwell also urged the creation of a Council on the Environment in the Executive Office and favored establishing a cabinet level Department of Environment and Natural Resources—building on the oft-discussed reorganization of the Department of the Interior. See Finn, *supra* note 24, at 301–03. The President's Council on Recreation and Natural Beauty favored a national environmental policy. See THE PRESIDENT'S COUNCIL ON RECREATION AND NATURAL BEAUTY, FROM SEA TO SHINING SEA: A REPORT ON THE AMERICAN ENVIRONMENT—OUR NATURAL HERITAGE 259 (1968).

82. Caldwell, *supra* note 72, at 651.

doctrine governing man's behavior toward his biophysical environment as an environment." Caldwell lamented that "Government in America has no charge to deal comprehensively with environmental questions; it approaches environmental issues only through some specific environment-affecting responsibility."⁸³ He concluded that, until "ecological concepts" are "somehow reflected in the public law of the United States, available administrative means for environmental control cannot be utilized with full effectiveness."⁸⁴

B. Senator Scoop Jackson's Staff

Shortly after Caldwell began his campaign to infuse ecology into public administration, a newly hired special counsel for the Committee on Interior and Insular Affairs, William Van Ness, Jr., was asked by Jerry Verkler, the Staff Director of the Committee, and Sterling Munro, Administrative Assistant to Senator Jackson, "to give some thought to possible ways in which the Committee might become more actively involved in dealing with water pollution and environmental quality problems."⁸⁵ This, of course, presented a

83. *Id.* Caldwell expressed concern that "[t]here is presently no administrative machinery through which comprehensive public environmental policy can be developed and applied." *Id.* at 660.

84. *Id.* at 666. In a book he prepared while assisting Congress's consideration of NEPA, Caldwell wrote, "if modern man and his civilization are to survive, administration of man's environmental relationships must become a major task of government." LYNTON K. CALDWELL, *ENVIRONMENT: A CHALLENGE TO MODERN SOCIETY*, at x (1970). Caldwell would later extend this challenge to the need for the international community to protect the biosphere. *See generally* LYNTON K. CALDWELL, *IN DEFENSE OF EARTH: INTERNATIONAL PROTECTION OF THE BIOSPHERE* (1972). Caldwell was not alone in making such pleas; Odum and other prominent ecologists submitted a joint questionnaire to the 1968 presidential candidates asking for their views about the environment and public administration. *See* Memorandum from Lynton K. Caldwell to Editors (July 16, 1968) (on file with the DUKE ENVTL. L. & POL'Y F.).

85. Memorandum from William Van Ness to Senator Henry M. Jackson (Jan. 4, 1967) (on file with the DUKE ENVTL. L. & POL'Y F.). Senator Jackson's experience in national security matters led him to appreciate the need for addressing governmental organization, or public administration. Personal Conversation with William Van Ness, Chief Counsel (1970-77), U.S. Senate Comm. on Energy and Natural Res., in Washington, D.C. (Dec. 18, 2007). In 1960, Senator Jackson's Subcommittee for National Security Staffing and Operations had explored national security organizational issues and prepared several reports. *See* Arthur Schlesinger, Jr., *Effective National Security Advising: A Most Dubious Precedent*, 115 POL. SCI. Q. 347 (2000). And during NEPA's hearings, he included as an exhibit Stephen Bailey's article on *Managing the Federal Government*, in *AGENDA FOR THE NATION* (Kermit Gordon ed., 1968). As Bill Van Ness recalls, "The controversies over the Central Arizona Project and the Colorado River during the Johnson administration had convinced Jackson that the nation sorely needed comprehensive legislation to establish national priorities on the environment and to coordinate the activities of the federal government, whose constituent parts too often worked at cross-purposes." ROBERT G. KAUFMAN, *HENRY M. JACKSON: A LIFE IN POLITICS* 202 (2000) (citing

jurisdictional challenge for the Committee: Senator Muskie's Public Works Subcommittee on Air and Water Pollution had often been perceived as the principal forum for environmental legislation.⁸⁶ At the time, Senator Muskie appeared focused on trying to establish a Senate select committee that would concentrate on technology and the human environment.⁸⁷ The new ecology, however, conflicted with Congress's committee structure, because the concept of "environment" could not be cabined to any one agency or corresponding congressional committee.⁸⁸ And any debate over which committee could capture jurisdiction over the "environment" must be viewed in hindsight, with the knowledge that both Senators Jackson and Muskie would later compete for the Democratic presidential nomination.⁸⁹

On January 4, 1967, Van Ness finished a memorandum to Senator Jackson.⁹⁰ The memorandum endorsed "environmental administration," with an emphasis on affording "a new interdisciplinary social science" an opportunity to assist in public administration.⁹¹ He explained that "environment" was a useful, if not

an interview between Kaufman and William Van Ness).

86. Business Week observed that "[u]p to now the Public Works Committee has had the environment pretty much to itself." BUSINESS WEEK 46 (July 12, 1969). And Senator Muskie's prominence in developing environmental legislation was unparalleled. *See generally* Robert F. Bloomquist, *Nature's Statesmen: The Enduring Environmental Legacy of Edmund S. Muskie of Maine*, 24 WM. & MARY ENVTL. L. & POL'Y REV. 233 (2000); Robert F. Bloomquist, *Senator Edmund S. Muskie and the Dawn of Modern American Environmental Law: First Term, 1959–1964*, 26 WM. & MARY ENVTL. L. & POL'Y REV. 509 (2002); Robert F. Bloomquist, "To Stir Up Public Interest": Edmund S. Muskie and the U.S. Senate Special Subcommittee's Water Pollution Investigations and Legislative Activities, 1963–66—A Case Study in Early Congressional Environmental Policy Development, 22 COLUM. J. ENVTL. L. 1 (1997); Robert F. Bloomquist, *What is Past is Prologue: Senator Edmund S. Muskie's Environmental Policymaking Roots as Governor of Maine, 1955–58*, 51 ME. L. REV. 87 (1999).

87. In his opening remarks during a subcommittee meeting on December 15, 1966, Senator Muskie observed that a select committee could "provide a forum where our scientists and technologists can confront the politicians across the table, on a broad range of subjects affecting technology and human development." Edmund S. Muskie, Chairman, S. Subcomm. on Intergovernmental Relations, Opening remarks on S. Res. 298, to Establish a Select Committee on Technology and Human Environment (Dec. 15, 1966) (On file with the DUKE ENVTL. L. & POL'Y F.).

88. Senator Jackson would make this point when presenting NEPA on Oct. 8, 1969. *See* 115 CONG. REC. 29,055 (Oct. 8, 1969) ("On a subject so pervasive, broad, and important as 'environment' and the 'quality of life,' no committee may exercise exclusive jurisdiction.").

89. *US President—D Convention*, OURCAMPAIGNS.COM, <http://www.ourcampaigns.com/RaceDetail.html?RaceID=58482> (last visited Nov. 15, 2010).

90. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 85.

91. *Id.* at 2.

a necessary, focus of public policy and that the time appeared ripe for a legislative proposal.

The fact that there has not been a comprehensive national environmental policy, and that our past institutional arrangements have been better adapted to exploitation of the biophysical environment than to its rational planned use, protective custody and self-renewing development does not mean that there should not or will not in the future be an environmental policy.⁹²

To accomplish this, Van Ness suggested that the committee first undertake a study of the federal government's role in environmental quality management, with the aid of the Legislative Reference Service and the National Science Foundation, and, later, perhaps convene a joint hearing where the issues could be explored. Either "alone or in conjunction" with these efforts, he added that Senator Jackson could convene a "forum for selected authors and experts in the natural resource and environmental quality areas to express their views."⁹³ This approach, Van Ness believed, would follow Senator Mike Mansfield's efforts to embark on a legislative review and provide an alternative to Senator Muskie's proposal for a select committee.⁹⁴ Van Ness then attached to the memorandum a draft of proposed legislative language, which he hoped would "bring into focus the overall nature of the environmental quality problems faced by the Nation and provide the research and leadership necessary for their resolution."⁹⁵ A modified version of this memorandum accompanied Senator Jackson's introduction of proposed legislation in December 1967.⁹⁶

C. Senator Jackson and Congressman Dingell Decide to Legislate

By the summer of 1967, Senator Jackson decided to legislate a national environmental policy. He delivered two speeches emphasizing the importance of declaring a national policy on the

92. *Id.* at Attachment 2, p. 9–10 (Draft of a Proposed Legislative Program on the Problems of "Environmental Quality and the Management of Natural Resources").

93. *Id.* at Memo, p. 5.

94. *See id.* at 3.

95. *Id.* The proposed language, the Natural Resource and Environmental Quality Research, Planning and Coordination Act of 1967, included five titles, including a modified version of Senator Gaylord Nelson's S. 2282, Ecological Research and Surveys, 89th Cong. (1965), and Senator Nelson's bill had incorporated ideas floated earlier by Senator Abraham Ribicoff (D. Conn.). *See generally id.*

96. 113 CONG. REC. 36,856–57 (1967).

environment.⁹⁷ Meanwhile, Senator Jackson's staff requested draft legislation from the Interior Department. His staff elicited the help of Lynton Caldwell through the services of the Conservation Foundation.⁹⁸ When Interior's draft finally arrived, Senator Jackson's office asked Senator Gaylord Nelson's office whether he would like to co-sponsor, but Nelson's office declined and instead introduced S. 2282 (Ecological Research and Survey Bill) on December 14.⁹⁹ The next day, Senator Jackson introduced the Interior Department's draft bill, S. 2805, with the ranking minority member of the committee as co-sponsor.¹⁰⁰ Finn explains that Van Ness made a political calculation that, if any bill might move forward, it would need to be under the leadership of the more influential Senator Jackson rather than Senator Nelson.¹⁰¹ Senator Jackson's remarks upon introducing S. 2805 underscore how the dialogue about environmental policy was changing. He spoke about the need to "insure that present and future generations of Americans will be able to live in and enjoy an environment that is not fraught with hazards to mental and physical well-being" and said that the government could serve the role of "trustee for the environment."¹⁰² In the summer of 1968, Senator Jackson published an essay in *Public Administration Review*, discussing S. 2805 and the need to establish both a national policy and the institutional means to implement that policy, in order to "meet the threatening deterioration in the quality of our environment."¹⁰³

In July 1968, Senator Jackson, along with George Miller, Chairman of the House Committee on Science and Astronautics, convened a colloquium on the need for a national approach to

97. Senator Henry M. Jackson, Public Policy and Environmental Administration, Remarks Before the Plenary Session, 18th Annual, American Institute of Biological Sciences (Aug. 28, 1967), in 113 CONG. REC. 36,853 (1967); Senator Henry M. Jackson, Environment and Change: "How Much?" or "How Good?", Address to the Federation of Western Outdoor Clubs (Sept. 3, 1967), in 113 CONG. REC. 36,854 (1967).

98. Van Ness sought assistance from both Russell Train, then Chairman of the Conservation Foundation, and Lynton Caldwell, and he worked with Caldwell to prepare Senator Jackson's 1968 essay in the *Public Administrative Review* on federal activities in the area of environmental quality. Personal Conversation with William Van Ness, *supra* note 85. See also *infra* note 103.

99. Finn, *supra* note 24, at 200-01.

100. *Id.* at 201, 204.

101. *Id.* at 205-06. S. 2282 and S. 2805 both failed.

102. 113 CONG. REC. 36,849 (1967).

103. Henry M. Jackson, *Environmental Policy and Congress*, 28 PUB. ADMIN. REV. 303, 303 (1968). See *supra* note 98 (noting Lynton Caldwell's assistance in preparing essay).

environmental policy.¹⁰⁴ The Conservation Foundation would, at the time, refer to it as an environmental "happening."¹⁰⁵ Van Ness would later describe the purpose of this colloquium as a "consensus building" exercise to arrive at what the organizers already had determined—the need for a national environmental policy.¹⁰⁶ In advance of the colloquium, Caldwell and Van Ness prepared a report for the participants, entitled *A National Policy for the Environment*,¹⁰⁷ and the House Subcommittee on Science, Research, and Development issued its report *Managing the Environment*,¹⁰⁸ both

104. Finn explains that Richard Carpenter and Wallace D. Bowman, both from the Legislative Reference Service office, conceived of the colloquium idea and secured Congressman Daddario's approval first and then obtained Jackson's approval. Finn, *supra* note 24, at 259–62.

105. *In Search for National Policy on the Environment*, Conservation Foundation Letter (Conservation Found., D.C.), Aug. 12, 1968 (on file with the DUKE ENVTL. L. & POL'Y F.). The letter noted that the colloquium was unique because it included members from different jurisdictional committees.

106. Finn, *supra* note 24, at 308 (quoting 1971 William Van Ness interview).

107. STAFF OF S. COMM. ON INTERIOR AND INSULAR AFFAIRS, A NATIONAL POLICY FOR THE ENVIRONMENT, A REPORT ON THE NEED FOR A NATIONAL POLICY FOR THE ENVIRONMENT: AN EXPLANATION OF ITS PURPOSE AND CONTENT; AN EXPLORATION OF MEANS TO MAKE IT EFFECTIVE, AND A LISTING OF QUESTIONS IMPLICIT IN ITS ESTABLISHMENT, 90th Cong. (Comm. Print 1968) [hereinafter A NATIONAL POLICY FOR THE ENVIRONMENT]. The Legislative Reference Service also assisted in developing the report, presumably both Carpenter and Bowman were involved. *Id.* at iv. The report discussed the "new science of ecology," explaining the need for establishing a national environmental policy and addressing how governmental re-organization was necessary. *Id.* at 9–11. While the report noted that the "science of ecology can provide many of the principal ingredients for the foundation of a national policy for the environment," it cautioned that environmental policy includes more than applied ecology, it encompasses "the total needs of man—ethical, esthetic, physical, and intellectual." *Id.* at 16. In responding to the report, the National Science Foundation commented that "the paper provides Congress with an outstanding exposition of the ecological view." Edward S. Deevey, National Science Foundation, to Lynton K. Caldwell (Aug. 12, 1968) (on file with the DUKE ENVTL. L. & POL'Y F.).

108. See MANAGING THE ENVIRONMENT, REPORT OF THE SUBCOMM. ON SCIENCE, RESEARCH, AND DEVELOPMENT, COMMITTEE ON SCIENCE AND ASTRONAUTICS, U.S. HOUSE (1968) [hereinafter MANAGING THE ENVIRONMENT]. Carpenter drafted *Managing the Environment*, purportedly conveying the results of hearings conducted by the Subcommittee on Science, Research, and Development between January and March 1968. The report recommended that a national policy on the environment "be expressed in legislation after due deliberation by both Houses of the Congress." *Id.* at 7. And Carpenter further suggested an "Environmental Cabinet," under the leadership of the Department of the Interior, to "assure conformity of Federal operations with the national policy for the environment." *Id.* at 8. His report discussed prior congressional inquiries into the role of science and technology in addressing environmental quality. In chronicling past congressional efforts, he observed, "recognition of the need to deal with the issue of environmental management is widespread in the Congress. New proposals for institutional or organizational changes appear each month." *Id.* at 3. He then added, "[a] major lesson is being taught today on the relationship of man and his environment. It is the lesson of systematic ecology or the 'web of life'"—what he then referred

were distributed to colloquium participants. The participants discussed a range of issues, including looming threats to the environment, the positive and negative aspects of technology, and the need for better governmental organization and coordination. The comments at the colloquium reflected a pre-ordained consensus on the need for a national environmental policy and an organizational structure designed to generate, assess and disseminate environmental information. Secretary of the Interior Stewart L. Udall, whose Department many considered to be the agency best suited for overseeing national environmental quality, observed that a national policy—one that would "guide [the] attitude" and conduct of the Federal government—was in sight.¹⁰⁹ He added that the task required obeying the "dictates of ecology, giving this master science a new and central position in the Federal scientific establishment."¹¹⁰ These thoughts were then collected in a white paper prepared by Richard Carpenter and Wallace D. Bowman of the Legislative Reference Service, the two who had originally conceived of the colloquium.¹¹¹

Although members introduced numerous bills in both the House and Senate during 1968 and 1969, the two principal bills to emerge in 1969 were S. 1075, introduced by Senator Jackson on February 18, 1969, and H.R. 6750, introduced by Congressman Dingell the day before.¹¹² Senator Jackson introduced S. 1075 shortly after the Santa

to as the "interdependency of all living things and the environment." *Id.* at 12; 14–16 (discussing human ecology and systematic ecology). After recognizing the contributions of the Ecological Society of America, he added, "[t]he most important task for this profession is to bring ecological implications to policymakers." *Id.* at 44.

109. A NATIONAL POLICY FOR THE ENVIRONMENT, *supra* note 107, at 3.

110. *Id.* at 14. A number of the participants referred Congress to the principles of ecology, including a systems approach to human ecology. *Id.* at 75 ("[R]ediscovery of ecology is an excellent thing . . ."); *id.* at 77 (generalized knowledge of ecology); *id.* at 78 ("need to strengthen ecology"); *id.* at 222–23 ("application of systems methodology" and that "[h]uman ecology owes its 'system' character to the confluence of many disparate component lines"). *See also id.* at 152–64 (importance of ecology and ecosystems). Sierra Club literature at the time encouraged what it referred to as systems analysis. *Preserving the Quality of Our Environment: Suggestions to the Platform Committees of the Republican and Democratic Parties*, SIERRA CLUB BULL., Sept. 1968, at 19 (on file with DUKE ENVTL. L. & POL'Y F.) ("Man's habitat must be treated as . . . an interrelated system," with a "systems analysis . . . used to understand environmental relationships," and "[a]s a system, the environment embraces those resources of fixed location and those in motion.").

111. *See* STAFF OF S. COMM. ON INTERIOR AND INSULAR AFFAIRS & STAFF OF H. COMM. ON SCIENCE AND ASTRONAUTICS, CONGRESSIONAL WHITE PAPER ON A NATIONAL POLICY FOR THE ENVIRONMENT, 90th Cong., (Comm. Print 1968) [hereinafter CONGRESSIONAL WHITE PAPER].

112. Congressman Dingell had introduced the Environmental Quality Act of 1967, H.R. 7796, on March 23, 1967, while on December 15, 1967, Senator Jackson had introduced S. 2805,

Barbara oil spill, using the spill as a contemporary example to illustrate the importance of addressing environmental issues. S. 1075 resembled the earlier S. 2805, with some changes. Senator Jackson's remarks on S. 1075 reflect Caldwell's influence in his crusade to have the government take an active role in environmental management and establish a national environmental policy.¹¹³

The Interior Committee scheduled a hearing on S. 1075 for April 16. The day before, Senator Jackson announced that his bill would address one of the most pressing issues of the day: "How should the Federal Government be organized to deal with, to anticipate, and to avoid the adverse consequences of environmental problems."¹¹⁴ And he began the hearing by supporting "a strong declaration of congressional policy on the environment so that the executive branch will know its charter and have a stronger arm."¹¹⁵ Several Administration witnesses testified, mostly focusing on the need for a congressionally mandated independent council in light of President Nixon's effort to establish an environmental council. The Administration had organized a task force to consider how best to respond to Congress, but Senator Jackson indicated early on that an executive created "revamped Council on Recreation and Natural Beauty" would likely be ineffective.

According to most accounts, it was during the April hearing that Professor Caldwell first introduced the idea of adding an action-forcing mechanism to the policy statement. In his opening remarks, Caldwell stated,

I would urge that in the shaping of such [environmental] policy, it have an action-forcing, operational aspect. When we speak of policy we ought to think of a statement which is so written that it is capable of implementation; that it is not merely a statement of

containing similar provisions. Finn explains that Congressman Dingell "realized that the only committee where his legislation would receive sympathetic consideration was his own, the Committee on Merchant Marine and Fisheries with its Subcommittee on Fisheries and Wildlife Conservation of which he was chairman," and Dingell accomplished this reference to his committee by referencing the Fish and Wildlife Coordination Act. Finn, *supra* note 24, at 312–13.

113. See 115 CONG. REC. 3698–3700 (1969). The Senator included in the Congressional Record several influential documents. *Id.* Shortly thereafter, Senator Jackson wrote Caldwell, requesting an analysis of options for institutional reform. Finn, *supra* note 24, at 397–98. Caldwell's report was later published in the Congressional Record. 115 CONG. REC. 3701 (1969).

114. 115 CONG. REC. 9197 (1969).

115. *Hearing on S. 1075 Before the S. Comm. on Interior and Insular Affairs*, 91st Cong. 24–28 (1969).

things hoped for; not merely a statement of desirable goals or objectives; but that it is a statement which will compel or reinforce or assist all of these things, the executive agencies in particular, but going beyond this, the Nation as a whole, to take the kind of action which will protect and reinforce what I have called the life support system of this country.

Let me give you just a few illustrations of what I mean by policy-forcing or operational aspect of a policy statement. For example, it seems to me that a statement of policy by the Congress should at least consider measures to require the Federal agencies, in submitting proposals, to contain within the proposals an evaluation of the effect of these proposals upon the state of the environment, that in the licensing procedures of the various agencies such as the Atomic Energy Commission or the Federal Power Commission or the Federal Aviation Agency there should also be, to the extent that there may not now exist fully or adequately, certain requirements with respect to environmental protection, that the Bureau of the Budget should be authorized and directed to particularly scrutinize administrative action and planning with respect to the impact of legislative proposals, and particularly public works proposals on the environment.

Senator Jackson responded:

I am wondering if we might not broaden the policy provision in the bill so as to lay down a general requirement that would be applicable to all agencies that have responsibilities that affect the environment rather than trying to go through agency by agency. . . .

I think the immediate example that comes to my mind . . . is that the Atomic Energy Commission, in granting permits or licenses in connection with nuclear powerplants, should be required to make an environmental finding.¹¹⁶

116. *Id.* at 116–17. And when Senator Jackson added that “[y]ou see the problem that we are faced with: If we try to go through all of the agencies that are now exercising certain responsibilities pursuant to law in which there is no environmental policy or standard laid out, we could be engaged in a recodification of the Federal statutes for a long, long time,” Caldwell responded that he agreed, because “what we are talking about here in some cases is modifying or amending existing mandates to the agencies.” *Id.* at 117.

Senator Jackson concluded this dialogue with Caldwell by asking:

I . . . will be calling on you for some specific language to implement what we have discussed here this afternoon. It seems to me that the policy problem falls into two categories: First, a broad statement of environmental policy that would apply to all of the governmental departments, with the Bureau of the Budget in a position to stipulate that when proposals come over, that they must meet certain environmental policies and standards.

I think the other area relates to quasi-judicial proceedings where independent agencies are in a position to grant permits and licenses for activities that potentially have an enormous impact on the environment. Perhaps we could work out some kind of a general statutory provision that would be applicable to all quasi-judicial proceedings.

Id. at 121.

But there may well be more to the story.¹¹⁷ The concept of adding an action-forcing mechanism and a consideration of alternatives had surfaced earlier.¹¹⁸ Indeed, Senator Jackson had invoked the concept of action-forcing mechanisms in other contexts, and he recognized the need for an action-forcing mechanism in NEPA before Professor Caldwell's testimony.¹¹⁹ And while it is generally understood that section 102 as it later surfaced was drafted primarily by Van Ness and Daniel Dreyfus, a professional staff member on the Committee, Van Ness recalls that both he and Dreyfus prepared Caldwell for this hearing and effectively scripted the dialogue.¹²⁰

The months following the April 16 hearing affirmed the Senate Interior Committee's legislative strategy. Although the media apparently sat comfortably on the sidelines,¹²¹ Senator Jackson and his staff concluded that passage of legislation was possible. By May 29, 1969, when President Nixon issued Executive Order No. 11472 establishing an environmental quality council,¹²² Senator Jackson reportedly understood that the Administration—still publically opposed to an independent environmental council—would not veto his legislation. Senator Jackson, therefore, released an amended

117. Richard Liroff notes that the committee staff already had been considering the idea of some action forcing mechanism, and that Professor Caldwell “lent new impetus to their considerations.” LIROFF, *supra* note 23, at 16. During the 1968 colloquium, for instance, Russell Train commented that Congress should “look at the process and try to develop in our decision-making processes [a recognition of] . . . the complex interrelationships of the problems we have been talking about, so that the highway planner does not only look at the engineering aspects but also at the sociological, if you will, among others.” *Joint House-Senate Colloquium to Discuss a National Policy for the Environment, Hearing Before the S. Comm. on Interior and Insular Affairs and the H. Comm. on Science and Astronautics*, 90th Cong. 81 (1968). Senator Jackson had earlier raised, but did not discuss, the idea of some action-forcing mechanism. *See id.* at 60. Finn’s interviews with Caldwell, Carpenter and Van Ness confirm that the colloquium anticipated the need for some mechanism for implementing the mandate. Finn, *supra* note 24, at 277.

118. In the Congressional White Paper prepared after the summer 1968 colloquium, Richard Carpenter and Wallace Bowman (of the Legislative Reference Service) noted that “activities should proceed only after an ecological analysis and projection of probable effects,” along with the generation of alternatives. CONGRESSIONAL WHITE PAPER, *supra* note 111, at 16. Bowman had worked with Lynton Caldwell at the Conservation Foundation before joining the Library of Congress. *See* CALDWELL, ENVIRONMENT, *supra* note 84, at xvi. Bowman also supplied Van Ness with information about Caldwell, as well as a 32 page “‘strip list’ bibliography on environmental quality. Note from W. Bowman, Legislative Reference Serv., to William Van Ness (Mar. 17, 1969) (on file with the DUKE ENVTL. L. & POL’Y F.).

119. Personal Conversation with William Van Ness, *supra* note 85.

120. *Id.*

121. Finn explains that the congressional staff unsuccessfully reached out to the media. Finn, *supra* note 24, at 422 (referencing interviews).

122. Exec. Order No. 11,472, 3 C.F.R. 792 (1966–1970).

version of S. 1075,¹²³ incorporating concepts that surfaced during the April hearing as well as in further discussions with the Administration.¹²⁴ In particular, Van Ness added the policy statement and the language providing a right to a healthful environment, while Dreyfus drafted the language requiring a "finding" regarding the environmental impact by a responsible official, along with, *inter alia*, an analysis of appropriate alternatives to the proposed action.¹²⁵ When describing the policy statement, Senator Jackson emphasized that the language was not hortatory; the language was intended to operate as a "mandate" to federal agencies to afford "substantive attention" to environmental priorities.¹²⁶

The importance of the policy statement permeates the Committee Report drafted by Jackson's staff.¹²⁷ The report observed that, in order "[t]o provide a basis for advancing the public interest, a congressional statement is required of the evolving national objectives of managing our physical surroundings, our land, air, water, open space, and other natural resources and environmental

123. Senator Jackson asked Senator Mansfield to introduce the amended language on May 29, 1969, although the language was not reprinted in the Congressional Record until June 5, 1969. *See* 115 CONG. REC. 14,860 (1969).

124. After the April 1969 hearing, for example, an informal White House task force headed by Dr. Henry J. Kellerman, a State Department official, provided useful comments, including a recommendation that Congress consider language providing citizens with a right to a healthful environment. *See* Finn, *supra* note 24, at 288–94, 427, 430. In a June 16, 1969 memorandum to their boss, Senator Jackson's staff explained that they worked with the President's Science Advisor's staff as well as other executive agencies to draft the policy statement. Memorandum from William Van Ness and Dan Dreyfus to Senator Henry M. Jackson, Re: S. 1075, To Establish a National Policy for the Environment 4 (June 16, 1969) (on file with the DUKE ENVTL. L. & POL'Y F.). *See also* S. REP. NO. 91-296, at 34 (1969) ("I do believe such a policy statement would be useful") (letter of Lee A. DuBridge, Director of the Office of Science and Technology). On June 18, the Interior Committee met in executive session and reported out S. 1075 with certain amendments. *Id.* at 11.

125. Finn, *supra* note 24, at 423–29.

126. *See* 115 CONG. REC. 14,860 (1969). Senator Jackson added:

A statement of environmental policy is more than a statement of what we believe as a people and as a nation. It establishes priorities and gives expression to our national goals and aspirations. It serves a constitutional function in that people may refer to it for guidance in making decisions where environmental values are found to be in conflict with other values.

Id. Reporting on Senator Jackson's efforts, reporter Robert Cahn observed that the proposal would "grant new authority when needed to federal agencies to manage and protect the environment." *Id.* at 14,861. Indeed, the Committee Report noted that the policy statement would rectify those instances where an agency's mandate had been interpreted narrowly to exclude environmental considerations. S. REP. NO. 91-296, at 9. And the action-forcing procedures in § 102 of S. 1075 were intended "to ensure that the policies enunciated in section 101 are implemented." *Id.* at 19.

127. Finn, *supra* note 24, at 444.

amenities."¹²⁸ The purpose of S. 1075, according to the Committee, "is to establish, by congressional action, a national policy to guide Federal activities which are involved with or related to the management of the environment or which have an impact on the quality of the environment."¹²⁹

The Committee Report also reflects the committee's work with the executive branch between April and July. To begin with, the Administration accepted the concept of having a policy statement.¹³⁰ The Administration had two primary recommendations for Title I of S. 1075. First, the Administration recommended adding the language "to the fullest extent possible" to the requirement that all policies, regulations, and laws be interpreted and administered in accordance with the policy statement. The second recommendation was to change the requirement for environmental impact analysis from "every recommendation or report on proposals for legislation or other significant federal actions affecting the quality of the human environment" to "every recommendation or report on proposals for legislation and other *major* federal actions *significantly* affecting the quality of the human environment."¹³¹ Van Ness and Dreyfus apparently negotiated both of these changes with the Administration

128. S. REP. NO. 91-296, at 6.

129. *Id.* at 8. The following passage illustrates that the Committee afforded significance to the policy statement:

The challenge of environmental management is, in essence, a challenge of modern man to himself. The principal threats to the environment and the Nation's life support system are those that man has himself induced in the pursuit of material wealth, greater productivity, and other important values. These threats—whether in the form of pollution, crowding, ugliness, or in some other form—were not achieved intentionally. They were the spinoff, the fallout, and the unanticipated consequences which resulted from the pursuit of narrower, more immediate goals.

The purpose of S. 1075 is, therefore, to establish a national policy designed to cope with environmental crisis, present or impending. The measure is designed to supplement existing, but narrow and fractionated, congressional declarations of environmental policy.

Id. at 8–9.

130. The Director of the Bureau of the Budget for the Nixon Administration formally endorsed the utility of such a policy statement in a letter to Senator Jackson on July 7, 1969, although agreeing with Senator Muskie's staff that there already was a "large body of policy" on the environment. Letter from Robert P. Mayo, Dir., Bureau of the Budget, to Hon. Henry M. Jackson, July 7, 1969, *reprinted in* S. REP. NO. 91-296, at 28. Finn explains that the principal disagreement with the Administration involved the creation of an independent council. Finn, *supra* note 24, at 440–46. The New York Times similarly viewed this as the principal disagreement, involving how best to coordinate environmental policy in the government. E. W. Kenworthy, *Challenge by Democrats*, N.Y. TIMES, Jan. 2, 1970, at 12.

131. Letter from Robert P. Mayo to Hon. Henry M. Jackson, *supra* note 130, at 30.

because the July 9 Committee Report already incorporated the Administration's recommendations.¹³²

D. Clash of the Titans: The Fall of 1969

NEPA's prospect for passage, however, would soon become sealed in how the two would-be Democratic presidential contenders and their senate committees would deploy their power. Senator Muskie and his Public Works Committee became the bill's penultimate hurdle. Not until the summer of 1969, did Senator Muskie or his staff become meaningfully interested in an environmental policy act. Their primary interest focused on air and water pollution legislation.¹³³ But with the legislation gaining momentum, the Public Works Committee—apparently at the instigation of its minority counsel—became jealous of losing jurisdiction over environmental issues and expressed concern about the merits of the legislation.¹³⁴ Senator Muskie's committee, particularly Minority Counsel Tom Jorling, believed that the Public Works Committee had jurisdiction to address environmental matters.

The first of several significant meetings occurred on July 7, between the staffs of the two committees.¹³⁵ The first meeting, Finn explains, "is crucial to an understanding of the passage of [NEPA] because it shaped the subsequent events surrounding S. 1075."¹³⁶ But what exactly occurred at the meeting remains uncertain. The Public Works Committee apparently expressed several concerns with what the Interior Committee had done. The Public Works Committee apparently expected that it could provide Senator Jackson with a list of specific issues and that no action would occur until at least the end of the week.¹³⁷

132. S. REP. NO. 91-926, at 2. Van Ness later referenced the committee's apparently productive discussions with the Administration. See Memorandum, Alternative Proposals and Strategies for the Enactment of Legislation Establishing a National Policy for the Environment 4 (Sept. 24, 1969) (on file with DUKE ENVTL. L & POL'Y F.). Although Finn suggests that these changes by the Administration, including the insertion of the word "major," made the language more restrictive, Finn, *supra* note 24, at 436-39, Van Ness recalls that this addition was not intended to change the requirement in any meaningful manner. Personal Conversation with William Van Ness, *supra* note 85.

133. Finn, *supra* note 24, at 446.

134. *Id.* at 447-48.

135. *Id.* at 454.

136. *Id.* at 455.

137. *Id.* at 455-56.

Senator Muskie and his committee, in particular, voiced several reservations with Senator Jackson's proposal, in addition to objecting to Senator Jackson's alleged effort to usurp the Public Works Committee's jurisdiction. Surprisingly, the Public Works staff opposed the "environmental right" language.¹³⁸ The counsel to the Public Works Committee expressed concern that the provision might permit citizens to sue without, for instance, establishing any personal injury.¹³⁹ As of late 1969, the modern concept of standing had yet to emerge. Judicial review of agency decisions under the APA was still in its pre-1970s form, and the idea of an express citizen suit provision allowing suits against private parties was just over the horizon.¹⁴⁰ Senator Muskie (or the Senator at the urging of this staff) apparently objected to having federal agencies police themselves by preparing their own environmental documents. He believed that a separate environmental agency was necessary to implement such programs.¹⁴¹ Indeed, Muskie's staff appeared concerned that the § 102 process might allow an agency to ignore the mandate and permit an action to go forward because of other considerations.¹⁴² The staff further feared that the § 102 process might preempt what would become § 401 of the CWA.¹⁴³ And they expressed concern about the lack of specificity in the § 102 process, which had been drafted by Dreyfus and presumably modeled after the water resources project review procedure.¹⁴⁴ Not

138. *Id.* at 463–64.

139. *Id.* at 479. Little doubt should exist that the environmental rights provision, as originally included by Van Ness, was intended to serve as a citizen suit provision. Van Ness had attended the Airlie House Conference and was aware of the need to afford citizens the ability to enlist the judiciary in the environmental crusade. *See supra* note 40 and accompanying text. The idea of empowering citizen enforcement against pollution was even present in a 1965 report referenced by Senator Jackson in a 1967 speech. *See supra* note 97; Finn, *supra* note 24, at 76–77. And, after Congress passed NEPA with the stripped down environmental right language, there were several efforts to revisit the ability to establish a citizen suit law or explore a constitutional amendment to the same effect. *See Shelton supra* note 43, at 134–35, 312–14.

140. *See* Sam Kalen, *Standing on its Last Legs: Bennett v. Spear and the Past and Future of Standing in Environmental Cases*, 13 J. LAND USE & ENVTL. L. 1, 4–9 (1997).

141. Finn, *supra* note 24, at 465–66.

142. *Id.* at 467–68.

143. *See id.* at 469.

144. *See* Dreyfus & Ingram, *supra* note 23, at 259. Dreyfus would later indicate that both he and Van Ness drafted § 102. *Id.* at 254. *See also* CALDWELL, THE NATIONAL ENVIRONMENTAL POLICY ACT, *supra* note 23, at 29 (“Detailed language for the impact statement requirement was drafted by Interior Committee staff member Daniel A. Dreyfus and counsel William Van Ness.”). In unsigned notes for Dreyfus and Ingram’s article, Dreyfus recalled that “[t]he ‘102’ process, quite frankly, was patterned after the 90-day review process required of water resource projects. . . . The intent of the impact statement was merely to amplify the environmental consequences [along with the economic evaluation] which might not otherwise have been

much is understood about what was expected from the § 102 process, other than that the environmental statements would accompany a proposal throughout its process and possibly all the way to the Bureau of Budget, if need be.¹⁴⁵

Purportedly to avoid delaying consideration of S. 1075 until after a potentially protracted debate on antiballistic missiles,¹⁴⁶ Senator Jackson reported his bill out of committee on July 10, with the Senate then passing it quickly without much discussion—even to the surprise of Lynton Caldwell.¹⁴⁷ Although Van Ness later indicated that he thought Senator Jackson honored the July 7th agreement with Senator Muskie, Senator Muskie and his committee staff believed otherwise.¹⁴⁸

incorporated into the decisionmaking process.” Unsigned Notes from William Van Ness files entitled “Dan Dreyfus Article” (on file with author). *See also* Dreyfus & Ingram, *supra* note 23, at 259. The Water Resources Act of 1965 and Senate Document No. 97 required affording full consideration when engaged in water resource planning. 42 U.S.C. § 1962 (2006); THE PRESIDENT’S WATER RES. COUNCIL, POLICIES, STANDARDS, AND PROCEDURES IN THE FORMULATION, EVALUATION, AND REVIEW OF PLANS FOR USE AND DEVELOPMENT OF WATER AND RELATED LAND RESOURCES, S. DOC. NO. 87-97 (1962). *See* Emery Castle, Maurice Kelso & Delworth Gardner, *Water Resources Development: A Review of the New Federal Evaluation Procedures*, 45 J. FARM ECON. 693, 695 (1963) (“Senate Document 97 is distinguished by its emphasis on multiple purpose planning, coordination among affected agencies, with considerable attention being paid to recreation, wilderness, and water quality uses of resources.”). Dreyfus’s background and interest was in the water resources area, and it is highly likely that Senate Interior Committee staff also discussed aspects of NEPA with Henry P. Caufield, Jr., who had worked in the Interior Department from 1961 and served as the first Director of the Water Resources Council, where he helped develop policies for comprehensive river planning under the 1965 Water Resources Act.

The § 102 process also mirrors, in some respects, the movement for a technology assessment urged by Congressman Emilio Daddario, a strong supporter of NEPA in the House and an organizer of the 1968 colloquium. Finn, *supra* note 24, at 259–62. *See* J.G. Speth, *The Federal Role in Technology Assessment and Control*, in FEDERAL ENVIRONMENTAL LAW 420, 432–34 (Erica L. Dolgin & Thomas G. P. Guilbert eds., 1974). *See also* Finn, *supra* note 24, at 95–109 (describing the 1967–68 congressional inquiry into the need for a technology assessment). Technology, after all, had prompted “man’s ability to change aspects of the natural world” and by the 1960’s it became “commonplace that under the pressure of modern technology and increased population, some of the changes in the environment, if extended, seriously threaten man’s continued existence in that environment.” Robert E. Light, *Unanticipated Environmental Hazards*, 161 SCIENCE 1365, 1365 (1968) (announcing a prominent symposium).

145. Finn, *supra* note 24. At 469–71. Van Ness was skeptical that the Bureau of Budget was capable of reviewing environmental documents. *Id.* at 461.

146. *Id.* at 459–60.

147. *Id.* at 457–58.

148. *Id.* at 458. In the records I reviewed, only bleak references exist regarding meetings during this period with Senators Randolph and Jackson, and with the Staff Director of the Public Works Committee. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 73, at 4.

The bill was referred to the House of Representatives, which had already conducted hearings on Congressman Dingell's bill.¹⁴⁹ Wayne Aspinall became the House's principal opponent, expressing concern that the bill might affect all federal agencies and amend existing laws.¹⁵⁰ This is precisely how the bill was understood by its proponents.¹⁵¹ *Time Magazine* described the draft bill as "sweeping," noting that it would "[r]equire Congress and every federal agency to interpret all federal laws, policies and regulations in terms of a new national goal—safeguarding and enhancing the physical environment."¹⁵² On August 28, Aspinall outlined his objections in a letter to Congressman Dingell, concerned that the bill would amend existing laws to increase an agency's authority to require environmental responsibility.¹⁵³ Dingell reluctantly responded to these concerns for fear of losing jurisdiction over the bill.¹⁵⁴

On September 23, 1969, after the House passed H.R. 12,549, a slightly modified and cleaned up version of H.R. 6750 (originally introduced by Congressman Dingell),¹⁵⁵ the House then passed the

149. Congressman Dingell's 1969 bill H.R.6750, included the reference to the Fish and Wildlife Coordination Act, *see supra* note 71, and focused on establishing a council on environmental quality, but it did not contain any requirement for an impact statement and included only a short pronouncement on environmental policy. *See LIROFF, supra* note 23, at 21, 23. It also proposed establishing an independent environmental council (in lieu of President Nixon's effort to create a more politically malleable council through an executive order). The Administration's testimony on H.R. 6750 appears inconsistent. Finn, *supra* note 24, at 328–32. Indeed, one of the witnesses, Russell B. Train, later the first Chairman of the Council on Environmental Quality, testified, and undoubtedly Congressman Dingell knew of Train's personal views. *See RUSSELL E. TRAIN, POLITICS, POLLUTION AND PANDAS: AN ENVIRONMENTAL MEMOIR* 69–70 (2003). As early as 1965, Train encouraged establishing a Council of Ecological Advisors "having a strong ecological orientation." *Id.* at 50. President Nixon's science advisor, Lee A. DuBridge, opposed the council. Finn, *supra* note 24, at 335–43. *But cf. id.* at 441 (DuBridge later suggesting that he did not oppose such a council). When Dingell's subcommittee reported out its bill, the committee agreed to re-introduce a new "clean" bill on July 11, H.R. 12,549, with additional cosponsors. *Id.* at 345, 351. Congressman Dingell also engaged in a tactical effort to ensure that Senator Jackson's bill would go to his committee when it arrived in the House: he had Congressman Lucien N. Nedzi introduce a slightly modified version of Senator Jackson's bill and then coordinated with the House Parliamentarian. *Id.* at 347–49. By August, Congressman Wayne Aspinall of the House Interior committee expressed concern over his committee's loss of jurisdiction. *Id.* at 352–54.

150. *Id.* at 353–55.

151. *See id.* at 354.

152. *Legislation: Policing the Polluters*, TIME, Aug. 1, 1969, at 41, available at <http://www.time.com/time/magazine/article/0,9171,901183,00.html>.

153. Finn, *supra* note 24, at 358–59, 371.

154. *Id.* at 361, 368.

155. *See id.* at 361–75 (describing actions in the House). Congressman Daddario noted his concern that H.R. 12,549 omitted the critical language in the Jackson bill on the policy

Senate's bill as amended to reflect the House-agreed-upon language in H.R. 12,549.¹⁵⁶ The House then appointed as conferees members from Aspinall's Interior Committee and Dingell's Merchant Marine Committee.¹⁵⁷

But when H.R. 12,549 arrived back in the Senate, it confronted an escalating interest by Senator Muskie and his committee. Shortly after Senator Jackson passed S. 1075, Senator Muskie initiated efforts in August to move his own bill, S. 2391, aware that the matter would come back before the Senate once the House acted.¹⁵⁸ In an executive session of the Public Works Committee, Muskie incorporated S. 2391 into S. 7, which the Committee reported shortly thereafter.¹⁵⁹ At this point, Senator Muskie signaled an intention to block convening a conference, possibly affording him time to pass S. 7.¹⁶⁰ Tensions mounted between the principals and the two committee staffs, particularly among Van Ness, Jorling, and Billings, and also later between Dingell and Muskie. Of the staff, only Van Ness really had independence.¹⁶¹ Muskie prepared for a public confrontation, while Jackson successfully solicited support from environmental groups.¹⁶² In several memos, the Public Works Committee, fearful of losing jurisdiction over environmental issues, raised objections to S. 1075, including questioning the policy statement, the environmental mandate, and the provision for an environmental right.¹⁶³ For Senator Muskie, Leon Billings floated some possible compromise amendments—although the amendments would have eliminated § 102 of Title I and Title II of S. 1075.¹⁶⁴

The night before the scheduled meeting between the House and Senate conferees, Senator Jackson's staff met with the members of the Public Works Committee to develop a compromise using S. 1075 and Title II of S. 7 and left believing they had an agreement.¹⁶⁵ That

statement, and he expressed little appreciation for Congressman Dingell's insistence on an environmental council. *Id.* at 364–66, 370.

156. *Id.* at 373.

157. *Id.* at 374.

158. *Id.* at 472–73.

159. *Id.* at 473.

160. *Id.* at 474.

161. *See id.* at 476–77. The fight was more a result of conflicts between committees than between parties. *Id.* at 485.

162. *Id.* at 477–78.

163. *Id.* at 482.

164. *Id.* at 485–86.

165. Van Ness informed Senator Jackson that he was to meet with the Public Works

agreement apparently evaporated the next day, as the Public Works Committee sought to have the compromise developed through a procedure that would precipitate further delay. Van Ness counseled the Senator against this approach, noting that it was not what had been agreed to, that it could delay the vote, and that "the House has not been in a position where they have gone on record on the strong environmental provisions. Thus, it is probably best to work out a strong bill in conference and place the House in the position of voting Yea or Nay on the Conference Report."¹⁶⁶ Van Ness believed that the House language was "inadequa[te]" and favored securing "Congressional enactment of a strong, meaningful national policy for the environment."¹⁶⁷ He further defended a challenge to the Senate Interior Committee's jurisdiction:

The measure is general in nature and is directed at *all* agencies of Federal government. The bill is directed at planning, policy making, research and Federal overview capabilities on *all* resources and environmental trends—recreational, loss of natural beauty, land-use, water and mineral resource development, population, congestion, noise, urban sprawl, transportation systems, pollution, and industrial growth,—which threaten a quality life in quality surroundings.

The particular trends and problems involve the jurisdiction of virtually all of the Committees of the Congress. The purpose of S.

Committee on September 22, apparently to address at the very least jurisdictional concerns with S. 1075 and S. 7, along with a proposed solution. Memorandum from William Van Ness to Senator Henry M. Jackson, Re: Meeting with Members of the Public Works Committee (Sept. 19, 1969) (on file with the DUKE ENVTL. L. & POL'Y F.). Title II of Senator Muskie's S. 7, the Water Quality Improvement Act of 1969, provided that environmental policy should be the primary responsibility of state and local governments, and that the environmental policy of the federal government already was embodied in several specifically identified federal statutes. S. 7, 91st Cong. (1969). *See also* S. REP. NO. 91-351, at 37 (1969). But Senator Muskie's language in S. 7 endorsed the creation of an independent Office of Environmental Quality, and the report accompanying S. 7 suggested that the environmental policies would be mandatory. *See id.* at 40–41, 38 ("Technological and economic developments which produce short-term benefits at the expense of the long-term health and productivity of the environment would be rejected."); *id.* ("Alternatives should be chosen which minimize deleterious effects.").

166. Memorandum from William Van Ness to Senator Henry M. Jackson 2 (Sept. 23, 1969) (on file with the DUKE ENVTL. L. & POL'Y F.). Van Ness further suggested that Senator Muskie's procedural concerns were possibly overstated in light of the Senate and House procedural rules. *Id.* In his memo to the Senator just days before, Van Ness had cautioned that S. 1075 had received bipartisan support and would not likely be vetoed by the President, and that a stronger measure than Senator Muskie's proposal should be pursued in lieu of agreeing to "water the measure down." Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 165, at 2. Van Ness added, "[t]he enactment of a National policy for the environment should be achieved in the form of separate legislation, and not as one title in a measure on a related matter." *Id.* at 3.

167. Memorandum, *supra* note 132, at 6.

1075 is to state general goals to guide Federal agencies and officials, to state a general policy for officials to follow, and to establish a new institution to provide an overview of the impact that undesirable trends have on the quality of life and the quality of America's total environment.¹⁶⁸

During this conference committee meeting, Senator Muskie, although not on the conference committee,¹⁶⁹ raised a concern that S. 1075 might detract from his pending Water Quality Improvement Act, which required a state water quality certification as a condition to the issuance of a federal license or permit. S. 1075 required "findings" by a federal agency, and Senator Muskie sought to avoid a conflict between a federal agency issuing findings related to water quality and any state's determination regarding the impact of the proposed licensed or permitted activity on water quality.¹⁷⁰

At the request of Senator Muskie, Leon Billings reportedly prepared amendments and remarks in anticipation of a public confrontation between Senators Muskie and Jackson. Of particular importance, Finn explains that Billings objected to S. 1075's policy statement and remained concerned with establishing an environmental mandate that he believed had been prepared "in haste or in darkness."¹⁷¹ Senator Muskie also believed that it was important not to let agencies police themselves on environmental matters, and the conference further recommended solicitation of comments on proposed actions by other air and water pollution control agencies.

This led to a publicized clash between Muskie and Jackson, as well as a need to reconcile differences between the Senate and House bills. On September 29, the *Washington Post* reported that the dispute

168. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 73, at 8.

169. Van Ness had recommended to Senator Jackson that he invite two members from the Public Works Committee to attend the House/Senate Conference, and he also suggested that he join with Senators Muskie and Randolph to establish a Joint Committee on the Environment to avoid future jurisdictional concerns. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 165, at 3–4. Three days later Van Ness repeated the suggestion that future jurisdictional disputes could be resolved by a joint environmental committee. Memorandum, *supra* note 132, at 3. Senator Muskie's staff purportedly understood that the Public Works Committee could have two conferees attend the House/Senate conference on S. 1075. Finn, *supra* note 24, at 486 (referring to memorandum from Leon Billings).

170. The final language of NEPA, § 104, provides that it shall not "in any way affect the specific statutory obligations of any Federal agency (1) to comply with criteria or standards of environmental quality, (2) to coordinate or consult with any other Federal or State agency, or (3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency." 42 U.S.C. § 4334 (2006).

171. Finn, *supra* note 24, at 496.

between Muskie and Jackson was less over substance and more over "which Senate units should have jurisdiction over general environmental questions."¹⁷² The *Washington Post* further noted that Senator Muskie's pending water pollution legislation included a title creating an office of environmental quality in the executive office, which appeared similar to Jackson's Board of Environmental Advisors.¹⁷³ The *Sunday Star* similarly reported, in early October, on the conflict between the two senators, precipitously suggesting that an agreement had been reached.¹⁷⁴

In preparation for the October meeting, Van Ness prepared an analysis for Senator Jackson. This analysis noted that S. 7 would not likely be supported by the President, that S. 1075 was a stronger bill, two years in the making, and that "[a] National policy for the environment should be enacted as a *separate* act and not as an amendment to a measure on a related matter."¹⁷⁵ This echoed Van Ness's earlier counsel to Senator Jackson, where he observed that S. 1075 was stronger than S. 7, in part because it (a) recognizes that all persons have a right to a healthful environment; (b) "[a]mends the basic enabling legislation of all Federal agencies and programs to make clear that a basic goal of the government and a basic responsibility of every agency is the preservation, protection and enhancement of the environment"; and (c) "[e]stablishes a set of broad national goals for the guidance of all agencies and officials of the Federal government."¹⁷⁶ He further added that Senator Muskie's committee would not likely accept a "strong bill in conference on S. 7."¹⁷⁷

172. Spencer Rich, *Sens. Muskie and Jackson Feuding Over Control of Environmental Bills*, WASH. POST, Sept. 29, 1969, at A1. A September 24 memorandum apparently developed by Van Ness for Senator Jackson explained that the meeting on September 22 included an understanding that "[f]uture jurisdictional conflicts between Committees of the Congress in the field of environmental legislation and policy making could be best resolved by the creation of a Joint Committee on the Environment. Senators Jackson and Muskie agreed" to investigate this possibility. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 132.

173. Rich, *supra* note 172, at A7.

174. Roberta Horning, *Jackson, Muskie Nearing Environment Policy Compromise*, WASH. STAR, Oct. 5, 1969, at A14-15 (on file with the DUKE ENVTL L. & POL'Y F.).

175. Memorandum from William Van Ness files (undated) (on file with the DUKE ENVTL L. & POL'Y F.).

176. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 166, at 2. The memo further adds that S. 1075 "[s]ets forth, in explicit language, a requirement that findings must be made by appropriate officials and agencies on all decisions and actions significantly affecting the quality of the human environment." *Id.*

177. *Id.*

The two senators averted a floor fight by reaching what has since been dubbed the October Compromise.¹⁷⁸ This "compromise," however, entailed more form than substance, and it did not weaken S. 1075. When Senator Muskie initiated floor discussions on S. 7, his water pollution bill included a modified title (Title II), incorporating aspects of S. 1075; and his remarks on Title II focused primarily on the various environmental bills considered by the Public Works Committee and he emphasized the importance of states acting first in the environmental area.¹⁷⁹ Rather than confronting any objections to S. 1075, Senator Muskie instead talked generally about the need to address and incorporate environmental considerations into the consideration of public works projects and programs, and further added that an independent office within the Executive Office "is crucial to the effective coordination and administration of all Federal programs in line with the Nation's policy of environmental enhancement."¹⁸⁰

For the compromise that unfolded on October 8, 1969, the conference committee presented to the Senate an agreed upon substituted S. 1075 and sought to have the Senate instruct its conferees to insist upon the language of the substituted S. 1075.¹⁸¹ S. 1075, as modified, included a requirement in § 102 for a "detailed statement" in lieu of "findings."¹⁸² Next, it "explicitly" clarified Senator Jackson's pre-existing intention not to interfere with Senator Muskie's effort in S. 7 to require water quality certifications.¹⁸³ It also created an organizational structure that "marr[ied]" Senator Muskie's Office of Environmental Quality in S. 7 with Senator Jackson's Board of Environmental Quality Advisors.¹⁸⁴ Substituted S. 1075 further

178. *E.g.*, Finn, *supra* note 24, at 492-511; Lindstrom, *supra* note 22, at 44-47; LIROFF, *supra* note 23, at 18-19.

179. 115 CONG. REC. 28,954, 28,956 (1969).

180. *Id.* at 28,956. Muskie explained that "[n]o Federal department or agency which is not primarily oriented to environmental matters can be expected to have either the sufficient expertise or the proper perspective to evaluate their own programs". *Id.* See also *id.* at 29,053 (objecting to self-policing). Of course, this is precisely what Senator Jackson was attempting to do—effectively build into each agency a mandate and recognition for considering environmental effects of their activities.

181. See *id.* at 29,054.

182. Liroff would later suggest that, based on his interviews of the participants, the change from "findings" to a "statement" may have enhanced "the potential role of judicial review." Letter from Richard Liroff, Env'tl. L. Inst., to Helen Ingram (Oct. 10, 1975) (on file with the DUKE ENVTL. L. & POL'Y F.).

183. 115 CONG. REC. 29,056 (1969).

184. *Id.* at 29,062. The new organizational structure prompted an awkward exchange

required that the "detailed statements" be distributed for comment to the appropriate "agencies with jurisdiction and special expertise" in the area, and "be made available to the President, the Board and the public."¹⁸⁵ That these changes were agreed upon or appear minor underscores the actual underlying dispute—the legislative battle for jurisdiction over ecology—which Senator Jackson would win in this instance.¹⁸⁶ The compromise, in sum, most likely occurred because Senator Jackson agreed not only to publicly support a new joint committee¹⁸⁷ but also to have the annual reports by the Board "transmitted . . . to the [congressional] committees which traditionally have exercised jurisdiction over the environmental subject matter contained therein."¹⁸⁸

Three primary issues lingered as the conferees concluded their work in the remaining two months.¹⁸⁹ To begin with, Congressman Aspinall targeted the provision securing an environmental right and he remained concerned with section 102 and potential conflicts with

between Senators Muskie and Allott, with Allott noting that he had not agreed to this compromise and questioning the wisdom of what he described as an "administrative two-headed monster." *Id.* at 29,061. Allott objected to creating, in addition to President Nixon's newly created Council on Environmental Quality, yet another Office of Environmental Quality as well as another legislatively-created environmental board. *Id.* Another issue that required resolution prior to NEPA's passage centered around the Citizens Advisory Committee on Environmental Quality created in President Nixon's May 29, 1969 Executive Order No. 11472. Laurance Rockefeller chaired this committee and sought from Senator Jackson legislative protection and continuation of this committee. *See* Letter from Henry L. Diamond to William Van Ness (Oct. 23, 1969) (on file with DUKE ENVTL. L. & POL'Y F.). This would become § 205(1) of NEPA. 42 U.S.C. § 4345.

185. 115 CONG. REC. 29,058 (1969). When implementing NEPA, CEQ issued a memorandum on June 3, 1970 interpreting and applying this requirement. Council on Env'tl. Quality, Memorandum, Re: Federal Agencies with "Jurisdiction by Law or Special Expertise" to Make Comments with Respect to Various Types of Environmental Impact of Proposed Actions (June 3, 1970) (on file with DUKE ENVTL. L. & POL'Y F.).

186. Senator Jackson would report that S. 1075 "would remain relatively unchanged." 115 CONG. REC. 29,055 (1969).

187. *Id.* (Senator Jackson informed the Senate that "the next logical step" is to have a "joint committee"). Earlier, Senator Jackson had informed Senator Muskie that he supported exploring the possibility of establishing a joint committee. Letter from Jerry T. Verkler to Senator Henry M. Jackson (Sept. 23, 1969) (on file with the DUKE ENVTL. L. & POL'Y F.) (minutes of meeting on S. Res. 78). The importance of this dispute should not be understated. "Environment," as Senator Jackson explained, no longer could be viewed as merely pollution control, it included all facets of human society, including economics, land use (both public and private), quality of life, etc.—in short, what the emerging study of ecology was attempting to persuade Congress. 115 CONG. REC. 29,055 (1969). This emerging broader understanding of "environment" necessarily conflicted with how Congress had established its committees—a problem that arguably continues to this day.

188. 115 CONG. REC. 29,051 (1969).

189. *See* Finn, *supra* note 24, at 511–67.

specific agency directives under existing law. Second, Senator Allott had questions about soliciting input from other federal and state agencies and paperwork holding up federal proposals. Finally, Senator Muskie, Congressman Dingell, and Congressman Aspinall voiced reservations regarding the appropriate recipients for the submission to Congress of the environmental report by the CEQ.¹⁹⁰ A December 8, 1969 staff memo to Senator Jackson outlined a resolution to each of these issues—the last issue apparently involving a disagreement between Congressmen Aspinall and Dingell, while an agreement had already been reached with Senator Muskie.¹⁹¹

Senator Jackson's staff explained that Congressman Aspinall's concern had been addressed by adding the phrase "to the fullest extent possible" into section 102—a phrase already included in the Senate-passed version of the bill. But Van Ness added that the phrase was not intended to detract from the bill's mandate:

The purpose of the new language is to make clear that *if* existing law applicable to an agency's operations expressly prohibits or makes full compliance with one of the directives set in subsections (a) through (h) impossible, then compliance with that particular directive is not immediately required.¹⁹²

In return for adding the language already included in the Senate version, the House agreed to delete the more restrictive language that would have provided that "nothing in this Act shall increase, decrease or change any responsibility or authority of any Federal official or agency created by other provision of law."¹⁹³ When coupled with § 105

190. Memorandum from William Van Ness to Senator Henry M. Jackson (Dec. 8, 1969) (on file with the DUKE ENVTL L. & POL'Y F.).

191. *Id.* In a subsequent memorandum, Van Ness indicated that, in any conversations with Senator Muskie, it should be "emphasized" that the Senate Conferees were successful far "exceed[ing] reasonable expectations" in securing "approval of the major provisions of S. 1075 as well as virtually all of the language agreed to on the Senate floor." Memorandum from William Van Ness to Senator Henry M. Jackson (Dec. 9, 1969) (on file with the DUKE ENVTL L. & POL'Y F.) Van Ness also had drafted a statement for the Senator that would have explained that the annual environmental report would be submitted to all appropriate congressional committees, but this part was omitted from Senator Jackson's published statement. *See* Memorandum from William Van Ness files (undated) (on file with author). Earlier, Van Ness had informed Senator Jackson that the concern about the annual report's submission to Congress had been resolved, as had been Senator Muskie's concern about any potential conflict with § 16 and other provisions of the water bill. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra*, at 2 (Dec. 9, 1969).

192. Memorandum from William Van Ness to Senator Henry M. Jackson *supra* note 190. The same language appears, slightly altered, in the final Conference Report. H.R. REP. NO. 91-765, at 9 (1969) (Conf. Rep.). The phrase was moved in the sentence to clarify its application to each of the succeeding requirements.

193. H.R. REP. NO. 91-765, at 9.

of the bill, Van Ness further informed Senator Jackson that the language would supplement existing agency authorities, and only in "instances of clear conflict or impossibility" could an agency avoid complying with one of the specific directives.¹⁹⁴ In short, according to the language in the final Conference Report, the bill would not "repeal" existing law in those limited circumstances where such a direct conflict or impossibility exists.¹⁹⁵

Ultimately, the Conference Committee reported out its recommendation in December. One observer reported that the bill that emerged out of the conference was "much stronger" than expected, with Senator Jackson and Congressman Dingell having fought "doggedly throughout the conference."¹⁹⁶ In his remarks to the Senate, Jackson focused primarily on NEPA's policy statement and goals as well as the establishment of the CEQ. He lamented the decision to remove the "fundamental" and "inalienable" right of citizens to a healthful environment—what at the time was perceived as a citizen suit provision. He alerted Congress that after NEPA became law he would offer "a detailed congressional declaration of a statutory bill of environmental right."¹⁹⁷ But nothing that occurred between October and December diminished Senator Jackson's "declaration" in NEPA,

that we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the health of mankind. That we will not intentionally initiate actions which will do irreparable damage to the resources which support life on earth.¹⁹⁸

194. Memorandum from William Van Ness to Senator Henry M. Jackson, *supra* note 190. This language similarly appeared in modified form in the final Conference Report. H.R. REP. NO. 91-765, at 10.

195. H.R. REP. NO. 91-765, at 10. In describing §§ 102 through 105, the conferees clearly indicated that agencies would need to "conduct their activities in accordance with the provisions of the bill," but that the bill would not allow agencies to violate otherwise clearly expressed congressional directives. *Id.* at 8–10. An exhibit drafted by Van Ness and attached to Senator Jackson's remarks on S. 1075, as modified, repeated this understanding of the change in language. 115 CONG. REC. 40,418 (1969).

196. Robert Cahn, *Environment Package: Congress Wraps Broad Controls for What May be a Landmark Law*, CHRISTIAN SCI. MONITOR, Dec. 16, 1969, at 3.

197. 115 CONG. REC. 40,416 (1969).

198. *Id.* at 29,056. *See also id.* at 29,055 ("will prevent instances of environmental abuse and degradation caused by Federal actions before they get off the planning board"); *id.* at 29,056 ("give all agencies a mandate, a responsibility, and a meaningful tool to ensure that the quality of America's future environment is as good or better than today's").

Both houses then passed the legislation,¹⁹⁹ which President Nixon signed on January 1, 1970.²⁰⁰ The next day, the New York Times reported that Senator Jackson had "maneuvered . . . diligently" in securing passage of what it termed a Pollution Control Bill.²⁰¹

III. THE NEW *MAGNA CARTA*

It would be a mistake to suggest that Congress's decision to establish a national environmental policy occurred either precipitously or without considerable deliberation. NEPA's journey began before Van Ness's January 1967 memorandum. It began with ecologists' efforts to convince policymakers of the need to appreciate the "new" science and the urgency of addressing the pressing threats to our planet. Only months after President Nixon signed NEPA into law, Eugene Odum would write, "the public entry into the 'ecology movement' is a natural and predictable response that has been in the making for some time."²⁰² Another commentator proclaimed that it "is heartening that the word 'ecology' has taken on meaning throughout the nation, and indeed a good part of the world."²⁰³ Of course, ecology's acceptance into the political arena prompted Paul Ehrlich to observe that "most politicians, as well as a wide variety of physicists and engineers who advise politicians, do not have the vaguest notion what ecology is all about."²⁰⁴

Those members of Congress who were paying attention, however, fully appreciated what Congress had accomplished; through

199. See *id.* at 40,427, 40,928 (1969) (adoption of Conference Report); H. REP. NO 91-765, at 1.

200. *The Guardian: Origins of the EPA*, U.S. ENVTL. PROT. AGENCY (1992), <http://www.epa.gov/aboutepa/history/publications/print/origins.html>.

201. *Sponsor of Pollution Control Bill: Henry Martin Jackson*, N.Y. TIMES, Jan. 2, 1970, at 13.

202. Shelton, *supra* note 43, at 323–24 (quoting Eugene P. Odum, *The Attitude Revolution*, PROGRESSIVE, Apr. 1970, at 10–11) (Odum's introduction to the *Progressive* magazine's April issue entitled *The Crisis of Survival*).

203. COMM. ON SCI. AND ASTRONAUTICS, 92ND CONG, PANEL ON SCIENCE AND TECHNOLOGY TWELFTH MEETING, INTERNATIONAL COOPERATION IN THE ENVIRONMENTAL SCIENCES 40, (Comm. Print 1971) (statement of Walter Orr Roberts).

204. Shelton, *supra* note 43, at 322–23 (quoting Paul Ehrlich, *We're Standing on the Edge of the Earth*, NAT'L WILDLIFE, Oct.–Nov. 1970, at 16). And while readers of *Government Executive* were told that "ecology . . . is here to stay," they were equally informed that "[t]he ecology field is such complex virgin soil that not even such experts as there are can say with any degree of assurance that a given policy or program will have a desired effect—or even which agency should have jurisdiction over which activity." Samuel Stafford, *Federal Pollution Attack Gains Steam, But Long-Term Outlook Remains Cloudy*, GOV'T EXECUTIVE, Sept. 1970, at 51 (on file with the DUKE ENVTL. L. & POL'Y F.).

the leadership of Senator Jackson and Congressman Dingell, and with a legislative strategy artfully developed by Senator Jackson's staff and assisted by Caldwell and Bowman and Carpenter of the Legislative Reference Service, it solidified a national policy—a mandate for environmentally sound decisions.²⁰⁵ In May 1970, Senator Jackson wrote, "[t]he Act makes a concern for environmental values and amenities a part of the charter of every agency of the federal government."²⁰⁶ The Act furthered this mandate by creating an executive office specifically designed to coordinate the new environmental management agenda.²⁰⁷ In a sentiment endorsed by Senator Jackson, staffer Dan Dreyfus explained that NEPA would "establish the environment as a top-level organizational and managerial concept in the executive branch."²⁰⁸ This mandate does not require arresting development; it expressly recognizes that humans and human development are part of environmental quality, but it does suggest that agencies must employ ecological principles—however murky the concept—in balancing the pros and cons of their decisions.²⁰⁹ Early commentators expected that NEPA would do just that.²¹⁰

205. This is not to suggest that all those who understood that NEPA established such a mandate believed that it provided effective enforcement mechanisms. Congressman Richard Ottinger, for example, suggested that a constitutional amendment might be necessary. Richard L. Ottinger, *Legislation and the Environment: Individual Rights and Government Accountability*, 55 CORNELL L. REV. 666, 671–72 (1970).

206. Henry M. Jackson, *Foreward: Environmental Quality, the Courts, and the Congress*, 68 MICH. L. REV. 1073, 1079 (1970).

207. The creation of CEQ unquestionably dominated most of the discussion surrounding NEPA, and perhaps one of the failings of NEPA has been the lack of effective coordination under CEQ auspices—a failure that may in the Obama Administration be changing. See E.W. Kenworthy, *Challenge by Democrats*, N.Y. TIMES, Jan. 2, 1970, at 12 (discussing NEPA and the new CEQ).

208. S. COMM. ON INTERIOR AND INSULAR AFFAIRS, A DEFINITION OF THE SCOPE OF ENVIRONMENTAL MANAGEMENT 3, 91st Cong. (Comm. Print 1970).

209. Cf. *Calvert Cliffs' Coordinating Comm., Inc. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1112, 1128, 1129 (D.C. Cir. 1971).

210. Ronald B. Robie, *Recognition of Substantive Rights Under NEPA*, 7 NAT. RESOURCES L. 387 (1974); Eva H. Hanks & John L. Hanks, *An Environmental Bill of Rights: The Citizen Suit and the National Environmental Policy Act of 1969*, 24 RUTGERS L. REV. 230 (1970). A senior legal editor for the Bureau of National Affairs argued that lawyers and jurists needed to turn their attention to ensuring that the substantive goals of NEPA would become a national reality, urging that "it is important that they remember that unenforceable obligations are not obligations at all, and unenforceable rights, no matter how grandly stated, are nothing more than empty words." Hugh J. Yarrington, *Judicial Review of Substantive Agency Decisions: A Second Generation of Cases Under the National Environmental Policy Act*, 19 S.D. L. REV. 279, 294 (1974). See also Victor J. Yannacone, Jr., Bernard S. Cohen & Steven G. Davison, *Environmental Rights and Remedies* § 5 (1972); Victor J. Yannacone, Jr., *National*

The convergence of several factors may explain why this substantive mandate did not fully materialize. To begin with, NEPA's broad mandate at the time coupled with its emphasis on science left both agencies and courts with perhaps insufficient tools to respond quickly enough to complex environmental issues.²¹¹ As Russell Train, the first Chairman of the CEQ observed in November 1970, NEPA "is so general in its language, so innovative in its procedures and so all-embracing in the range of Government activities included."²¹² Next, NEPA was only part of an ongoing effort by Congress to explore how best to respond to looming threats.²¹³ Congress considered and passed other legislation intended to supplement NEPA, but in some respects, it failed. For instance, while Congress passed the Coastal Zone Management Act in 1972,²¹⁴ it failed to pass

Environmental Policy Act of 1969, 1 ENVTL. L. 8, 14 (1970) (emphasizing importance of NEPA's requirement that agencies' policies, regulations and statutes be interpreted, "to the fullest extent possible," in accordance with NEPA's policies). Another observer commented that, whether NEPA is more than a procedural statute, will "presumably . . . become clear through the gradual process of litigation, [which] will determine in large measure how meaningful judicial review in this area will be." Richard S. Arnold, *The Substantive Right to Environmental Quality Under the National Environmental Policy Act*, 3 ENVTL. L. REP. 50,028, 50,042 (1973) (discussing one of the first cases under NEPA). See also Anthony D'Amato & James H. Baxter, *The Impact of Impact Statements Upon Agency Responsibility: A Prescriptive Analysis*, 59 IOWA L. REV. 195, 243 (1973) ("The idea that NEPA requires *only* the preparation of an impact statement, and that for purposes of judicial review the provisions of section 102 can be clearly severed from those of section 101, seems clearly fallacious."). Another article even suggested that NEPA might provide grounds for federal claims against polluters, albeit perhaps ignoring the change to the environmental rights language in NEPA. Virginia F. Coleman, *Possible Repercussions of the National Environmental Policy Act of 1969 on the Private Law Governing Pollution Abatement Suits*, 3 NAT. RESOURCES L. 647 (1970).

211. Michael C. Blumm astutely suggests that Congress perhaps assumed too much when it passed NEPA. Michael C. Blumm, *The National Environmental Policy Act at Twenty: A Preface*, 20 ENVTL. L. 447, 448-49 (1990).

212. Letter from Russell E. Train, Chairman, Council on Env'tl. Quality, to Senator Henry M. Jackson (Nov. 19, 1970), reprinted in 116 CONG. REC. 38,292-93 (1970). Train made these comments amid growing dissatisfaction with how CEQ was enforcing the requirement for agencies to file adequate environmental impact statements, and afford the interested public sufficient access to such documents. *Id.* See also E.W. Kenworthy, *Hart Prods Nixon on Environment Act*, N.Y. TIMES, Nov. 19, 1969, at 16 (indicating that Senator Hart might push for a citizen suit provision to further force CEQ to require compliance with NEPA).

213. In 1971, Senator Jackson proposed the National Environmental Policy Institute to serve as a "highly skilled and competently staffed organization to provide an interdisciplinary, professional service in environmental policy analysis to the" CEQ and other agencies, as well as to assist the CEQ with developing long-range needs under NEPA. 117 CONG. REC. 6,320 (1971). And in 1970, Congress passed the Environmental Education Act. Pub. L. No. 91-516, 84 Stat. 1312 (1970).

214. Coastal Zone Management Act, 16 U.S.C. §§ 1451-1466 (2006). Similar to NEPA, Congress directed that it would be a national policy to encourage states to give "full consideration to ecological, cultural, historic, and esthetic values as well as the needs for

Senator Jackson's accompanying national land use legislation.²¹⁵ CEQ Chairman Russell Train testified, in April 1970, that "the development of effective land use policies would be part of the long and hard road to environmental quality. We in the Council believe that a national land use policy underlies the concept of conscious protection and enhancement of the environment set out in" NEPA.²¹⁶

Also, while Congress's primary debate on NEPA focused on how CEQ would coordinate environmental policy, a consensus existed that "[p]resently the Federal efforts to monitor and control the environment are scattered over many agencies in fragmented fashion."²¹⁷ Although the creation of the Environmental Protection Agency in 1970 might have minimized, to some degree, the lack of coordination by consolidating certain programs into one agency,²¹⁸ it also arguably affected how CEQ would operate. For example, with William D. Ruckelshaus's appointment as the first Administrator of EPA, Russell Train commented that CEQ's role would be "primarily . . . advis[ing] the President on the development of new

compatible economic development" to coastal zone activities. *Id.* § 1452(2).

215. See Jayne E. Daly, *A Glimpse of the Past—A Vision for the Future: Senator Henry M. Jackson and National Land-Use Legislation*, 28 URB. LAW. 7 (1996).

216. *National Land Use Policy: Hearing on S. 3354 to Amend the Water Resources Planning Act to Provide for a National Land Use Policy Before the S. Comm. on the Interior and Insular Affairs*, 91st Cong. 88–89 (1970) (statement of Russell E. Train, Chairman, Council on Environmental Quality). Lynton Caldwell similarly discussed the relationship of NEPA to Senator Jackson's effort to pass national land use legislation. See CALDWELL, THE NATIONAL ENVIRONMENTAL POLICY ACT, *supra* note 23, at 74–75. See also Lynton K. Caldwell, *The Ecosystem as a Criterion for Public Land Policy*, 10 NAT. RESOURCES J. 203, 205 (1970) (discussing national land use legislation and a "total systems" or ecosystems approach to public land use planning). Daniel Dreyfus, too, wrote that "Land use policy appears to be the next logical step toward developing rational mechanisms for public decisionmaking." DANIEL A. DREYFUS, NATIONAL LAND USE POLICY AND WATER MANAGEMENT, A PAPER PREPARED FOR WATER AND POWER RESOURCES, COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, U.S. SENATE 9 (Mar. 13, 1973) (on file with the DUKE ENVTL. L. & POL'Y F.). See also A. Dan Tarlock, *Land Use Regulation: The Weak Link in Environmental Protection*, 82 WASH. L. REV. 651, 656 (2007) (noting assumption about passing accompanying land use legislation).

217. MITRE Corporation, *Management Plan: Study of a System for Monitoring the Nation's Environment* 3 (July 31, 1970) (working paper for Council on Environmental Quality) (on file with the DUKE ENVTL. L. & POL'Y F.).

218. Programs administered by other agencies were transferred to EPA pursuant to President Nixon's Reorganization Plan No. 3. Reorganization Plan No. 3 of 1970, 3 C.F.R. 199 (1970) *reprinted in* 5 U.S.C. app. at 200 (2009), *and in* 84 Stat. 2086 (1970). In recommending the establishment of EPA, the Ash Council memorandum suggested that "[t]he special contribution that organization can make to the administration of large-scale enterprise is to mobilize people, ideas, and things in ways best calculated to achieve clearly articulated goals." Memorandum from President's Advisory Council on Exec. Org. to President Richard Nixon, Re: Federal Organization for Environmental Protection (Apr. 29, 1970), *available at* <http://www.epa.gov/history/org/origins/ash.htm>.

policies."²¹⁹ In fact, one of the driving forces behind NEPA was better governmental coordination and the creation of an independent council capable of performing that function; however, only days before President Nixon signed NEPA, Senator Muskie announced a proposal for a new watchdog agency that would protect the "interrelationship between the natural environment and [the] man-made environment."²²⁰ Senator Muskie's frustration with how CEQ was performing its oversight functions apparently led to his effort, in 1970, to secure EPA's role in the NEPA process through section 309 of the Clean Air Act, which arguably further dissipated CEQ's oversight function.²²¹

Political reality, too, would prove formidable and ultimately leave early courts reviewing NEPA challenges with insufficient guidance. CEQ, at the outset, did not receive sufficient funds to accomplish what may have been a daunting task.²²² The lack of consistency among the agencies and a perceived recalcitrance by certain elements within the Administration would mar early NEPA implementation.²²³ In March 1971, Van Ness advised Senator Jackson to criticize the Administration—during an interview on *Face the Nation*—for its politicization of environmental issues, warning that he would introduce legislation to establish an environmental think tank "*which will not be subject to the clutches and the whims of White House aides.*"²²⁴

219. Carroll Kilpatrick, *Nixon Selects Environmental Administrator*, WASH. POST, Nov. 7, 1970, at A6.

220. Stuart Auerbach, *Muskie Proposes Watchdog Agency to Lead U.S. Anti-Pollution Fight*, WASH. POST, Dec. 30, 1969, at A2.

221. 42 U.S.C. § 7609 (2006). See Andreen, *supra* note 23, at 223–29; Fischman, *supra* note 38.

222. See E.W. Kenworthy, *Environment Agency Fund Cut Deplored by Key Congressmen*, N. Y. TIMES, Aug. 3, 1970, at 35; *Environmental Council Taxed by Work Load*, L.A. TIMES, Nov. 18, 1970.

223. In December 1970, the Conservation Foundation opined that NEPA implementation "by various executive agencies and the Council on Environmental Quality has been fraught with bureaucratic extemporizing and flimflam." Conservation Foundation Letter, Dec. 12, 1970 (on file with the DUKE ENVTL. L. & POL'Y F.). See also Editorial, *For the Environment—Hopefully*, L.A. TIMES, Nov. 12, 1970, at 6 ("Although a number of antipollution statutes are on the books, their implementation has been hampered by the wide dispersal of enforcement authority throughout the federal bureaucracy and by the White House's hot-and-cold approach to environmental problems.").

224. Memorandum from William Van Ness to Senator Henry M. Jackson, Re: *Face the Nation* Interview and Press Worthy Topics to Touch Upon, at 2 (Mar. 6, 1971) (on file with the DUKE ENVTL. L. & POL'Y F.).

Finally, Congress's effort at environmental management and acceptance of ecology into the public arena left little guidance for how courts could review agencies' responses to NEPA's new mandate.²²⁵ While the concept of a specialized environmental court capable of undertaking such a task surfaced, it never materialized.²²⁶ But NEPA, as envisioned by Congress, does not demand such expertise. Judge Wright, in *Calvert Cliffs Coordinating Committee, Inc. v. United States Atomic Energy Commission*,²²⁷ explained the operation of the mandate and the role of reviewing courts. He observed that NEPA contains a distinct substantive duty under section 101(b) for agencies to use all practicable means to protect environmental values, albeit leaving sufficient discretion for an agency in "particular problematic instances" to make difficult choices.²²⁸ He added that agencies must balance the array of environmental and other values and afford sufficient weight to environmental values when doing so:

225. Professor Hanna Cortner of the University of Arizona would later observe that:

Judicial restraint in the area of substantive implementation combined with an absence of pressures from other political actors, have given administrators a great deal of discretion to apply to this aspect of implementation. The agencies have exercised this discretion to avoid substantive reform in agency decision-making and decision outcomes. Consequently, after four and one-half years, NEPA, as a vehicle for creating and maintaining environmental integrity and reform of environmental decision-making has had only a modicum of success.

HANNA J. CORTNER, A CASE ANALYSIS OF POLICY IMPLEMENTATION: THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969, at 34 (Oct. 1974) (on file with the DUKE ENVTL. L. & POL'Y F.). See also Hanna J. Cortner, *A Case Analysis of Policy Implementation: The National Environmental Policy Act of 1969*, 16 NAT. RESOURCES J. 323, 334 (1974).

226. In the Federal Water Pollution Control Act, Congress charged the Administration with studying the idea of a court that could review the "beneficial and adverse effects of on-going programs." H.R. REP. NO. 92-911, at 143 (1972); Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, § 2, 86 Stat. 816 (1972). See Scott C. Whitney, *The Case for Creating a Special Environmental Court System*, 14 WM. & MARY L. REV. 473 (1973). A specialized court arguably could appreciate the various scientific issues often involved in making environmentally sound decisions, addressing the concern of some judges that these matters "which must be left for expert judgment and determination in fields where this court has no experience or expertise." *Howard v. Env'tl Prot. Agency*, 2 ELR 20,745 (W.D. Va. 1972). The Nixon Administration opposed the idea. See U.S. ATTORNEY GENERAL, REPORT OF THE PRESIDENT ACTING THROUGH THE ATTORNEY GENERAL ON THE FEASIBILITY OF ESTABLISHING AN ENVIRONMENTAL COURT SYSTEM (1973). See also 1974 ANNUAL REPORT OF THE ATTORNEY GENERAL OF THE UNITED STATES 124 (1974) (describing the Department of Justice's involvement and noting conclusion).

227. 449 F.2d 1109 (D.C. Cir. 1971). See also Kalen, *supra* note 140; Dan Tarlock, *The Story of Calvert Cliffs: A Court Construes the National Environmental Policy Act to Create a Powerful Cause of Action*, in ENVIRONMENTAL LAW STORIES 77 (Richard J. Lazarus & Oliver A. Houck eds., 2005).

228. *Calvert Cliffs*, 449 F.2d at 1112.

Section 102 of NEPA mandates a particular sort of careful and informed decisionmaking process and creates judicially enforceable duties. The reviewing courts probably cannot reverse a substantive decision on its merits, under Section 101, unless it can be shown that the actual balance of costs and benefits that was struck was arbitrary²²⁹ or clearly gave insufficient weight to environmental values.

This follows Senator Jackson's remarks during the October "compromise," when he expressed concern about experimental nuclear blasting in Alaska and suggested that NEPA would afford the Atomic Energy Commission "the authority, responsibility, and a directive" to "weigh" the environmental impact of these nuclear tests against the agency's other "mission-oriented" goals.²³⁰

IV. CONCLUSION

That the Court has yet to appreciate NEPA's fading mandate should not deter efforts to explore the resiliency of the environment's *Magna Carta*. Courts undoubtedly examine Congress's purpose when determining the legitimacy of an agency's interpretation,²³¹ and the Supreme Court's crabbed interpretation of NEPA²³² should be susceptible to modification under *National Cable &*

229. *Id.* at 1115. Judge Wright added that the agency must engage in a "rigorous balancing" and "rigorous consideration of environmental factors." *See id.* at 1128.

230. 115 CONG. REC. 29,056 (1969). Dan Dreyfus would later explain that NEPA originally contemplated a "'balancing' of environmental costs and benefits against the cultural, economic, and social costs and benefits of actions and inactions." Daniel A. Dreyfus, *Environmental Policy and the Energy Crisis*, Mich. St. Interdepartmental Seminar 7 (Apr. 17, 1974) (on file with the DUKE ENVTL. L. & POL'Y F.). In CEQ's April 1970 interim guidance document, the Council noted that environmental values had to be given not just "careful attention" but also "appropriate weight"—in effect requiring a balancing of environmental and other values. CEQ, Interim Guidelines, 35 Fed. Reg. 7390 (Apr. 30, 1970), *amended* 36 Fed. Reg. 7724 (Apr. 23, 1971). These guidelines noted that the purpose of the § 102 process is to ensure that "to the fullest extent possible, [agencies] direct their policies, plans and programs so as to meet national environmental goals." CEQ, Statements on Proposed Federal Actions Affecting the Environment, 36 Fed. Reg. 7724 (Apr. 23, 1971). They further provided that the process was designed "in order that adverse effects are avoided, and environmental quality is restored or enhanced, to the fullest extent practicable." *Id.*

231. *See Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687 (1995); *Tenn. Valley Auth. v. Hill*, 473 U.S. 153 (1978).

232. *See Kalen, supra* note 140.

*Telecommunications Association v. Brand X Internet Services*²³³ by any subsequent CEQ guidance entitled to deference.²³⁴

A critical review of NEPA's legislative history demonstrates several salient points that will allow us to follow such an approach. To begin with, the policy statement was far from an afterthought—it was, after all, an act to establish a national policy. The policy statement accomplished what many ecologists sought: recognition of ecology and the need for a coordinated and integrative approach to federal decision-making. In the words of Daniel Dreyfus, it "set a new paradigm" and "a precedent for future policies."²³⁵ Next, the participants paid little attention to section 102(2)(C) and the preparation of a "detailed statement." This was but a mechanism for agencies to ensure that they could arrive at decisions consistent with the new mandate and the type of balancing established by Congress. NEPA, in effect, served as the opening salvo in a several decades-old effort to create an entirely new paradigm in government administration for the environment.²³⁶ It admittedly would be a paradigm that would struggle in its nascent years. But now, with the Act slightly over forty-one years old, what Congress sought to accomplish at the birth of the modern environmental movement remains relevant. Congress, after all, crafted a statute whose resiliency affords it ample flexibility to assist in addressing many of our modern problems.

233. 545 U.S. 967 (2005). In *Brand X*, the Court indicated that, under *Chevron*, prior judicial decisions upholding ambiguous statutory language could be overruled by subsequent agency interpretations.

234. CEQ recently invoked *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979) in support of its effort to receive deference when interpreting NEPA. Council on Environmental Quality, Memorandum for Heads of Federal Departments and Agencies, Re: Establishing and Applying Categorical Exclusions Under the National Environmental Policy Act (2010).

235. Dreyfus, *supra* note 77, at 15. "NEPA," Dreyfus explained, "stated that there was a whole new Federal government role—the role of environmental management. It was made everybody's business. Every Federal action, whatever its primary purpose, was to be considered an opportunity for environmental benefit or a threat of environmental damage." Dreyfus, *supra* note 230, at 3.

236. This paradigm, unfortunately, would begin to fade in only a few years, as Marion Clawson, with Resources for the Future would write in 1975:

The partial and piecemeal approach to environmental problems has been particularly strange because its proponents ignored the maxim of ecology which presumably all would accept: that everything in an ecosystem is related to everything else in that system. Had interrelationships among inputs, processes, and outputs been carefully studied, and had more distant, as well as a primary, consequences been considered, the marching up and down of the past few years could have been much reduced, if not avoided entirely. The environmental protagonist simply forgot what the environmental scientist had taught.

Marion Clawson, *Ecology: Second Thoughts*, WASH. POST., Feb. 28, 1975.