

# BUSH V. OBAMA: THE FIGHT FOR THE SOUL OF SCIENCE IN ENVIRONMENTAL POLICYMAKING

Mark A. Latham\*

## INTRODUCTION

Cogent, thoughtful environmental policy must be grounded in sound science. This is necessary because effective environmental policies require a fundamental understanding of the often complex interaction between human activity and the natural world.<sup>1</sup> Thus, government efforts to address the myriad domestic environmental challenges facing our nation must take account of the fact that policymaking and science are inexorably intertwined. As a few examples illustrate, environmental policy decisions that lack a sound foundation in science at best frustrate statutory goals and at worst are doomed to fail.<sup>2</sup>

Consider several of the regulatory decisions that are routinely made to implement some of our core federal environmental statutes. If the “best” science is not used in determining whether to list a species as endangered or threatened under the Endangered Species Act,<sup>3</sup> extinction may occur, despite the overarching statutory goal of species preservation.<sup>4</sup> Under the federal Superfund program,<sup>5</sup> absent consideration of scientific principles by Environmental Protec-

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\* Associate Professor of Law, Vermont Law School. I thank Christine Ryan, Vermont Law School Environmental Law Librarian, and Thomas Paul, Vermont Law School Class of 2010, for their invaluable research assistance in the preparation of this article.

<sup>1</sup> See Holly Doremus, *Scientific and Political Integrity in Environmental Policy*, 86 TEX. L. REV. 1601, 1620 (2008) (“Environmental-policy goals cannot be sensibly pursued without an accurate understanding of what is known of the scientific context, the likely consequences of alternative decisions for the natural world, and human goals.”).

<sup>2</sup> See UNION OF CONCERNED SCIENTISTS, 2004 SCIENTIST STATEMENT ON RESTORING SCIENTIFIC INTEGRITY TO FEDERAL POLICY MAKING [hereinafter SCIENTIST STATEMENT] [http://www.ucusa.org/scientific\\_integrity/abuses\\_of\\_science/scientists-sign-on-statement.html](http://www.ucusa.org/scientific_integrity/abuses_of_science/scientists-sign-on-statement.html) (“Although scientific input to the government is rarely the only factor in public policy decisions, this input should always be weighed from an objective and impartial perspective to avoid perilous consequences.”).

<sup>3</sup> See, e.g., 16 U.S.C. § 1533(c) (2006), which requires the Secretary of the Interior to publish a list of endangered and threatened species in the Federal Register. In developing this list the “Secretary shall make determinations . . . on the basis of the best scientific and commercial data available . . .” *Id.* at § 1533(b)(1)(A) (2006).

<sup>4</sup> See 16 U.S.C. § 1531(b) (2006) (expressly recognizing that the purposes of the Endangered Species Act “are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species . . .”).

<sup>5</sup> See Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675 (2006).

tion Agency (EPA) regulators in selecting appropriate action at a site listed on the National Priorities List,<sup>6</sup> hazardous substances may miss detection and the selected remedy may fail to protect human health and the environment.<sup>7</sup> If sound science is not involved in the decision to regulate a particular drinking water contaminate, then the goal of protecting the population from acute or chronic illnesses transmitted by tainted water may not occur.<sup>8</sup> If science finds no voice in the determination of how best to achieve water quality standards under the Clean Water Act,<sup>9</sup> the statute's express objective of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of our Nation's waters" will fail.<sup>10</sup> Similarly, if science is given short shrift during the process of periodically revising the national ambient air quality standards,<sup>11</sup> then the most basic goal of the 1970 Clean Air Act, namely, "to protect and enhance the quality of the Nation's air resources," will miss the mark.<sup>12</sup>

Application of sound science in the policymaking realm is necessary not only to address our domestic environmental issues, but must also be at the core of the policy responses developed to confront global environmental challenges. We need not look any further than the complexities surrounding climate change to see that the policy responses ultimately taken to address this global threat must be grounded in science. If the policy decisions that are made to confront

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<sup>6</sup> See *id.* at § 9605(a)(8)(B) (2006) (establishing national priorities among sites where the release or threatened release of hazardous substances has occurred).

<sup>7</sup> See, e.g., the definition of "remedial action" under CERCLA, 42 U.S.C. § 9601(24) (2006), which "means those actions consistent with a permanent remedy . . . in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so they do not migrate to cause substantial danger to present or future public health or welfare or the environment." See also *id.* at § 9621 (2006), which sets out the statutory criterion to consider in establishing remedial cleanup standards under CERCLA. These criterion require, among other things, that the selected remedial action "is protective of human health and the environment, that is cost effective, and that utilizes permanent solutions . . ." *Id.* at (b)(1).

<sup>8</sup> See, e.g., Public Health Service Act, 42 U.S.C. § 300g-1(b)(1)(A) (2006) (imposing an obligation on the EPA administrator to develop maximum contaminate levels for substances that (1) may have an adverse impact on human health; (2) may be frequently found in public water supplies; and (3) the regulation of which will reduce risk to persons).

<sup>9</sup> The statutory requirements governing the establishment of water quality standards under the Clean Water Act (CWA) are found at Federal Water Pollution Control Act, 33 U.S.C. §§1251, 1313 (2006).

<sup>10</sup> This express objective of the CWA is set out by Congress at 33 U.S.C. § 1251(a) (2006).

<sup>11</sup> See, e.g., Clean Air Act, 42 U.S.C. §§7401, 7409(d)(1) (2006), which requires EPA to evaluate and revise if necessary the national ambient air quality standards at five year intervals.

<sup>12</sup> *Id.* at § 7401(b)(1) (2006).

climate change are not deeply rooted in science, then the efforts taken to curb greenhouse gas emissions will fall short with dire consequences predicted.<sup>13</sup>

When the majority of the statutes underlying the present federal environmental regulatory regime were enacted, Congress understood the importance of science in advancing environmentally beneficial policy goals. This is why virtually all federal environmental laws address in some form or fashion the science underlying the particular regulatory goals targeted by each statute.<sup>14</sup>

Congress further recognized the significant role that science plays in environmental policymaking when it established the Science Advisory Board (SAB)

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<sup>13</sup> For a summary of the predicted adverse consequences of climate change *see* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SUMMARY FOR POLICYMAKERS, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 12-17 (Susan Solomon et al. eds. 2007), available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>.

<sup>14</sup> *See, e.g.*, Toxic Substances Control Act (TSCA), 15 U.S.C. § 2609(a) (2006) (requiring that EPA will conduct research necessary to achieve the purposes of TSCA); Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. § 136r (2006) (“[T]he Administrator shall undertake research . . . to carry out the purposes of this subchapter . . . .”); Safe Drinking Water Act, 42 U.S.C. § 300j-1(a)(1) (2006) (empowering EPA to conduct research “relating to the causes, diagnosis, treatment, control, and prevention of physical and mental diseases and other impairments . . . resulting directly or indirectly from contaminants in water . . . .”); Resource Conservation and Recovery Act, 42 U.S.C. § 6981(a) (2006) (authorizing EPA to conduct or coordinate with others “research, investigations, experiments, training, demonstrations, surveys, public education programs, and studies” relating to a variety of solid waste issues) and *id.* at § 6982 (2006) (authorizing EPA to conduct studies related to a variety of solid waste streams and facilities); CERCLA, 42 U.S.C. § 9660 (2006) (authorizing EPA to perform far-reaching hazardous substance research); Clean Air Act, 42 U.S.C. § 7403 (2006) (allowing EPA to conduct a wide variety of research related to the prevention and control of air pollution); Clean Water Act, 33 U.S.C. § 1254 (2006) (requiring EPA to conduct coordinated research into water pollution prevention, reduction and elimination) and *id.* at § 1254a (2006) (requiring EPA to research the adverse effects of water pollution); Oil Pollution Prevention Act, 33 U.S.C. § 2761 (2006) (establishing among other research-related matters an “Interagency Coordinating Committee on Oil Pollution Research” to “coordinate a comprehensive program of oil pollution research, technology development, and demonstration among the Federal agencies, in cooperation and coordination with industry, universities, research institutions, State governments, and other nations . . . .”); Coastal Zone Management Act, 16 U.S.C. § 1463b(a)-(b) (2006) (establishing a National Coastal Resources Research and Development Institute to carry out projects based on “biological, geological, genetic, economic, and other scientific research applicable to the purposes of this section . . . .”); and Endangered Species Act, 16 U.S.C. § 1533(b)(1)(A) (2006) (requiring the use of “the best scientific and commercial data” in reaching the determination as to whether a species is endangered or threatened).

in 1978.<sup>15</sup> The statutory charge of the SAB is to provide scientific advice to EPA and certain designated congressional committees.<sup>16</sup> With respect to EPA, the SAB reviews the adequacy of the science underlying regulations, reviews agency research programs, evaluates the guidelines used to incorporate science into regulatory action, and advises the agency on a wide spectrum of science, technology, social, and economic issues.<sup>17</sup>

Congress is of course not the only branch of government that is influential within the environmental policymaking sphere. The executive branch certainly has an instrumental role in developing environmental policy. It is the President who sets the tone, establishes priorities, and appoints the individuals who will implement the executive branch's environmental policy prerogatives. In terms of environmental policymaking appointees, the President's authority extends to selecting the EPA administrator, perhaps the single most important environmental policymaking appointee in any administration.

Given that the heads of the agencies involved in environmental policymaking are political appointees, those involved in transforming the priorities of the President into existing regulatory structures, consistent with the commands of various environmental statutes enacted by Congress, must navigate through a maze of politics and law. At the same time, however, environmental policymakers must be mindful of the important role that science should play in policy implementation. After all, once implemented, environmental policies are stripped bare of politics and will stand alone to face the rigorous assessment of the natural world. Thus, nature serves as the ultimate arbiter of whether envi-

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<sup>15</sup> The SAB was statutorily created by the Environmental Research, Development, and Demonstration Authorization Act, 42 U.S.C. § 4365 (2006). The reports of the various studies that the SAB conducts may be accessed at

<http://yosemite.epa.gov/sab/sabproduct.nsf/WebReportsOriginalStudyBOARD!OpenView>. The Clean Air Act Amendments of 1977 created an advisory committee similar to the SAB to provide EPA with scientific advice related to the national ambient air quality standards. 42 U.S.C. § 7409(d)(2)(A)-(C) (2006). This Clean Air Act mandated advisory committee is referred to as the Clean Air Scientific Advisory Committee. *See* EPA Clean Air Scientific Advisory Committee, <http://yosemite.epa.gov/sab/sabpeople.nsf/WebCommittees/CASAC> (last visited Mar. 8, 2010).

Another advisory committee was established by the Clean Air Act Amendments of 1990, *see* 42 U.S.C. § 7612(f) (2006). The Council on Clean Air Compliance Analysis was created in 1990 to "conduct a comprehensive analysis of the impact of [the Clean Air Act] on the public health, economy, and environment of the United States." *Id.* at § 7612(a) (2006). The results of the work performed by the Council on Clean Air Compliance Analysis is reported to Congress biannually, *see id.* at § 7612(d)-(e) (2006), and is available at <http://yosemite.epa.gov/sab/sabproduct.nsf/WebCOUNCIL/advisoryreports?OpenDocument>.

<sup>16</sup> 42 U.S.C. § 4365 (2006).

<sup>17</sup> *See generally* EPA Science Advisory Board, <http://yosemite.epa.gov/sab/sabpeople.nsf/WebCommittees/BOARD> (last visited Mar. 8, 2010).

ronmental policies are indeed the product of sound science. Accordingly, the primary federal environmental policymaking agency – EPA – rightfully describes itself as both a regulatory agency and a scientific agency.<sup>18</sup>

To fulfill this latter role, EPA has an Office of Research and Development that,<sup>19</sup> at various research centers throughout the country,<sup>20</sup> conducts a wide range of technical activities. These activities include research related to air pollution, water quality, drinking water, climate change, nanotechnology, pesticides, and toxics.<sup>21</sup> EPA's Office of Research and Development also operates the National Health and Environmental Effects Research Laboratory (NHEERL) in Research Triangle Park, North Carolina.<sup>22</sup> NHEERL serves as “the focal point for toxicological, clinical, epidemiological, ecological, and biogeographic research within EPA.”<sup>23</sup> The scientists at NHEERL serve as scientific advisors and reviewers in providing technical assistance to EPA, states, tribes, and other agencies, countries and organizations.<sup>24</sup>

It is in part through the Office of Research and Development, together with NHEERL, that EPA's self-description as part scientific agency assumes significance beyond mere bureaucratic rhetoric. If the scientific determinations within the halls of EPA are unfettered and considered, that can serve to ensure that environmental policymaking decisions by the agency will have a foundation in sound science.

With the above as a backdrop, this article examines the role science played in developing environmental policy during the administration of President George W. Bush, and compare it to the place that science has assumed in environmental policymaking thus far during the nascent administration of his suc-

<sup>18</sup> In describing its mission, EPA has stated that “The United States Environmental Protection Agency (EPA) functions as both a scientific and regulatory agency of the United States.” U.S. Env'tl. Prot. Agency, Health and Environmental Effects Research, Basic Information, <http://www.epa.gov/nheerl/about/> (last visited Mar. 8, 2010).

<sup>19</sup> The Office of Research and Development states its mission is to “perform research and development to identify, understand, and solve current and future environmental problems.” The Office of Research and Development, Who Are We, <http://epa.gov/ord/hm/aboutord.htm> (last visited Mar. 8, 2010).

<sup>20</sup> The research efforts conducted by EPA's Office of Research and Development are carried out at fourteen facilities throughout the country. Labs, Centers and Offices, <http://epa.gov/ord/hm/laboratories.htm> (last visited Mar. 8, 2010).

<sup>21</sup> Basic Information, How We Conduct Research, <http://epa.gov/ord/hm/aboutord-research.htm> (last visited Mar. 8, 2010).

<sup>22</sup> Health and Environmental Effects Research, Basic Information, <http://www.epa.gov/nheerl/about/> (last visited Mar. 8, 2010).

<sup>23</sup> NHEERL Mission & Goals, <http://www.epa.gov/nheerl/about/mission.html> (last visited Mar. 8, 2010).

<sup>24</sup> *Id.*

cessor, President Barack Obama. The Bush administration did not embrace science in environmental policymaking. It viewed science as a foe to be thwarted in the pursuit of politically driven environmental policymaking goals. In contrast, the Obama administration has, from the outset, recognized the importance of science in environmental policymaking decisions, and has pledged “to return science to its rightful place.”<sup>25</sup>

## I. THE ADMINISTRATION OF GEORGE W. BUSH AND SCIENCE IN ENVIRONMENTAL PROTECTION

Despite the indisputable importance of sound science in effective environmental policymaking, the administration of President George W. Bush promptly gained the reputation as an administration that suppressed, manipulated, and rejected science in its environmental policymaking decisions.<sup>26</sup> These charges were leveled at the Bush administration particularly with respect to its approach to climate change.<sup>27</sup> Other environmental regulatory efforts, however, were also open to claims of scientific abuse.<sup>28</sup>

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<sup>25</sup> President Barack Hussein Obama, Inaugural Address (Jan. 20, 2009), *available at* <http://www.whitehouse.gov/blog/inaugural-address/>.

<sup>26</sup> Robert F. Kennedy, Jr., *The Junk Science of George W. Bush*, THE NATION, Mar. 8, 2004, at 11, *available at* <http://www.thenation.com/doc/20040308/kennedy> (“Today, flat-earthers within the Bush Administration—aided by the right-wing allies who have produced assorted hired guns and conservative think tanks to further their goals—are engaged in a campaign to suppress science that is arguably unmatched in the Western world since the Inquisition.”). For a detailed examination of science in a number of Bush administration policymaking arenas *see, e.g.*, DAVID MICHAELS, DOUBT IS THEIR PRODUCT: HOW INDUSTRY’S ASSAULT ON SCIENCE THREATENS YOUR HEALTH 192-211 (2008) (discussing “The Bush Administration’s Political Science”) and CHRIS MOONEY, THE REPUBLICAN WAR ON SCIENCE (2005) (noting that “[o]ver the first three years of Bush’s presidency, a wide array of cases had piled up in which the administration had been accused of abusing science.”).

<sup>27</sup> *See, e.g.*, COMM. ON OVERSIGHT AND GOV’T REFORM, U.S. HOUSE OF REPRESENTATIVES, 110th CONG., POLITICAL INTERFERENCE WITH CLIMATE CHANGE SCIENCE UNDER THE BUSH ADMINISTRATION [hereinafter POLITICAL INTERFERENCE] (2007), *available at* <http://oversight.house.gov/images/stories/documents/20071210101633.pdf>.

<sup>28</sup> *See, e.g.*, UNION OF CONCERNED SCIENTISTS, INTERFERENCE AT THE EPA, SCIENCE AND POLITICS AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY [hereinafter INTERFERENCE AT THE EPA] (2008), [http://www.ucsusa.org/assets/documents/scientific\\_integrity/interference-at-the-epa.pdf](http://www.ucsusa.org/assets/documents/scientific_integrity/interference-at-the-epa.pdf). In INTERFERENCE AT THE EPA, the results of a survey given to over 5,500 EPA scientists are discussed. A majority of the respondents “reported wide-spread and inappropriate interference by EPA political appointees, the White House, and other federal agencies in their scientific work.” *Id.* at 2. It concluded by remarking that “[t]he Bush administration’s direct abuse of science . . . highlights the need for the next president and Congress to restore scientific integrity to the agency’s decision making. Only then can the EPA fully mobilize to serve the public good and ensure the nation’s health.” *Id.* at 61.

### A. *Suppression of Science*

There is perhaps no better illustration of the degree to which the Bush administration attempted to suppress science than the efforts taken to censor information concerning the threat that climate change presents. Dr. James E. Hansen, Director of the Goddard Institute for Space Studies and a leading climate change scientist, reported that his supervisors at NASA attempted to suppress his public remarks concerning climate change after he called for dramatic reductions in greenhouse gas emissions.<sup>29</sup> According to Dr. Hansen, the suppression of his public remarks concerning climate change occurred as a result of policies adopted by NASA officials subjecting his lectures, speeches, papers web postings, and interviews to prior review by members of NASA's public affairs staff.<sup>30</sup> This policy also provided that others could stand in for Dr. Hansen at interviews conducted by the news media.<sup>31</sup> Further suppression of his scientific views occurred when a twenty-four-year-old NASA public affairs officer, George Deutsch, refused a request by National Public Radio to interview Dr. Hansen.<sup>32</sup>

The claims of Dr. Hansen were substantiated by a later congressional investigation.<sup>33</sup> The House Oversight and Governmental Reform Committee conducted a 16-month-long investigation into allegations that Bush administration officials had interfered with the work of climate scientists.<sup>34</sup> Testimony, e-mails, and telephone messages provided to the Committee confirmed that Mr. Deutsch and several other political appointees would not allow National Public Radio to interview Dr. Hansen.<sup>35</sup> Dr. Hansen testified before the Committee that “[t]he effect of the filtering of climate change science during the current Administration has been to make the reality of climate change less certain than

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<sup>29</sup> Andrew C. Revkin, *Climate Expert Says NASA Tried to Silence Him*, N.Y. TIMES, Jan. 29, 2006, at A1. Dr. Hansen has been at the forefront of the scientific community in raising public awareness about climate change and the need for reductions in greenhouse gas emissions. *Id.*

<sup>30</sup> Dr. Hansen is quoted in the article as saying that “he would ignore the restrictions.” *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* Apparently Mr. Deutsch rejected the request because he viewed National Public Radio as “‘the most liberal’ media outlet in the country.” *Id.* Mr. Deutsch, a political appointee, later resigned his position when inaccuracies in his resume came to light; specifically, Mr. Deutsch claimed that he had graduated from Texas A & M University when he had not. Andrew C. Revkin, *A Young Bush Appointee Resigns His Post at NASA*, N.Y. TIMES, Feb. 8, 2006, at A13.

<sup>33</sup> POLITICAL INTERFERENCE, *supra* note 27, at 9-11.

<sup>34</sup> *Id.* at i (“The evidence before the Committee leads to one inescapable conclusion: the Bush Administration has engaged in a systematic effort to manipulate climate change science and mislead policymakers about the dangers of global warming.”).

<sup>35</sup> *Id.* at 9-11.

the facts indicate and to reduce concern about the relation of climate change to human-made greenhouse gas emissions.”<sup>36</sup>

The efforts to stifle Dr. Hansen and other government climate scientists led the Committee to conclude that:

The White House exerted unusual control over the public statements of federal scientists on climate change issues. It was standard practice for media requests to speak with federal scientists on climate change to be sent to [the Council on Environmental Quality] for White House approval. By controlling which government scientists could respond to media inquiries, the White House suppressed dissemination of scientific views that could conflict with Administration policies.<sup>37</sup>

Dr. Hansen’s experience was not the only instance where the views of government scientists were subjected to the heavy hand of Bush administration officials. Philip A. Cooney, who served as a lawyer for the American Petroleum Institute before joining the Bush administration as the Chief of Staff for the Council on Environmental Quality (CEQ),<sup>38</sup> heavily edited several climate change reports prepared by government scientists, despite his lack of scientific expertise.<sup>39</sup> The edits that were made apparently went beyond stylistic or grammatical recommendations and were numerous.<sup>40</sup> According to the investigation documented in *Political Interference*, in one report alone Mr. Cooney and others made hundreds of edits “to exaggerate or emphasize scientific uncertainties or to deemphasize or diminish the importance of the human role in global warming.”<sup>41</sup>

The editing of scientific information was not limited to reports. The House Oversight and Governmental Reform Committee also determined from its investigation that congressional testimony concerning climate change was also

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<sup>36</sup> *Id.* at 11.

<sup>37</sup> *POLITICAL INTERFERENCE*, *supra* note 27, at i.

<sup>38</sup> Mr. Cooney was employed by the American Petroleum Institute for more than 15 years, and in the latter part of his career there was involved with climate change issues “where it was his job to ensure that any governmental actions taken relating to climate change were consistent with the goals of the petroleum industry.” *Id.* at 17.

<sup>39</sup> Andrew C. Revkin, *Bush Aide Edited Climate Reports*, *N.Y. TIMES*, June 8, 2005, at A15. Mr. Cooney left the Bush administration shortly after news of his involvement in editing climate change reports became public and joined Exxon Mobil. Andrew C. Revkin, *Former Bush Aide Who Edited Reports is Hired by Exxon*, *N.Y. TIMES*, June 15, 2005, at A21.

<sup>40</sup> *POLITICAL INTERFERENCE*, *supra* note 27, at 16-17.

<sup>41</sup> *Id.* at ii.

subject to editing by Bush administration officials.<sup>42</sup> Administration officials, for example, altered the testimony of the director of the Centers for Disease Control, Dr. Julie Gerberding, to remove two sections relating to vulnerabilities and public health concerns arising from climate change.<sup>43</sup> This was consistent with the experience of Dr. Richard Carmona, the Surgeon General from 2002 until 2006. According to Dr. Carmona, administration officials suppressed public health reports unrelated to climate change.<sup>44</sup> In a newspaper article, Dr. Carmona was quoted as saying that “public health reports are withheld unless they’re filled with praise for the administration.”<sup>45</sup>

Nor was the scientific interference by Bush administration officials in matters related to environmental policy confined to the climate change arena. According to a report prepared by the Union of Concerned Scientists, USDA officials would not allow Dr. James Zahn, a microbiologist with the Department of Agriculture, to publish his research results concerning the health effects of large-scale hog farming operations.<sup>46</sup> Dr. Zahn had determined that airborne drug-resistant bacteria near such operations presented a potential threat to human health.<sup>47</sup> The Union of Concerned Scientists opined that “[t]he suppression of Zahn’s research results seems to be a larger pattern within the USDA of squelching findings that conflict with the Bush administration’s agenda.”<sup>48</sup>

### *B. Rejection and Manipulation of Science*

Not only are there numerous examples where Bush administration officials suppressed science, but they also attempted to shape it in order to achieve pre-conceived goals that were not necessarily the best policy choices from an environmental protection perspective. As several examples illustrate, the science

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<sup>42</sup> *Id.* at 11-16.

<sup>43</sup> *Id.* at 11-12. According to a high level EPA official, who later resigned, the revisions to Dr. Gerberding’s testimony were made in part at the direction of members of Vice President Dick Cheney’s staff. Andrew C. Revkin, *Cheney’s Office Said to Edit Draft Testimony on Warming*, N.Y. TIMES, July 9, 2008, at A12.

<sup>44</sup> Dan Vergano, *Science vs. Politics Gets Down and Dirty; Scientists Are Bitter About What They Call Bush Administration Interference*, USA TODAY, Aug. 7, 2007, at 1D.

<sup>45</sup> *Id.*

<sup>46</sup> UNION OF CONCERNED SCIENTISTS, SCIENTIFIC INTEGRITY IN POLICYMAKING, AN INVESTIGATION INTO THE BUSH ADMINISTRATION’S MISUSE OF SCIENCE 13 [hereinafter MISUSE OF SCIENCE] (2004), available at

[http://www.ucsusa.org/assets/documents/scientific\\_integrity/rsi\\_final\\_fullreport\\_1.pdf](http://www.ucsusa.org/assets/documents/scientific_integrity/rsi_final_fullreport_1.pdf).

<sup>47</sup> *Id.* at 13-14.

<sup>48</sup> *Id.* at 13.

surrounding decisions involving species protection was a favorite target for this tactic.<sup>49</sup>

The Department of the Interior (DOI), for instance, had conducted more than a decade of research into the effects that oil exploration and production in the Arctic National Wildlife Refuge might have on the Porcupine Caribou population.<sup>50</sup> The study ultimately found that oil exploration and production would have an adverse impact on the species.<sup>51</sup> The Bush administration's then Secretary of the Interior, Gale Norton, dismissed the study as "science fiction" and ordered another one.<sup>52</sup> Although the original study had taken over a decade to complete, the new report appeared in a week, and concluded that no adverse impact to the caribou would occur.<sup>53</sup> Not surprisingly, Secretary Norton accepted the second report.<sup>54</sup>

The incident involving Secretary Norton and the Porcupine Caribou was not the only instance of interference with science at the DOI. As a result, in part, of her efforts at scientific manipulation related to species protection, former Deputy Secretary of the Department of the Interior for Fish, Wildlife, and Parks, Julie MacDonald, was the subject of two investigations by the DOI's

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<sup>49</sup> The Bush administration was not favorably inclined toward the Endangered Species Act. One article in the press compared the number of listings that had occurred to date in the administration of George W. Bush with those made during his father's presidency. The reporter determined that the number of new listings during the tenure of George W. Bush in the White House were starkly lower: 231 new listings during George H. W. Bush's administration and only 58 new listings at the time of the article during the administration of George W. Bush. Brad Knickerbocker, *Controversy Erupts Over the Endangered Species Act*, CHRISTIAN SCIENCE MONITOR, July 25, 2007, at 2. Further, the reporter noted that many of the new listings during George W. Bush's administration were forced by litigation. *Id.*

<sup>50</sup> DEMOCRATIC STAFF OF COMM. ON RESOURCES, WEIRD SCIENCE: THE INTERIOR DEPARTMENT'S MANIPULATION OF SCIENCE FOR POLITICAL PURPOSES 4 [hereinafter WEIRD SCIENCE] (2002), available at <http://www.ourforests.org/weirdscience.pdf>.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.* Other instances of dubious science documented in WEIRD SCIENCE include the use of questionable data in determining adequate flows in the Klamath River Basin sufficient to protect threatened species; recommendations that were inadequate to protect threatened salmon despite the death of more than 33,000 of the species in the lower Klamath River; rejection of evidence concerning the harmful effects of emissions from snowmobiles in national parks; failure to correct deficiencies in the Everglades restoration project and failure to establish a program to protect the endangered manatee. WEIRD SCIENCE at 5-13. WEIRD SCIENCE also noted that the Bush administration supported H.R. 4840, which sought to amend the Endanger Species Act to use a "clear and convincing" standard rather than the "best scientific" standard in the listing determination. WEIRD SCIENCE at 7.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

Inspector General's Office.<sup>55</sup> In her capacity at the DOI, Ms. MacDonald's responsibilities involved oversight of agency actions performed under the Endangered Species Act, including the listing of endangered and threatened species and critical habitat designations.<sup>56</sup> Ms. MacDonald was appointed to this position, where she assumed responsibility for these critical scientific activities under the Endangered Species Act, despite the fact that she did not have expertise as a biologist or in any other area of the natural sciences.<sup>57</sup>

The first Inspector General's investigation was triggered by an anonymous complaint that Ms. MacDonald was engaged in unethical and illegal conduct.<sup>58</sup> Specifically, the complaint alleged that Ms. MacDonald "had persistently harassed, bullied, and insulted [Fish and Wildlife Service] employees to change documents and 'ignore good science' related to the Endangered Species Program."<sup>59</sup> When interviewed by investigators, the former Director of the Endangered Species program stated that "many of the scientific reports that his office has issued have been edited extensively by MacDonald."<sup>60</sup> Similarly, the Chief of the Division of Consultation for the Fish and Wildlife Service told investigators that "MacDonald, when evaluating scientific reports, has leaned more toward the question of: 'Does the science fit the policy?',"<sup>61</sup> rather than considering whether the policy fits the science.

Even before the first investigation by the Inspector General's Office, Ms. MacDonald's involvement in the science behind listing determinations under the Endangered Species Act was called into question. To a large degree, her efforts in shaping science to reach a desired outcome – by down-listing the California Tiger Salamander from endangered to threatened – led to a success-

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<sup>55</sup> OFFICE OF THE INSPECTOR GEN., DEPT. OF INTERIOR, INVESTIGATIVE REPORT ON THE ALLEGATIONS AGAINST JULIE MACDONALD, DEPUTY ASSISTANT FISH, WILDLIFE AND PARKS [hereinafter ALLEGATIONS AGAINST JULIE MACDONALD] (2007) and OFFICE OF THE INSPECTOR GEN., DEPT. OF INTERIOR, INVESTIGATIVE REPORT, THE ENDANGERED SPECIES ACT AND THE CONFLICT BETWEEN SCIENCE AND POLICY [hereinafter THE CONFLICT BETWEEN SCIENCE AND POLICY] (2008). Following the first investigation Ms. MacDonald resigned her post at the Department of the Interior. See Knickerbocker, *Controversy Erupts Over the Endangered Species Act*, *supra* note 49.

<sup>56</sup> ALLEGATIONS AGAINST JULIE MACDONALD, *supra* note 55, at 2.

<sup>57</sup> *Id.* at 2, 4.

<sup>58</sup> *Id.* at 4.

<sup>59</sup> *Id.*

<sup>60</sup> *Id.* The Inspector General's first investigation concluded, however, that Ms. MacDonald's conduct did not violate the Endangered Species Act, but did violate regulations prohibiting government employees from disclosing non-public information, since on multiple occasions Ms. MacDonald provided non-public information to private individuals including representatives of industry, lobbyists, and the Pacific Legal Foundation. *Id.* at 18-22.

<sup>61</sup> ALLEGATIONS AGAINST JULIE MACDONALD, *supra* note 55, at 5.

ful challenge in federal district court.<sup>62</sup> The court took note of the fact that just four days before the final rule was due, Ms. MacDonald sent an e-mail to the scientific review team demanding that it take certain action regarding the listing of the salamander.<sup>63</sup> The court found that “[i]t is clear from the record that the scientific review team rushed to respond to the DOI’s new directive by the deadline.”<sup>64</sup> The court ultimately concluded that the action taken “effectively decreased the protection of the salamanders as a whole,”<sup>65</sup> and found that “[t]he final rule was bereft of any analysis . . . [t]he prior finding of biological and ecological significance was ignored. Brute force and *ipse dixit* were substituted without even a semblance of agency reasoning.”<sup>66</sup>

Following the first investigation by the Inspector General’s Office, Ms. MacDonald’s anti-scientific antics served in part to persuade another federal court that the refusal to list the Greater Sage-Grouse as an endangered species was contrary to the law.<sup>67</sup> The judge’s findings were clearly influenced by Ms. MacDonald’s efforts to undermine the science at the very heart of the Endangered Species Act’s listing process.<sup>68</sup> The court’s findings concerning Ms. MacDonald’s involvement in the listing process are telling regarding scientific abuse by Bush administration political appointees in environmental policymaking:

MacDonald’s principal tactic is to steer the ‘best science’ to a pre-ordained outcome. That may explain why so much of the ‘best science’ in this case was verbally communicated and never reduced to writing in any analytical or rigorous manner. This process allows the ultimate decision-makers to subjectively bend the ‘best science’ to their own ends, while obscuring any inconsistencies. In other words, MacDonald’s principal tactic dovetails precisely with the principal weakness in this case. For this reason, MacDonald’s extensive involvement in the sage-grouse listing decision is an independent

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<sup>62</sup> Center for Biological Diversity v. U.S. Fish & Wildlife Serv., 2005 WL 2000928 (N.D. Cal., Aug. 19, 2005).

<sup>63</sup> *Id.* at \*4.

<sup>64</sup> *Id.*

<sup>65</sup> *Id.* at \*13.

<sup>66</sup> *Id.* (emphasis in original).

<sup>67</sup> See, *W. Watersheds Project v. U.S. Fish & Wildlife Serv.*, 535 F. Supp. 2d 1173, 1188 (D. Idaho 2007).

<sup>68</sup> See, 16 U.S.C. § 1533(b)(1)(A) (2006) (the decision whether to list a species as threatened or endangered shall be made “solely on the basis of the best scientific and commercial data available.”).

reason for the Court's finding that the [listing decision] is arbitrary and capricious under the APA.<sup>69</sup>

In light of a negative reaction in Congress towards Ms. MacDonald's conduct, the Inspector General's Office conducted a second investigation.<sup>70</sup> The second investigation focused on the twenty listing decisions that Ms. MacDonald was involved with while at the Department of the Interior.<sup>71</sup> This investigation concluded that Ms. MacDonald's actions "potentially jeopardized the ESA decisional process in 13 of those 20 matters."<sup>72</sup> With respect to the misuse of science to advance a political agenda, the report from the second investigation noted

We reaffirmed findings from previous OIG investigations which showed that MacDonald pursued her agenda by exerting political influence on the FWS Washington Office, regional offices, and field offices. She frequently contested the scientific findings of FWS biologists and often replaced their scientific conclusions with her own, even though she was not a biologist.<sup>73</sup>

The results of the second investigation prompted the Inspector General to write that "MacDonald's zeal to advance her agenda has caused considerable harm to the integrity of the ESA program and to the morale and reputation of the [Fish and Wildlife Service], as well as potential harm to individual species."<sup>74</sup>

Others, too, have raised similar concerns about the attitude of Bush administration political appointees and their misuse of science in environmental policymaking:

No administration has been above inserting politics into science from time to time. However, a considerable number of individuals who have served in positions directly involved in the federal government's use of scientific knowledge and

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<sup>69</sup> *W. Watersheds Project*, 535 F. Supp. 2d at 1188-89.

<sup>70</sup> THE CONFLICT BETWEEN SCIENCE AND POLICY, *supra* note 55.

<sup>71</sup> *Letter to Sen. Ron Wyden, Chairman, Subcommittee on Public Lands and Forests from Earl E. Devaney* (Dec. 15, 2008) [hereinafter *Devaney Letter*] (copy on file with author).

<sup>72</sup> THE CONFLICT BETWEEN SCIENCE AND POLICY, *supra* note 55, at 1.

<sup>73</sup> *Id.*

<sup>74</sup> *Devaney Letter*, *supra* note 71, at 1. Inspector General Devaney also pointed out that Ms. MacDonald's "overreaching" conduct "caused the unnecessary expenditure of hundreds of thousands of dollars to re-issue decisions and litigation costs to defend decisions that, in at least two instances, the courts found to be arbitrary and capricious." *Id.* at 2.

expertise have asserted that the Bush administration is, to an unprecedented degree, distorting and manipulating the science meant to assist the formation and implementation of policy.<sup>75</sup>

The Union of Concerned Scientists was particularly pointed about its criticisms concerning the politicization of science that had occurred during the Bush administration:

When scientific knowledge has been found to be in conflict with its political goals, the administration has often manipulated the process through which science enters into its decisions. This has been done by placing people who are professionally unqualified or who have clear conflicts of interest in official posts on scientific advisory committees; by disbanding existing advisory committees; by censoring and suppressing reports by the government's own scientists; and by simply not seeking independent scientific advice. Other administrations have, on occasion, engaged in such practices, but not so systematically nor on so wide a front. Furthermore, in advocating policies that are not scientifically sound, the administration has sometimes misrepresented scientific knowledge and misled the public about the implications of its policies.<sup>76</sup>

However, even when Bush administration officials appeared to recognize science in environmental policy decisions, controversy followed. In 2008, for instance, the polar bear was listed as a threatened species due to habitat destruction caused by climate change.<sup>77</sup> At first blush this could have signaled an acceptance by administration officials of what scientists were saying about the

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<sup>75</sup> MISUSE OF SCIENCE, *supra* note 46, at 28. See also Russell E. Train, *When Politics Trumps Science*, N.Y. TIMES, June 21, 2003, at A14, available at <http://www.nytimes.com/2003/06/21/opinion/1-when-politics-trumps-science-209236.html?pagewanted=1>. In his letter to the editor, former EPA Administrator Train remarked as follows regarding the Bush administration's interference in environmental policymaking:

Having served as E.P.A. administrator under both Presidents Nixon and Ford, I can state categorically that there never was such White House intrusion into the business of the E.P.A. during my tenure. The E.P.A. was established as an independent agency in the executive branch, and so it should remain. There appears today to be a steady erosion in its independent status.

<sup>76</sup> SCIENTIST STATEMENT, *supra* note 2.

<sup>77</sup> Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Polar Bear (*Ursus maritimus*) Throughout Its Range, 73 Fed. Reg. 28,212 (May 15, 2008) (to be codified at 50 C.F.R. pt. 17).

adverse consequences of a warming planet and a willingness to take responsive action. On the same day, however, the Fish and Wildlife Service promulgated a “special rule” that limited the protection afforded to the polar bear under the Endangered Species Act.<sup>78</sup> Needless to say, this action spawned challenges in federal court.<sup>79</sup>

The regulation of particulate matter under the Clean Air Act during the Bush administration serves as a final example where science was ignored in the environmental policymaking context. EPA promulgated revised particulate matter regulations on October 17, 2006,<sup>80</sup> and they faced immediate challenges in federal court.<sup>81</sup> While the agency lowered the 24-hour standard for fine particulate matter, it did not do so for the annual standard applicable to fine particulate matter.<sup>82</sup> The refusal to do so was contrary to the recommendations of the Clean Air Scientific Advisory Committee (CASAC),<sup>83</sup> which concluded that a more stringent annual standard was called for by several studies.<sup>84</sup> The court found that by ignoring the scientific recommendations of the CASAC, EPA acted contrary to its obligation under the Clean Air Act to establish national ambient air quality standards that were sufficiently protective of human health.<sup>85</sup> Thus, yet

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<sup>78</sup> Endangered and Threatened Wildlife and Plants; Special Rule for the Polar Bear, 73 Fed. Reg. 28,306 (May 15, 2008) (to be codified at 50 C.F.R. pt. 17).

<sup>79</sup> See, e.g., Allison Winter and Ben Geman, *Groups Take Polar Bear Listing Back to Court*, LAND LETTER, May 22, 2008, <http://www.eenews.net/Landletter/2008/05/22/archive/8?terms=polar+bear>.

<sup>80</sup> National Ambient Air Quality Standards for Particulate Matter, 71 Fed. Reg. 61,144 (Oct. 17, 2006) (to be codified at 40 C.F.R. pt. 50).

<sup>81</sup> *American Farm Bureau Fed. v. U.S. Evtl. Prot. Agency*, 559 F.3d 512 (D.C. Cir. 2009).

<sup>82</sup> 71 Fed. Reg. at 61,444.

<sup>83</sup> *American Farm Bureau Fed.*, 559 F.3d at 518.

<sup>84</sup> *Id.*

<sup>85</sup> *Id.* at 520 (“[w]e conclude that EPA failed adequately to explain why, in view of the risks posed by short-term exposures and the evidence of morbidity resulting from long-term exposures, its annual standard is sufficient ‘to protect the public health [with] an adequate margin of safety.’”) (citation omitted).

another federal court took issue with the treatment of science in environmental policymaking by Bush administration officials.<sup>86</sup>

## II. THE OBAMA ADMINISTRATION: THE RETURN OF SOUND SCIENCE TO ENVIRONMENTAL POLICYMAKING?

Even as a candidate, President Obama made it clear that if elected he would restore science to what he viewed as its proper role in policymaking.<sup>87</sup> During his campaign, he asserted that sound science – unfettered by politics – would have an integral role in the policies he adopted and the appointments that he made in his administration.<sup>88</sup>

During his historic run for the White House, candidate Obama foreshadowed the anticipated role that science would play in his administration. During what was dubbed “Science Debate 2008,”<sup>89</sup> presidential candidates John McCain and Barack Obama were asked how they would ensure scientific integrity in their respective administrations. Then-candidate Obama remarked that he would “restore the basic principle that government decisions should be based on the best-available, scientifically-valid evidence and not the ideological predisposition of agency officials or political appointees.”<sup>90</sup> He also remarked that

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<sup>86</sup> After several high profile disagreements with Bush administration officials about the direction of environmental policy, Christine Todd Whitman resigned as the administrator of EPA, citing a desire to spend more time with her husband. Katharine Q. Seelye, *Often Isolated, Whitman Quits as EPA Chief*, N.Y. TIMES, May 22, 2003, at A1, available at <http://www.nytimes.com/2003/05/22/us/often-isolated-whitman-quits-as-epa-chief.html?pagewanted=1>. In a later interview, however, she apparently noted policy differences related to Clean Air Act regulation with Bush administration officials, specifically with Vice President Cheney, as her reason for stepping down at EPA. See Jo Becker and Barton Gellman, *Angler; The Cheney Vice Presidency*, WASHINGTON POST, June 27, 2008, at A01 (“It was the insistence in easing air pollution controls, not the personal reasons she cited at the time, that led Christine Todd Whitman to resign as administrator of the Environmental Protection Agency, she said in an interview that provides the most detailed account of her departure.”), available at [http://voices.washingtonpost.com/cheney/chapters/leaving\\_no\\_tracks/](http://voices.washingtonpost.com/cheney/chapters/leaving_no_tracks/).

<sup>87</sup> See *Investing in America's Future, Barack Obama and Joe Biden's Plan for Science and Innovation*, available at <http://www.barackobama.com/pdf/issues/FactSheetScience.pdf> (last visited Apr. 10, 2010). In this campaign piece, Barack Obama and Joe Biden remarked that they would support technological innovation through a number of means, including “restoring integrity to U.S. science policy to ensure that decisions that can be informed by science are made on the basis of the strongest possible evidence.”

<sup>88</sup> *Barack Obama: Connecting and Empowering All Americans Through Technology and Innovation*, [http://www.barackobama.com/pdf/issues/technology/Fact\\_Sheet\\_Innovation\\_and\\_Technology.pdf](http://www.barackobama.com/pdf/issues/technology/Fact_Sheet_Innovation_and_Technology.pdf) (last visited Apr. 10, 2010).

<sup>89</sup> Through Science Debate 2008 more than 3,400 potential questions were submitted as suggestions, and 14 were selected for the candidates to answer. See *Science Debate 2008*, <http://www.sciencedebate2008.com/www/index.php?id=42> (last visited Apr. 10, 2010).

<sup>90</sup> *Id.*

“I will appoint individuals with strong science and technology backgrounds and unquestioned reputations for integrity and objectivity to the growing number of senior management positions where decisions must incorporate science and technology advice.”<sup>91</sup> Candidate Obama further emphasized that science would play an important part in his presidency if elected: “I have already established an impressive team of science advisors, including several Nobel Laureates, who are helping me to shape a robust science agenda for my administration.”<sup>92</sup>

President Obama, once elected, closely hued to his campaign rhetoric concerning the place of science in his administration. This new dawn for science in the White House began with his inaugural speech where he remarked that “[w]e will restore science to its rightful place . . . .”<sup>93</sup> Only a few months later this was followed by President Obama’s Memorandum on Scientific Integrity,<sup>94</sup> where he wrote:

Science and the scientific process must inform and guide decisions of my Administration on a wide range of issues, including improvement of public health, protection of the environment, increased efficiency in the use of energy and other resources, mitigation of the threat of climate change, and protection of national security.

The public must be able to trust the science and scientific process informing public policy decisions. Political officials should not suppress or alter scientific or other technological findings and conclusions. . . . The selection of scientists and technology professionals for positions on the executive branch should be based on their scientific and technological knowledge, credentials, experience, and integrity.<sup>95</sup>

Indeed, President Obama’s selection of several high level administration political appointees echoes the commitments made in his inaugural address and restated in his Memorandum on Scientific Integrity. One need only consider the appointment of Dr. Steven Chu as Secretary of Energy to see that President

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> Obama *supra*, at note 25.

<sup>94</sup> Memorandum on Scientific Integrity, 74 Fed. Reg. 10,671 (Mar. 9, 2009). On the same day that he issued the Memorandum on Scientific Integrity, President Obama also signed an Executive Order removing the ban from federal funding for embryonic stem cell research. Exec. Order No. 13,505, Removing Barriers to Responsible Scientific Research Involving Stem Cells, 74 Fed. Reg. 10,667 (Mar. 11, 2009).

<sup>95</sup> 74 Fed. Reg. at 10,671.

Obama stood true to his words concerning selection of appointees based on qualifications instead of politics. Dr. Chu, who was awarded the Nobel Prize for Physics in 1997,<sup>96</sup> was sworn into office as the Secretary of Energy on January 21, 2009.<sup>97</sup> Before his confirmation as the Secretary of Energy, Dr. Chu served as a director of the Lawrence Berkeley National Laboratory and was a professor at the University of California.<sup>98</sup> Dr. Chu's expertise in physics and renewable energy sources is much needed in the energy and climate change policy arena.

Similarly, President Obama's appointment of Dr. John Holdren, a Harvard physicist, as the White House science advisor speaks favorably to the commitment to high level appointments made on the basis of qualifications.<sup>99</sup> Dr. Holdren's areas of expertise, which include energy, climate change, and nuclear proliferation,<sup>100</sup> also match up well with the environmental policy demands confronting the Obama administration. Dr. Holdren also serves as the co-chair of the President's Council of Advisors on Science and Technology.<sup>101</sup>

As examples of his commitment to science, the appointments of Dr. Chu and Dr. Holdren to critical administration positions, along with their credentials, are consistent with President Obama's campaign and inaugural address pledge to "restore science to its rightful place."<sup>102</sup> At EPA, another agency where sound science is critical to policymaking integrity, President Obama has appointed Lisa Jackson as administrator. Lisa Jackson is not a scientist,<sup>103</sup> she has, however, publicly recognized the importance of environmental policymaking grounded in sound science:

*Science must be the backbone for EPA programs.* The public health and environmental laws that Congress has enacted depend on rigorous adherence to the best available science. The President believes that when EPA addresses scientific

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<sup>96</sup> See Profile of Dr. Steven Chu, Secretary of Energy, [http://www.energy.gov/organization/dr\\_steven\\_chu.htm](http://www.energy.gov/organization/dr_steven_chu.htm). (last visited Apr. 10, 2010).

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> Carolyn Y. Johnson and Bina Venkataraman, *Obama Chooses Harvard Physicist*, BOSTON.COM, Dec. 19, 2008,

[http://www.boston.com/news/nation/articles/2008/12/19/obama\\_chooses\\_harvard\\_physicist/](http://www.boston.com/news/nation/articles/2008/12/19/obama_chooses_harvard_physicist/).

<sup>100</sup> *Id.*

<sup>101</sup> See Principle PCAST Members,

<http://www.whitehouse.gov/administration/eop/ostp/pcast/about/members> (last visited Mar. 11, 2010).

<sup>102</sup> See Obama, *supra* note 25.

<sup>103</sup> Administrator Jackson is a chemical engineer by education. See Administrator Lisa P. Jackson Biography, <http://blog.epa.gov/administrator/bio/> (last visited Mar. 29, 2010).

issues, it should rely on the expert judgment of the Agency's career scientists and independent advisors. When scientific judgments are suppressed, misrepresented, or distorted by political agendas, Americans can lose faith in their government to provide strong public health and environmental protection<sup>104</sup> (emphasis in original).

A looming question, though, is whether such appointments have resulted in science-based policy decisions in the realm of environmental protection? After only a little more than a year in office, perhaps it is too soon to answer this question. It takes time for a new administration to develop its policy priorities and to transform complex science into policy; this is certainly true when one contemplates the enormous environmental challenges facing our country and the world. Nevertheless, there is evidence that science is indeed driving the environmental policymaking decisions of the Obama administration. To reach this admittedly preliminary conclusion, one only needs to look at the policy decisions that have been made by EPA with respect to climate change during the first year since President Obama was sworn into office.

No longer is climate change science suppressed, distorted, and ignored by the White House and its political appointees. The Obama administration has used the science behind climate change to begin focusing on greenhouse gas emissions.<sup>105</sup> As a first step in this direction, EPA Administrator Jackson granted California's long sought after waiver to regulate greenhouse gas emissions from mobile sources under the Clean Air Act.<sup>106</sup> In reversing the Bush

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<sup>104</sup> See EPA SEMI-ANNUAL REGULATORY AGENDA (Spring 2009) at 3, available at <http://www.epa.gov/regulations/documents/regagendabook-spring09.pdf>.

<sup>105</sup> See Robin Bravender, *EPA Chief Goes Toe-to-Toe With Senate GOP Over Warming Science*, GREENWIRE, Feb. 23, 2010, <http://www.eenews.net/Greenwire/2010/02/23/archive/1?terms=endangerment+finding> (quoting EPA Administrator Jackson as remarking at a hearing before the Senate Environment and Public Works Committee that "[t]he science behind climate change is settled . . . [t]hat conclusion is not a partisan one.").

<sup>106</sup> California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 74 Fed. Reg. 32,744 (July 8, 2009). California first sought a waiver in 2005 but the request was ultimately denied by the Bush Administration. California State Motor Vehicle Pollution Control Standards; Notice of Decision Denying a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 73 Fed. Reg. 12,156 (Mar. 6, 2008). At the request of California, the decision denying the waiver was reconsidered by EPA following the election of President Obama. Greenhouse Gas Regulations; Reconsideration of Previous Denial of a Waiver of Preemption, 74 Fed. Reg. 7,040 (Feb. 12, 2009).

administration's denial of the waiver, Jackson alluded to the science underlying the adverse impacts of a warmer planet:

I have evaluated the comments received and evidence in the record and have determined that the opponents of the waiver have not met their burden in demonstrating why evidence such as the impacts of climate change on existing ozone conditions in California along with the cumulative impacts identified by proponents of the waiver (e.g., impacts on snow melt and water resources and agricultural water supply, wildfires, coastal habitats, ecosystems, etc.) is not compelling and extraordinary.<sup>107</sup>

The second major environmental policy decision driven by climate change science took place on December 15, 2009, when EPA issued the so-called "endangerment finding" concerning the emission of greenhouse gases from mobile sources and the threat to public health and public welfare that such emissions present.<sup>108</sup> The endangerment finding was based on Administrator Jackson's consideration of science and the predicted adverse effects of climate change as a catalyst for regulatory action under the Clean Air Act.<sup>109</sup>

The Administrator has considered how elevated concentrations of the well-mixed greenhouse gases and associated climate change affect public health by evaluating the risks associated with changes in air quality, increases in temperatures, changes in extreme weather events, increases in food- and water-borne pathogens, and changes in aeroallergens. . . . The

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<sup>107</sup> Executive Summary: EPA's Waiver Decision on California's Greenhouse Gas Emission Standard for New Motor Vehicles, *available at*

<http://www.epa.gov/otaq/climate/ghgwaiverexecutivesummary.pdf> (last visited Apr. 10, 2010).

<sup>108</sup> Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act [hereinafter Endangerment Finding], 74 Fed. Reg. 66,496 (Dec. 15, 2009). A multitude of legal challenges to the endangerment finding were promptly filed and are pending. Robin Bravender, 16 "Endangerment" *Lawsuits Filed Before Deadline*, GREENWIRE, Feb. 17, 2010, *available at*

<http://www.eenews.net/Greenwire/2010/02/17/archive/2?terms=endangerment+finding>. Congressional action challenging the Endangerment Finding also has been proposed. Robin Bravender, *House GOP to Launch Another Salvo at EPA Emissions Rules*, GREENWIRE, Mar. 3, 2010, *available at* <http://www.eenews.net/Greenwire/2010/03/01/archive/2?terms=endangerment+finding>.

<sup>109</sup> A section of the Clean Air Act's mobile source provisions, 42 U.S.C. § 7521(a)(1) (2006), provides that the EPA Administrator "shall by regulation prescribe . . . standards applicable to the emission of any air pollutant from any . . . new motor vehicles or new motor vehicle engines, which in [her] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." There is a similar provision applicable to stationary sources of air pollutants. *See, e.g.*, 42 U.S.C. § 7408(a)(1) (2006).

evidence concerning how human-induced climate change may alter extreme weather events also clearly supports a finding of endangerment, given the serious adverse impacts that can result from such events and the increase in risk, even if small, of the occurrence and intensity of events such as hurricanes and floods. Additionally, public health is expected to be adversely affected by an increase in the severity of coastal storm events due to rising sea levels.<sup>110</sup>

A third major science-based environmental policy development on the climate change front by the Obama administration is to require mandatory annual reporting of greenhouse gas emissions by major sources.<sup>111</sup> Under this new directive, a variety of sources, including stationary sources that emit at least 25,000 metric tons of greenhouse gases, are required to tabulate and report emissions to EPA each year.<sup>112</sup>

Thus, unlike the agency under the Bush administration, the Lisa Jackson-led EPA has taken substantial steps to regulate greenhouse gas emissions under the Clean Air Act.<sup>113</sup> EPA is no longer standing as a roadblock to the urgent action that scientists are telling us must be taken to stem the catastrophic effects that are predicted if no or limited action is taken to curb greenhouse gas emissions.<sup>114</sup> Instead, EPA under Administrator Jackson is pressing forward in

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<sup>110</sup> 74 Fed. Reg. at 66,497-98. The Endangerment Finding also was supported by a voluminous technical support document, which relied extensively on the work conducted by the Intergovernmental Panel on Climate Change and other scientific organizations. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act: EPA's Response to Public Comments, Vol. 1 General Approach to Science and Other Issues, available at <http://www.epa.gov/climatechange/endangerment/downloads/RTC%20Volume%201.pdf>.

<sup>111</sup> Mandatory Reporting of Greenhouse Gases; Final Rule, 74 Fed. Reg. 56,260 (Oct. 30, 2009) (to be codified at 40 C.F.R. pts. 86-87, 89-90, 94, 98, 1033, 1038, 1042, 1045 and 1048).

<sup>112</sup> See *id.* at 56,266-67 for a list of sources to which the mandatory greenhouse gas reporting rule applies. President Obama has also been willing to put money towards his scientific rhetoric. See, e.g., Jeffery Mervis, *Science Spared From Domestic Spending Freeze—For Now*, 327 SCIENCE 628 (Feb. 5, 2010) (“[d]espite his pledge to freeze domestic discretionary spending . . . President Obama has asked Congress to boost science spending across the federal budget.”) and Andrew Lawler, *Obama Backs New Launcher and Bigger NASA Budget*, 327 SCIENCE 18 (Jan. 1, 2010).

<sup>113</sup> For a discussion of the challenges presented by using the Clean Air Act to address greenhouse gas emissions, see William F. Pedersen, *Adapting Environmental Law to Global Warming Controls*, 17 N.Y.U. ENVTL. L.J. 256 (2008).

<sup>114</sup> In a similar vein the Council on Environmental Quality recently issued draft guidance discussing how federal agencies could better account for the effects of climate change when evaluating government actions subject to the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347 (2006). Nancy H. Stutley, Memorandum for Heads of Federal Departments and Agencies, Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (Feb. 18, 2010) (copy on file with author).

light of climate change science to take steps to regulate greenhouse gas emissions for the first time.

This is not to suggest, however, that the environmental policies of the Obama administration are without their critics. Environmentalists have been dismayed by President Obama's views on nuclear power, offshore oil drilling, and clean coal technologies such as carbon capture and sequestration.<sup>115</sup> Criticism has also been directed at the Obama administration's decision to retain the Bush-era polar bear special rule.<sup>116</sup> Such criticisms, however, are directed at specific policy choices and are not made on the basis that the Obama administration is suppressing, distorting, or ignoring science in its environmental policymaking decisions.<sup>117</sup>

The specter of politics has, of course, also been raised at EPA; specifically, there have been accusations that the Obama administration has made efforts to quiet those critical of President Obama's support for a cap and trade bill as part of his climate change agenda.<sup>118</sup> Again, while this dispute at EPA involves politics and environmental policymaking, it too does not raise allegations of scientific abuse by the White House or Obama administration political appointees.

It is likely that the criticisms of the Obama administration's environmental policies to date reflect a simple fact of life within any policy realm in Washington. That is, given the highly charged political space that the President and other policymakers roam through today, no policy-related decision will escape criticism. Even the announcement of Lisa Jackson as President Obama's choice

<sup>115</sup> See, e.g., John M. Broder, *Environmental Advocates Are Cooling on Obama*, N.Y. TIMES, Feb. 18, 2010, at A18.

<sup>116</sup> Allison Winter, *Interior Will Keep Bush's Polar Bear Rule*, GREENWIRE, May 8, 2009, available at <http://www.eenews.net/Greenwire/2009/05/08/archive/1?terms=polar+bear+AND+obama> (quoting one critic as saying "[w]e're very disappointed that Secretary Salazar decided not to cut through the red tape and restore protections for polar bears immediately."). For a summary of the polar bear rule see *supra* Section I(B).

<sup>117</sup> See Broder, *Environmental Advocates Are Cooling on Obama*, *supra* note 114 (reporting that "the grumbling of the greens has grown louder in recent weeks as Mr. Obama has embraced nuclear power, offshore oil drilling and 'clean coal' as keystones of his energy policy.").

<sup>118</sup> Ed O'Keefe, *Eye Opener: Is EPA Silencing Obama Critics?* WASHINGTON POST, Nov. 10, 2009, available at

[http://voices.washingtonpost.com/federal-eye/2009/11/eye\\_opener\\_is\\_epa\\_silencing\\_ob.html](http://voices.washingtonpost.com/federal-eye/2009/11/eye_opener_is_epa_silencing_ob.html) (discussing that two EPA lawyers were told to remove a YouTube video criticizing cap and trade for greenhouse gas emissions). The two had previously written an editorial also critical of pending climate change legislation. Laurie Williams and Allan Zabel, *Cap-and-Trade Mirage*, WASHINGTON POST, Oct. 31, 2009, available at

<http://www.washingtonpost.com/wp-dyn/content/article/2009/10/30/AR2009103002988.html>.

According to Ed O'Keefe's column, the agency only requested removal of the video after the publication of the Op-Ed piece critical of cap and trade.

to head EPA had its critics.<sup>119</sup> But setting aside the issue of whether certain criticisms directed at her nomination were valid, it is clear that Administrator Jackson has been far from shy about embracing science to forge ahead and tackle climate change, the issue that scientists are telling us is the greatest environmental threat we face.

## CONCLUSION

Sound science serves as a critical pillar of our environmental policymaking infrastructure. Without thoughtfully, objectively, and honestly considering the underlying science, environmental policymaking efforts will miss the mark. Without a solid grounding in science, environmental policies will not achieve environmentally beneficial results, be they reductions in greenhouse gas emissions, improvements in water quality by minimizing non-point sources of pollutants, protections for endangered species, or a reduction in the impact of acid rain in the forests of the northeastern United States.

Those tempted to elevate predetermined, politically-driven goals above science are surely mindful that environmental policy is always assessed through a variety of methods. Environmental policies may be assessed, for example, through a cost-benefit analysis or subject to assessment through the political process, as policymakers are acutely aware. Ultimately, though, environmental policies invariably confront the complexities of the natural world. This is perhaps the most demanding assessment that environmental policies will face. If they are divorced from science, environmental policies may still survive a cost-benefit analysis and they may even pass political muster. If developed in the absence of sound science, however, it is highly doubtful that environmental policies will withstand the rigorous scrutiny they will confront in the natural world.

The ultimate assessment that all environmental policies face – the unwavering, apolitical assessment of their effectiveness in the natural world – apparently was forgotten by the Bush administration. Science was not respected as a critical component of the environmental policymaking infrastructure. The power of science was certainly understood; and it was therefore routinely suppressed, manipulated, and ignored by the administration's political appointees as they developed environmental policies ranging from climate change to spe-

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<sup>119</sup> See, e.g., Kate Sheppard, *N.J. Enviro Deeply Divided Over Record of Obama's EPA Nominee*, GRIST (Jan. 5, 2009), available at <http://www.grist.org/article/The-Lisa-of-our-concerns/> (quoting one critic as saying "I was sadly disappointed, as were many folks in the environmental community in New Jersey, by [Lisa Jackson's] performance as commissioner of the DEP.").

cies protection to air quality standards. Politics, rather than science, dictated the actions that were taken or not taken during the Bush administration to address a variety of domestic and global environmental challenges.

Science thus far has found a much more receptive audience in the Obama administration, as demonstrated by the steps that have been taken in less than a year to address climate change. While it is too soon to conclude that science is completely welcome in the Obama administration, or that his administration's environmental policies can withstand scrutiny by the natural world, one can say that after his first year in office, President Obama has made great strides towards restoring "science to its rightful place" within the realm of environmental policymaking.<sup>120</sup>

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<sup>120</sup> See Obama, *supra* note 25.