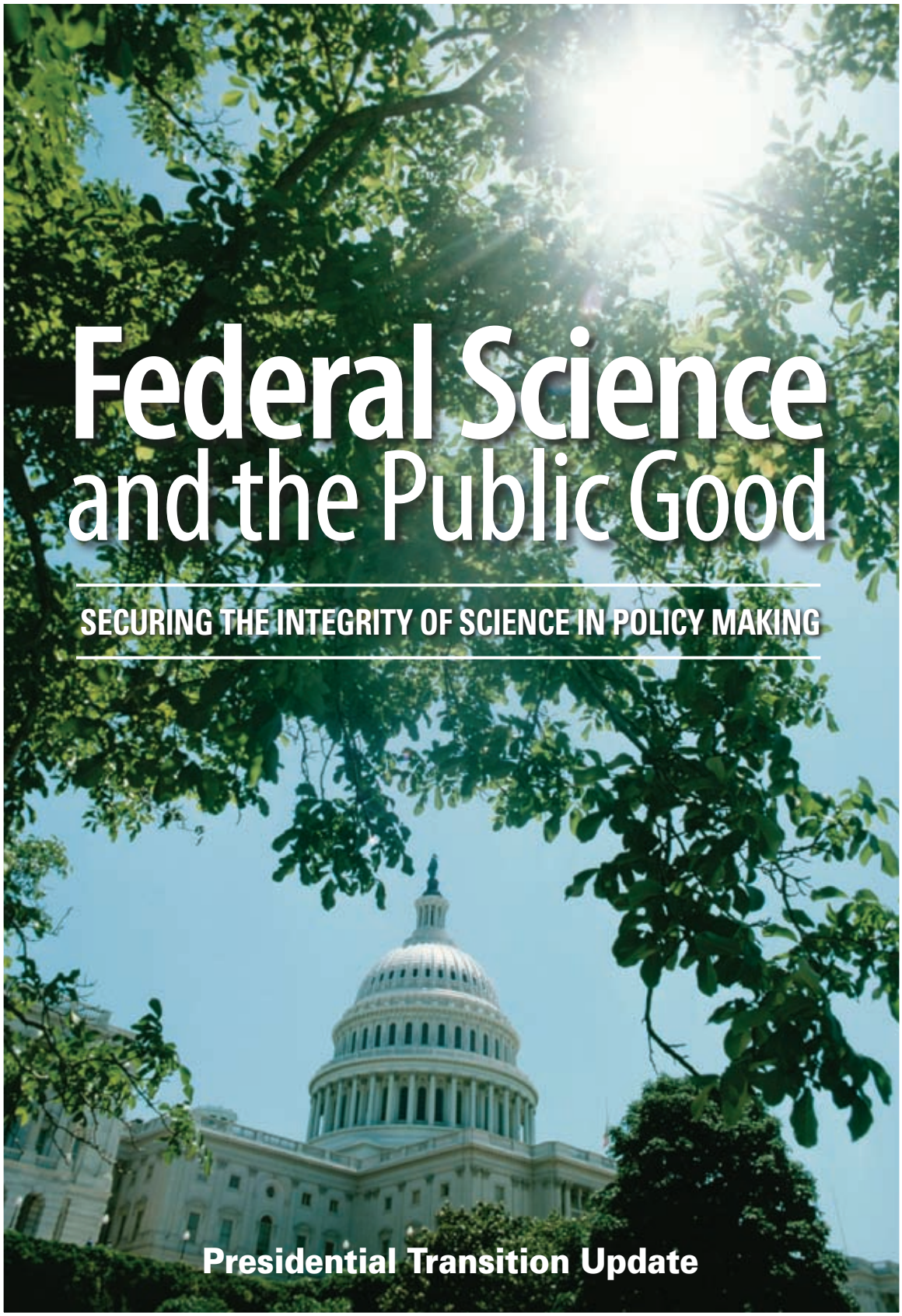


# Federal Science and the Public Good

## SECURING THE INTEGRITY OF SCIENCE IN POLICY MAKING

**Presidential Transition Update**

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

# Federal Science and the Public Good

## SECURING THE INTEGRITY OF SCIENCE IN POLICY MAKING

### Presidential Transition Update

Union of Concerned Scientists
Scientific Integrity Program

DECEMBER 2008

The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world.

The UCS Scientific Integrity Program mobilizes scientists and citizens alike to defend science from political interference and restore scientific integrity in federal policy making. More information about UCS and the Scientific Integrity Program is available online at *www.ucsusa.org/scientific_integrity.*

The full text of this report is available on the UCS website *(www.ucsusa.org/publications)* or may be obtained from:

UCS Publications
2 Brattle Square
Cambridge, MA 02238-9105

Or email *pubs@ucsusa.org* or call (617) 547-5552.

DESIGN: David Gerratt/NonprofitDesign.com
COVER PHOTOS: © Jupiterimages Corp.

# Contents

## Text Boxes

# Contributors

**Francesca Grifo** is the senior scientist and director of the UCS Scientific Integrity Program. She holds a Ph.D. in botany from Cornell University.

**Timothy Donaghy** is an analyst with the UCS Scientific Integrity Program. He holds a Ph.D. in physics from the University of Chicago.

**Patrick Baur**, now a research assistant at the National Academies, was an intern with the UCS Scientific Integrity Program. He holds a B.A. in environmental science and public policy from Harvard University.

**Michael Halpern** is the program manager for the UCS Scientific Integrity Program. He holds B.A. degrees in communication studies and sociology from Macalester College.

**Karly Kaufman** is the legislative assistant for the UCS Scientific Integrity Program. She holds a B.S. in environmental policy analysis from the University of California–Davis.

**Meredith McCarthy** is an analyst with the UCS Scientific Integrity Program. She holds an M.S. in astronomy from the University of Maryland–College Park.

**Celia Wexler** is the Washington representative for the UCS Scientific Integrity Program. She holds an M.A. in journalism from Point Park University.

# Acknowledgments

This report was made possible in part by the generous financial support of the Beldon Fund, the Gunther Family, The William and Flora Hewlett Foundation, The Stephen and Tabitha King Foundation, Open Society Institute, The David and Lucile Packard Foundation, The Streisand Foundation, and the Mendel McCormack Fund of the Tides Foundation.

This report would not have been possible without the valuable input of hundreds of former and current federal government scientists who shared their stories, their time, and their experiences.

The authors would like to thank Mark Cohen, Tom Devine, Peter Frumhoff, Kurt Gottfried, Matt Madia, Rick Melberth, Sean Moulton, Rick Piltz, Kathy Rest, and Suzanne Shaw for their wisdom and helpful comments. UCS would like to thank Sandra Hackman and Heather Tuttle for their masterful editing, David Gerratt for his deft layout and design, and Emily Neaville for the report photos and captions.

The opinions expressed in this report do not necessarily reflect the opinions of the foundations that supported this work, or of the individuals who reviewed and commented on it. Both the opinions and the information contained herein are the sole responsibility of the authors.

# Executive Summary

The United States has enjoyed prosperity and health in large part because of its strong and sustained commitment to independent science. As the nation faces new challenges at home and growing competitiveness abroad, the need for a robust federal scientific enterprise remains critical. Unfortunately, an epidemic of political interference in federal science threatens this legacy, promising serious and wide-ranging consequences.

Political interference in science has penetrated deeply into the culture and practices of federal agencies. These systemic problems cannot be resolved quickly or simply. An unwavering commitment to scientific integrity from President-elect Barack Obama, continued oversight by the 111th Congress, and the persistent and energetic engagement of many different stakeholders are critical.

This interference in science threatens our nation's ability to respond to complex challenges to public health, the environment, and national security. It risks demoralizing the federal scientific workforce and raises the possibility of lasting harm to the federal scientific enterprise. Most important, it betrays public trust in our government and undermines the democratic principles upon which this nation was founded.

## Restoring Scientific Integrity to Federal Policy Making

The damage done to the federal scientific

COURTESY OF HILTON KELLEY

**Political interference in federal science endangers the health and safety of our nation's communities.**

enterprise can be fixed, but executive and legislative branch leadership on several issues will be necessary to accomplish this. Specifically, policy makers should take concrete steps to restore scientific integrity in five crucial areas:

- **Protecting government scientists.** Federal scientists and researchers have a responsibility to the public, but to fulfill it their agencies must provide an environment free of political interference. One frontline defense against abuse of science is to explicitly extend whistle-blower protections to scientists who report such abuses. Existing whistle-blower laws should be strengthened, and the failed system to investigate claims of retaliation should be reformed.

- **Making government more transparent.** An open government is the best safeguard against corruption, and federal officials should take concrete steps to improve transparency. The administration should enact policies that presume that government information is public knowledge, to be withheld only when essential. Specific changes to policies regarding Freedom of Information Act requests, classification of information, and reporting of meetings between government officials and outside entities could give the public greater insight into how its government is run. The public also needs greater access to federal science through smarter use of information technology and the reform of agency media and publication policies. The administration should also clarify and improve their rules regarding conflicts of interest for employees.

- **Reforming the regulatory process.** Congress and the executive branch created regulatory agencies to implement and enforce various laws, and a balance should therefore be struck between White House priorities and agency independence. The president should institute a regulatory process that respects the scientific expertise of the regulatory agencies, and restrains revisions of agency science by both the Office of Management and Budget (OMB) and other agencies. This regulatory process should repeal or reverse the three main tenets of executive order 13422. Agencies should also provide more information to the public regarding how their regulatory decisions are made.

- **Ensuring robust scientific input to federal decision making.** The federal system for appointing scientific advisory committees should be reformed to end political litmus tests, and to better prevent conflicts of interest from undermining the decision making of such committees. To ensure that it has access to timely and objective scientific advice, Congress should reinstate the Office of Technology Assessment. The president should appoint a cabinet-level science adviser, and should expand the network of advisers providing scientific expertise to the president.

- **Strengthening monitoring and enforcement.** The president should value the information gathered by data-monitoring programs, and consider that information in decision making. Federal agencies should compile an easily searchable database of information from environmental-monitoring programs, and also investigate the need for additional programs and ways of compiling and reporting data so stakeholders can easily use the information. And Congress should investigate the ways in which reduced or eliminated enforcement and a lack of prosecution of violators undermine the integrity of science.

We will continue to engage with these stakeholders to further develop these solutions as we create a detailed plan for the 2009 presidential transition.

## Patterns of Abuse

This report documents political interference in science in numerous federal scientific and regulatory agencies. This interference can take many different forms, including:

ISTOCKPHOTO.COM/ISMET SALAHOR

**The revolving door for officials who shuttle between high-level government positions and regulated industries has harmed the integrity of federal science.**

- **Falsifying data and fabricating results.** Federal officials with little or no scientific background have misrepresented scientific data and presented scientific results not based on actual research.

- **Selectively editing reports and creating false uncertainty.** Political appointees have selectively deleted evidence from scientific documents, and exaggerated uncertainty in scientific findings.

- **Tampering with scientific procedures.** Federal agencies have replaced standard scientific procedures with flawed methodologies, biased toward finding predetermined results.

- **Intimidating and coercing scientists.** High-level administration officials have directly pressured researchers at federal agencies to alter scientific findings, threatening reprisal if they refuse.

- **Censoring and suppressing scientists.** Federal officials have prevented scientists from communicating with their colleagues, the media, and the public.

- **Hiding, suppressing, and delaying release of scientific findings.** Federal officials have buried scientific findings and prevented their public release.

- **Disregarding legally mandated science.** Federal agencies have repeatedly ignored scientific research that, by law, must form the basis for certain policy decisions.

- **Allowing conflicts of interest.** Officials with clear conflicts of interest have held key positions throughout the federal government, from which they have made decisions harming the integrity of federal science.

- **Corrupting scientific advisory panels.** Political interests have manipulated the process for selecting members of independent scientific advisory panels.

## Changing the Rules

Beyond the system-wide epidemic of interference, the Bush administration has instituted deeper changes in the structure and policies of the executive branch. Without a strong commitment to scientific integrity from the president and Congress, these changes may ensure that politicization of science will continue after President Bush leaves office.

- **Centralizing decision making and the unitary executive.** The Bush administration has invoked the theory of the "unitary executive" to justify tight White House control over federal agencies. For example, President Bush has greatly expanded the use of signing statements. He has used them to assert his right to ignore or disobey any laws or requests he

considers unconstitutional, including congressional requests for scientific information and whistle-blower rights for federal employees. Executive order 13422 dramatically expands the role of the OMB in reviewing all agency regulations, including the scientific basis for regulations.

- **Homogenizing agency decision making.** The White House has sought to replace the policies of individual agencies regarding peer review of scientific findings, risk assessment, and cost-benefit analysis with inappropriate government-wide standards, ignoring the reality that each federal agency requires different tools to best fulfill its mission.

- **Reducing transparency.** The Bush administration has limited government transparency and accountability by preventing public disclosure of information on the internal workings of the federal government. New policies regarding Freedom of Information Act requests and classification of government documents have created a "presumption of secrecy." In this approach, agencies automatically keep information from public view unless someone specifically requests it, or the law requires them to disclose it.

- **Adding unnecessary bureaucracy.** New demands, including interagency review and excessive legal challenges from industry, have prevented federal agencies from acting promptly to protect public health and safety.

- **Retaliating against whistle-blowers.** The Bush administration's penchant for secrecy and centralizing executive power has increased the vulnerability of federal employees who blow the whistle on government waste, fraud, or abuse.

- **Foxes guarding the henhouse.** The revolving door for officials who shuttle between high-level government positions and regulated industries has harmed the integrity of federal science. The legacy of political appointees with conflicts of interest lives on in the agencies after their departure—through both the flawed policies they helped enact and the erosion of public trust in agency integrity.

- **Removing science from decision making.** Administration officials have often simply shut out scientists and scientific information from the policy discussion.

- **Weakening enforcement and monitoring.** Many federal agencies have seen their ability to enforce the nation's laws decline under the Bush administration. In many cases, agencies are simply not collecting the data they need to ensure robust enforcement.

## The First 100 Days

During the first 100 days of his administration, we urge President Obama to:

- Appoint a widely respected scientist to be a cabinet-level assistant to the president for science and technology.
- Instruct agency heads to refrain from retaliating against whistle-blowers.
- Publicly commit to the principles of open government and create policy-making processes that presume all government information is public knowledge, to be withheld only when necessary.
- Instruct the heads of scientific and regulatory agencies to issue memos to their staffs indicating their commitment to open government and stating that scientific integrity is a crucial component to achieving their missions.
- Issue an executive order outlining his regulatory process that reverses the three major tenets of executive order 13422 and restricts the role of the OMB in reviewing the scientific work of the executive branch agencies.

## Concluding Thoughts

Implementing these recommendations will be difficult but not impossible. Strong leadership at the top of the executive branch and federal agencies will go a long way toward ensuring progress. Although incremental changes can improve the culture of these agencies, the leadership of President-elect Obama will be essential in creating significant and lasting reform.

# Introduction

A strong and sustained U.S. investment in independent science has brought the nation significant economic progress, science-based public policy, and unequaled global scientific leadership. As the country faces extraordinary challenges in the coming years, a robust federal scientific workforce and public trust in government decision making are even more critical.

The federal government runs on vast amounts of information, and makes policy decisions every day that affect the health and well-being of all Americans. Although science is rarely the only factor driving public policy, scientific input should always be weighed from an impartial perspective. Unfortunately, numerous independent investigations have documented a pattern of suppression, manipulation, and distortion of federal science before it enters the policy process. Under the outgoing George W. Bush administration, political interference in science has indeed become pervasive.

Furthermore, recent changes in the structure of the federal government impair the ability of federal scientists to fulfill their responsibility to serve their agencies and the public interest. Federal scientists find themselves under growing surveillance and control. Administration officials have curtailed public access to scientific information, and subtle systemic changes have sidelined scientists and advisory committees that previously helped inform the policy-making process. In too many cases, these officials have used tainted science to justify misguided policies.

The consequences of these practices are profound. Policy makers cannot make informed decisions without access to the best available scientific information. Even worse, the misuse of science threatens our nation's ability to respond to increasingly complex public health, environmental, and security challenges. Such interference significantly decreases the effectiveness of federal agencies such as the Food and Drug Administration, the Consumer Product Safety Commission, and the Environmental Protection Agency. It risks demoralizing the federal scientific workforce and raises the possibility of lasting harm to the federal scientific enterprise. And it makes our government less accountable to the citizens it is supposed to serve.

President Barack Obama and the 111th Congress should act immediately to halt these abuses and implement reforms and safeguards to prevent them from recurring.

In this report we provide detailed recommendations for restoring scientific integrity to federal policy making. These reforms include enacting whistle-blower protections for government scientists and researchers, increasing government transparency, reforming the regulatory process to protect independent science, improving scientific advice to the government, and strengthening monitoring and enforcement. Improving the way that science informs the decision-making process will require strong leadership at the top of the executive branch, as well as the persistent and energetic engagement of Congress, the scientific community, and the public.

Chapter 1 of this report outlines our detailed recommendations to President-elect Obama and the 111th Congress for restoring scientific integrity to federal policy making. Chapter 2 of this report briefly explores the ways that the George W. Bush administration directly misused science during his tenure. Chapter 3 delves into the systemic changes that have made it more difficult for federal scientists to serve the public interest.

CHAPTER 1

# Restoring Scientific Integrity to Federal Policy Making

Federal scientists and researchers have endured widespread political interference in their scientific work over the past several years. The resolution of this systemic problem will require a sustained effort by President-elect Obama, the new agency heads, and the new Congress. In this chapter we outline concrete steps that should be taken to restore scientific integrity to federal policy making and to bring about a reliable and productive federal scientific enterprise. **Specific recommendations are in bold lettering for easy reference.** We also provide a summary of these recommendations at the end of the chapter as scientific integrity "checklists" for Congress, the president, and the new agency heads.

**In UCS surveys, 1,413 scientists across nine agencies have reported that they fear retaliation for openly expressing their concerns about the mission-driven work of their agencies.** (UCS 2008a)

© JUPITER IMAGES CORP.

Restoring scientific integrity requires a five-pronged approach:

- Scientists and researchers should have the protections they need to fulfill their responsibilities to the public.
- Government operations and decision-making processes should become more transparent, so political interference in science can be exposed and corrected.
- The regulatory process should be fundamentally reformed, to protect the important role of independent science in that process.
- Policy makers need better mechanisms for obtaining high-quality advice from scientists and researchers, so that they have accurate information on which to base their decisions.
- Congress and the president should investigate existing scientific monitoring programs to ensure that resources needed to enforce existing laws are in place and that political interference has not harmed those programs.

In crafting these solutions, we have drawn on ideas put forward by a number of organizations that track government integrity and effectiveness, most notably two presidential transition projects convened by OMB Watch, a nonprofit government watchdog organization, on transparency (21st Century Right To Know Project 2008) and regulatory reform (Bass et al. 2008), but also work by the National Academies, the Government

Accountability Project and other organizations. Additional policy recommendations are adapted from reforms proposed in legislation but not enacted in the 110th Congress, such as the Federal Advisory Committee Act Amendments Act, the Executive Branch Reform Act, and the Whistleblower Protection Enhancement Act.

It is our hope that restoring the integrity of science will figure heavily in the presidential transition process and the first months of the new administration. We will continue to develop and refine these solutions as we create a more detailed plan for consideration by the Obama administration and the 111th Congress.

ISTOCKPHOTO.COM/P. WEI

**The engagement of the scientific community is essential to restoring the integrity of science in federal policy making.**

## Scientific Freedom and the Public Good

Scientific knowledge and its successful applications have played a large role in making the United States of America a powerful nation and its citizens increasingly prosperous and healthy. The challenges that face the United States in the twenty-first century can only be met if this tradition is honored and sustained.

To that end, the U.S. government must adhere to high standards of scientific integrity in forming and implementing its policies. Breaches of this principle have damaged the public good and the international leadership of the United States. To meet its obligation to serve the public interest, the government must have reliable scientific work and advice at its disposal, and provide the public with reliable scientific information. This requires the government to provide federal scientists with the resources and the professional environment necessary to carry out their missions effectively and honestly. The government should also draw on the knowledge of federal scientists and of the larger scientific community to formulate public policy in an objective and transparent manner.

Scientists employed by government institutions commit themselves to serve the public good free from undisclosed conflicts of interest and to carry out science that is reliable and useful, while respecting statutory limitations such as national security laws. Therefore, government scientists should, without fear of reprisal or retaliation, have the freedom:

- to conduct their work without political or private-sector interference;
- to candidly communicate their findings to Congress, the public, and their scientific peers;
- to publish their work and to participate fully in the scientific community;
- to disclose misrepresentation, censorship, and other abuses of science; and
- to have their technical work evaluated by scientific peers.

We call on Congress and the executive branch to codify these freedoms, to establish stronger means for gathering scientific advice, and to take concrete steps to enhance transparency, so as to create conditions conducive to a thriving scientific enterprise that will serve our democracy with integrity and bring the full fruits of science to all Americans and to the world.

## A. Protecting Government Scientists


INDEX OPEN/EYECANDY IMAGES

Federal scientists and researchers need certain rights and protections to fulfill their responsibility to the U.S. public. One frontline defense against political interference in science is to specifically affirm that scientists who report such abuses are protected from retaliation. Existing whistle-blower laws should be strengthened for all federal employees, and the failed system for investigating claims of retaliation should be reformed.

The administration should support legislation to strengthen the rights of federal employees who blow the whistle on fraud and corruption, and to ensure wider application and stronger enforcement of those rights.

**A.1. Congress should pass the strongest possible whistle-blower protection legislation and the president should sign it into law.** Court decisions have greatly weakened the Whistle-blower Protection Act of 1989 over the past two decades. In 2007, the U.S. House and Senate each passed, by overwhelming margins, whistle-blower protection bills, and came close to passing a final House-Senate compromise bill by the end of the 110th Congress. The next Congress must build on the progress made last year and pass a final law that:

- Makes clear that whistle-blower protections from retaliation apply to federal employees who report efforts to alter or suppress research or technical information
- Gives federal employees the same access to jury trials that Congress has given to millions of private-sector workers

**A.2. Congress should strengthen the Merit Systems Protection Board and Office of Special Counsel to make them capable of providing federal employees a secure means of reporting misconduct and corruption, and of protecting them from unlawful retaliation.** For more information on these institutions, see page 42.

**A.3. The president should direct agency heads to refrain from retaliating against whistle-blowers through reassignments, demotions, or terminations.** Agency heads should also issue a statement that encourages staff to speak out internally about concerns—especially those involving an abuse of science—and state that the agency values their input.

**A.4. During the confirmation process, Congress should question agency nominees about their views on whistle-blowers. After nominees are confirmed, Congress should hold them accountable for whistle-blower retaliations that occur in their respective agencies.**

**A.5. Following enactment of these reforms, the president should instruct agencies to proactively educate government scientists and researchers regarding their rights and protections.** These efforts could include mandatory briefings for new hires, requirements for posting educational information in workplaces, and in-service trainings.

## B. Making Government More Transparent


INDEX OPEN/ABLESTOCK

The integrity of federal science is threatened in no small part by decisions made behind closed doors. Opening up federal science and decision making to scrutiny from Congress and the public is an important, and inexpensive, means of revealing and ending political interference in science. The public needs greater access to federal science through better disclosure of regulatory decision making, wider use of information technology, and the reform of agency communication policies to allow scientists and researchers to freely share their expertise. An open government is the best safeguard against corruption and abuse of power, and is a necessary ingredient of democracy.

**B.1. The president should publicly commit to the principles of open government and should create policy-making processes that presume that all government information is public knowledge, to be withheld only when necessary.**

**B.1.1. The president should state in his inaugural address that he will oversee the most open, honest, and accountable government ever.**

**B.1.2. The president should immediately send a memo to agency heads outlining the principles of openness that will guide his administration. The memo should be followed up with an executive order that implements those principles, including:**

- A presumption that government information should be routinely made available to the public (apart from certain well-defined exemptions). The federal government should release information to the public as a matter of course, not only in response to a Freedom of Information Act (FOIA) request. The attorney general should provide guidance to the agencies on the release of information and should ensure that any legal withholding of information is narrowly and clearly defined.
- Basic information on how the government runs should be freely and easily available to the public. The administration should create a searchable database containing information on who receives federal funding, how that money is spent, who is lobbying the executive branch, and the names and backgrounds of top executive branch decision makers.

**[The integrity of the scientific work produced by FDA could best be improved by] Stopping "secret" meetings between Managers and industry & subsequent decisions without reviewer participation.**

A scientist from the Center for Devices and Radiological Health of the Food and Drug Administration (UCS 2006a)

## B. MAKING GOVERNMENT MORE TRANSPARENT

The president should instruct agency heads to issue similar openness memos to their staffs and to implement this commitment to open government (for a historical example, see Ruckelshaus 1983). Agencies should affirm the public's right to access many types of government information by posting statements in government offices and referring to these rights in agency communications.

**B.1.3. The president should build upon the guidelines for the release of scientific information issued in May 2008 by the White House Office of Science and Technology Policy (OSTP).** The America COMPETES Act, enacted in August 2007, requires the OSTP to consult with all federal agencies that conduct scientific research, and to develop principles and guidelines for agencies for disseminating scientific information (OSTP 2008). While these guidelines are a step in the right direction, the next president should improve upon them to be consistent with the principles of scientific openness outlined in sections B.2 and B.3.

**B.2. The president should instruct the science adviser to develop guidelines and require agencies to adopt policies based on these guidelines that ensure free and open communication between scientists and researchers, and the media, policy makers, and the public.**

**B.2.1. Agencies should implement media policies that incorporate the following principles:**

- *Scientists and researchers may freely express their personal views*. Scientists and researchers, as any federal employees, have a right to express their personal views outside of a few narrow restrictions (such as releasing classified or proprietary information). Provided that a scientist makes an explicit disclaimer that he or she is speaking as a private citizen and is not seeking to represent official agency policy, he or she should be allowed to speak freely about his or her research and to offer his or her *scientific* opinions—even in situations where the research may be controversial or have implications for agency policy. Agency policies governing communication with the media should make this option clear and explicit to employees.
- *Scientists and researchers have the right to review, amend, and comment publicly on the final version of any document or publication that significantly relies on their research, identifies them as an author or contributor, or purports to represent their scientific opinion.* While editing by non-scientists is often necessary and useful, final review by scientific experts is essential to ensuring that accuracy has been maintained in the clearance process.

**Scientists should be free to communicate with the media, rather than having media contacts filtered by "Public Affairs" officers. This should be official policy, not a "wink and nod" policy.**

A scientist from the National Oceanic and Atmospheric Administration (UCS and GAP 2007)

B. MAKING GOVERNMENT MORE TRANSPARENT

- *Agency employees have clearly defined responsibilities in working with the media.* Employees are responsible for the accuracy and integrity of their communications and should not represent the agency on issues of politics or policy without prior approval from the agency's public affairs officer (PAO). Employees are also responsible for working with the PAO to make significant research developments accessible and comprehensible to the public.
- *PAOs have clearly defined roles, such as responding promptly to media inquiries and providing journalists and agency staff with accurate information, but not acting as "gate-keepers" of information.* Scientists and researchers should not be required to obtain pre-approval from the PAO before responding to a media request about their research. However, requiring scientists and researchers to give the PAO prior notice of such interactions when possible, and to recap the interview afterward, is appropriate.
- *If whistle-blower protection reforms are enacted by Congress, employees should be informed of those rights.*
- *Employees that leave federal service should not be required to sign non-disclosure agreements that restrict disclosure beyond classified or proprietary information.*

**B.2.2. Public affairs staff should have a plan for disseminating the media policy to agency scientists and researchers and should conduct trainings in effective media communication that emphasize scientific openness.** The official agency media policy should be publicly available on the agency website.

**B.3. The president should instruct the science adviser to review agency policies on the clearance of official and non-official publications, presentations, and other information.** Information sharing is an essential component of the scientific process. While the broad direction of federal research is dictated by agency missions and funding priorities, federal scientists and researchers should be free to conduct that research and publish findings without fear of retaliation. The science adviser should develop minimum guidelines to ensure the free flow of scientific information and the president should encourage agency heads to adopt policies (or modify existing policies) consistent with these guidelines, including:

**B.3.1. The administration should review existing legal barriers to the public release of scientific information held by the government, and work with Congress to close loopholes that keep valuable information out of the public record. In particular, the administration should:**

- Rein in the use of information control markings (see B.7 below).
- Shift the burden of proving that scientific information falls under the "confidential business information" exemption from the federal government onto those requesting the exemption.
- Work with Congress to require the disclosure of privately funded research that is used in crafting regulation.

## B. MAKING GOVERNMENT MORE TRANSPARENT

**B.3.2. Agencies should affirm that scientific peer review is the appropriate standard for ensuring the quality of agency scientific information, and agencies should require that only qualified and non-conflicted scientists are involved in peer review of scientific publications.** Agencies are responsible to the public for providing accurate information and may adopt stricter peer review standards than those found in the private sector—including requirements that both official and non-official materials (e.g., papers submitted to scientific journals by agency employees) be peer reviewed. However, agencies should also have the flexibility to adopt peer review processes that best fit their needs.

**B.3.3. For non-official materials, authors should have the option of bypassing any policy review and publishing the work with a disclaimer that it does not represent agency policy.** A timely and transparent policy review is appropriate and recommended for official agency documents and reports.

**B.3.4. Agencies should set reasonable time limits for review and clearance of scientific publications and presentations.** The supervisor or other reviewing official shall provide to the author written clearance on the condition of specified changes being made, not later than 30 days after submission. If this deadline is not met, the author may proceed to submit the article for publication or presentation with an appropriate disclaimer stating that the article does not represent agency views or policies.

**B.3.5. Draft versions of official agency documents or scientific reports should periodically be made available to the public.** A draft version should be released if a document has been completed by agency staff yet held up in the policy or interagency review process for longer than six months.

**B.3.6. Scientific work done in an employee's personal time should not be required to be submitted to an internal review process, even if the employee identifies his or her employer, provided that the work includes an appropriate disclaimer.**

**B.4. All federal agencies should institute a transparency policy for meetings with outside entities.** This policy should require that the agency post on its website a complete record of all meetings with outside entities including for-profit and not-for-profit organizations, other agencies, and individuals (with the exception of meetings related to national security). Such a policy need not be burdensome, as participants could enter the required information directly into a database before the start of any meeting. The database should include the names and affiliations of meeting attendees as well as the date, time, location, and subject of the meeting.

**B.5. The administration should radically improve its use of technology to share information with the public, with the goal of making all government information searchable, shareable, and usable.** The president should appoint a Chief Technology Officer to work with the OMB's E-Government Administrator to implement this transparency agenda. This initiative should:

## B. MAKING GOVERNMENT MORE TRANSPARENT

- Redesign *www.science.gov* to be a comprehensive source for the government's scientific databases, reports, and other information holdings. The website should be broadly searchable by topic so website visitors do not need to know which agency has the information they seek.
- Require that government websites be searchable by major public search engines and require that government data be distributed in open formats.
- Encourage syndication of government data.
- Undertake a review of government standards for the use of metadata (information about the content of a document, such as keywords or tags, that are not part of the document text) and issue recommendations for improving the use of metadata to improve the usability of the data.
- Digitize older materials and make them available online.
- Encourage the use of open-source software by federal agencies.
- Move toward universal electronic reporting of scientific and other information, so the data can be quickly made available to the public.
- Work with the national network of libraries, including government libraries, to educate the public about resources to access government information.

**B.6. The president should clarify agency Freedom of Information Act (FOIA) policies to ensure that their default position is one of disclosure rather than secrecy.** While President Bush signed into law the Open Government Act of 2007, which strengthens FOIA and creates penalties for noncompliance, there are still several needed reforms to ensure FOIA remains an effective force for transparency.

**B.6.1. The president should instruct the Attorney General to issue a memo on the implementation of FOIA that provides an argument for broad disclosure of government records requested under FOIA.** This memo would supersede the earlier memo by then-Attorney General John Ashcroft that instructed agencies to withhold information if they could make a legal argument for doing so.

**B.6.2. Congress should appropriate sufficient funds to the National Archives and Records Administration to house the Office of Government Information Services (OGIS), which would act as the national FOIA ombudsman.**

**We are not afraid to entrust the American people with unpleasant fact, foreign ideas, alien philosophies, and competitive values. For a nation that is afraid to let its people judge the truth and falsehood in an open market is a nation that is afraid of its people.**

John F. Kennedy

## B. MAKING GOVERNMENT MORE TRANSPARENT

**B.6.3. The president should instruct the E-Government Administrator to implement a centralized digital system for FOIA requests that interacts with the individual agency FOIA offices.** Such a system could make the FOIA process more efficient by reducing duplication of requests and by providing comprehensive public access to FOIA information, including:

- online links to the text of FOIA requests and electronic versions of responsive documents that FOIA requesters have permitted to be made available to the public (responsive documents would be posted six months after the request is filled)
- a list (known as a Vaughn index) of all requested documents being withheld under FOIA

**B.6.4. Congress should ask the Government Accountability Office (GAO) to report on the funding levels needed for various federal agencies to handle the FOIA requests they receive.** The president should identify specific areas where supplemental funding would help agencies reduce their backlog of FOIA requests.

**B.7. The administration should reform the classification process at federal agencies by establishing clear guidelines and a transparent appeal process.** Certain government information may merit classification for national security and other reasons, but classification of information not essential to national security can prevent flawed analyses from being reviewed and corrected. The process by which information is labeled "classified" should be subject to independent oversight. (For more information about classification policies, see page 40.)

**B.7.1. The president should charge the Information Security Oversight Office with chairing an interagency task force to review and recommend revisions to our national security classification framework.** The goal of the task force should be to reduce secrecy to the essential minimum needed for national security and to identify process changes that will reduce overclassification.

**B.7.2. Agencies should establish safeguards to protect against overclassification.** These should include independent oversight and declassification advisory boards, regular auditing of classification decisions, and a transparent appeals process.

**B.7.3. The president should work with Congress to pass a Historical Records Act that would facilitate routine declassification of historically significant government information after a set period of time.**

**B.7.4. The president should issue a memo directing agencies to reduce the use of information control markings, such as "Controlled Unclassified Information."** The memo should emphasize that such markings should be used sparingly when directed by statute or presidential policy, and that such markings should not be used to undermine the FOIA process.

## B. MAKING GOVERNMENT MORE TRANSPARENT

**B.8. The administration should work with federal agencies to improve conflict-of-interest policies for government employees.**

**B.8.1. The Office of Governmental Ethics (OGE) should be restructured to:**

- Establish clear conflict-of-interest guidelines for federal employees.
- Serve as a central clearinghouse of public records on executive branch ethics rules, violations, and complaints.
- Act as an enforcement entity for federal government ethics rules.

**B.8.2. Government employees involved in the writing or enforcement of regulations should disclose all conflicts of interest and any previous employment ties that might affect or be perceived as affecting their ability to do their job in an independent manner.** These disclosures should be made in writing, publicly available, and required in all cases.

**B.8.3. Employees with a significant conflict of interest may still contribute to a project, but agencies should restrict them from holding decision-making authority or other positions where they can influence policy outcomes.** Any conflict-of-interest waivers should stipulate the parameters of permitted participation.

**B.8.4. Whenever possible the president should avoid appointing agency heads and high-level officials with recent financial ties to the industries regulated by that agency.**

**B.8.5. Federal employees should be required to recuse themselves from decisions involving a former employer, whether or not they have current financial ties to that employer.**

## C. Reforming the Regulatory Process

INDEX OPEN/PHOTOLIBRARY.COM PTY. LTD

Federal agencies were created to implement and enforce U.S. laws, with the understanding that specialization in certain areas is necessary. Each agency has developed the needed expertise, experience, processes, and policies to pursue its mission and fulfill its particular duties. While the White House is responsible for overseeing these agencies, a balance should be struck between administration priorities and agency independence. The regulatory process should respect the reservoir of scientific and technical knowledge that exists in the agencies.

**C.1. The president should restrict the role of the White House Office of Management and Budget (OMB) to prevent it from interfering in the scientific work of the executive branch agencies.** The OMB plays an important role in coordinating and overseeing the process of crafting regulations. However, the OMB does not have the expertise to credibly review the scientific findings underlying policy decisions across multiple federal agencies.

**C.1.1. The president should issue an executive order outlining the process his administration will follow to create regulations. The regulatory process should respect the scientific and technical expertise of the regulatory agencies, and exclude the OMB from participating in purely scientific determinations.**

**C.1.2. The OMB should replace its over-prescriptive "one-size-fits-all" policies on peer review and risk assessment with broader and more flexible guidelines that leave room for individual agencies to craft their own policies.** The George W. Bush administration attempted to exert greater control over how agencies conduct peer review and risk assessment. In both instances, the National Academies strongly criticized the proposed changes. (For more information about these OMB guidelines, see page 37.)

**C.2. In his executive order outlining the regulatory process, the president should reverse or repeal the three major tenets of executive order 13422.** By doing so, the president would:

- Restore "regulatory policy officers" to a policy coordination role, and return the power to commence rule making to agency heads
- Ensure that OMB review of agency guidance documents does not permit inappropriate political review of scientific documents
- Remove "market failure" as the primary justification for agency regulations, allowing individual agencies to craft regulations consistent with their legislative mandates

**C.3. The president should develop and publicly release criteria for the use of signing statements, and Congress should scrutinize all signing statements and executive orders for content that oversteps the intent of legislation.**

## C. REFORMING THE REGULATORY PROCESS

**C.4. The OMB should work with federal agencies to increase the transparency of the regulatory process, expand rule-making dockets, and make them more user-friendly.** It is currently very difficult for the public to find comprehensive information on how regulations are crafted, thus reducing the ability of the public to provide input into regulatory proposals. The rule-making docket should incorporate the following reforms:

**C.4.1. The OMB should overhaul *www.regulations.gov* to make it a truly consumer-oriented and user-friendly portal for information about proposed, pending and final regulations.** This website is a first step toward bringing rule making into the information age; improving its search and browsing functionality will help it live up to its full potential.

**C.4.2. The OMB should encourage the use of interactive technology to engage the public in the regulatory process.** Individual agencies should be allowed to innovate better methods for communicating information to the public and receiving feedback on proposed regulations.

**C.4.3. The OMB should also develop a regulatory tracking system that provides information on regulatory proposals earlier in the rule-making process.** The OMB currently only produces twice-yearly reports on the president's regulatory agenda and the status of any rules in preparation. A regularly updated tracking system would provide the public with more accurate and timely information about pending regulations and any associated paperwork requirements.

**C.4.4. Agencies should disclose more information about how a regulation was developed. The rule-making docket should contain:**

- All scientific studies in an agency's possession related to a proposed regulation, regardless of whether the study was directly cited or whether it directly informed the final decision.
- All official interagency communications regarding rules under review, including those from the White House.
- Completed and peer-reviewed drafts of agency documents prepared by scientific or technical staff before they are subjected to White House or interagency review.

**I don't think any administration has penetrated so deeply into the advisory committee structure as this one, and I think it matters. If you start picking people by their ideology instead of their scientific credentials you are inevitably reducing the quality of the advisory group.**

Donald Kennedy, former editor of *Science* and former president of Stanford University (Zitner 2002)

## C. REFORMING THE REGULATORY PROCESS

**C.5. The president should terminate inappropriate interagency review.** The administration should clarify which agencies have primary authority in various areas of scientific expertise, and limit other agencies' review of scientific information to advice and comment. Each agency has authorizing legislation and a mission that describe its particular duty to the people of the United States. Cases such as the Department of Defense's review of toxicology profiles in the Environmental Protection Agency's Integrated Risk Information System database (see page 41) reveal the perils of allowing other entities to influence an agency's scientific investigations, or to limit that agency's dissemination of scientific information to the public.

**C.6. Agencies should publish a summary statement discussing the scientific basis for any regulatory decisions informed by science.** The statement should be available in a timely fashion, and clarify how officials made the final decision given the evidence. The statement should include:

- The rationale for the decision, including all scientific documents and data used to make it
- A minority report voicing any significant dissenting scientific evidence or opinions and an explanation of how the agency resolved such differences of opinion
- Identification by name of each official and employee who participated in the decision

Similar transparency requirements have already been incorporated into the FDA Amendments Act of 2007, and should be adapted for other federal agencies.

**C.7. Congress should amend and reauthorize the Paperwork Reduction Act (PRA).** Reforms to the PRA should:

- Eliminate mandated yearly reductions in paperwork "burden," which have reduced the ability of agencies to conduct surveys or collect data
- Increase transparency in the information collection approval process
- Return more authority to the federal agencies so that they may collect information needed to evaluate programs, identify regulatory gaps, and otherwise pursue their mission

**C.8. The president should instruct the OMB to set forth broad guidelines for how cost-benefit analysis will be used in the regulatory process.** These guidelines should emphasize that cost-benefit analyses should be used according to agency discretion, should be consistent with the intent of the relevant congressional statute, and should not determine the regulatory outcome (unless specifically required by statute). The cost-benefit analysis process should also be fully transparent and the White House should never manipulate or alter the results of such an analysis.

## D. Ensuring Robust Scientific Input to Federal Decision Making


ISTOCKPHOTO.COM

Scientific information follows many routes in reaching federal policy makers, and nearly all those routes have been subject to politicization and interference. Strong reforms are needed at all levels of government to ensure that the best scientific information is readily available to federal agencies, Congress, and the president.

**D.1. The president should move to ensure that he has access to the best scientific advice from the very start of his administration.** High-quality advice on science and technology issues is crucial to the nation's health, prosperity, and security. A high priority for the administration should be to provide the president with the clear and objective scientific advice needed to make informed policy decisions.

**D.1.1. The president should appoint a widely respected scientist to be assistant to the president for science and technology (also known as the science adviser), and nominate the same person to be director of the OSTP.** It is critical that this position be filled as soon as possible, and the president should work with the Senate to streamline the confirmation process (NAS 2008). Because science and technology issues are so closely intertwined with other national priorities, including health, agriculture, energy policy, and national security, the science adviser should be a cabinet-level position with consistent and direct access to the president and other cabinet members.

**D.1.2. Advisory bodies such as the President's Committee of Advisors on Science and Technology and the National Science and Technology Council should be expanded into full offices and placed under the direction of the OSTP.** The OSTP should organize an interagency task force with access to experts in a wide range of disciplines from relevant agencies. This task force should operate on an ad hoc basis, responding with timely advice as needed. The OSTP should serve as the president's primary source of scientific advice. However, the agency's staff cannot now encompass the full range of expertise the president may need. The president should amplify the agency's advising capacity by expanding its network of advisory boards as well as its in-house expertise.

**D.1.3. The president should instruct the heads of scientific and regulatory agencies that scientific integrity is a crucial component to achieving their missions.** The president should issue an executive order requiring agency heads to monitor their agencies' efforts to improve scientific integrity, submitting their observations and actions to the OSTP in the form of an annual report. The science adviser is in the unique position of offering the president an overview of the state of federal science. The science adviser should appoint an OSTP assistant administrator to oversee the integrity of science in the executive branch, and hold agencies accountable for any abuses of science that might occur.

## D. ENSURING ROBUST SCIENTIFIC INPUT TO FEDERAL DECISION MAKING

**D.2. The president should work with Congress to reform and strengthen the federal scientific advisory committee system.** The Federal Advisory Committee Act became law in 1972 to ensure, among other goals, that the nation has access to the best objective scientific advice. Unfortunately, the integrity of many scientific advisory committees has been compromised in recent years. Strengthening the scientific advisory system should be a priority for the administration. In 2008, the House passed HR 5687, the Federal Advisory Committee Act Amendments Act (the Senate did not pass equivalent legislation). This bill contains many of the following reforms we endorse and the next Congress should continue work on these issues.

**D.2.1. Agencies should take concrete steps to ensure that inappropriate criteria such as party affiliation and political opinions are never a part of the process for selecting members of scientific committees.** Agencies should select members of advisory committees based solely on their experience and technical qualifications in the topic the committees will address.

**D.2.2. The process for selecting advisory committee members should be made more transparent through the following reforms:**

- Agencies should publicly announce their intent to form a new scientific advisory committee, or to select a new member for an existing committee.
- Agencies should publish criteria for selecting committee members and should solicit nominations for committee membership.
- Agencies should call for public comment on the charge to the committee.
- After the selection process is complete, the agency should make basic information on committee members easily available to the public. This information should describe each member's qualifications and background, and disclose past employers and funding sources.

**D.2.1. The president should instruct the Office of Governmental Ethics (OGE) to provide clear guidelines for conflicts of interest on federal advisory committees.** These guidelines should address the following issues:

- Agencies should specify which advisory committees are expressly scientific and which are designed to gather stakeholder input.
- Agencies should clarify their criteria for appointing advisory committee members as "special government employees" (SGEs) or "representatives," and ensure that the proper level of scrutiny of conflicts of interest occurs (GAO 2004). (SGEs are subject to greater scrutiny than representatives, who are assumed to be stakeholders with special interests.)
- The OGE should work with agencies to explicitly define the type and magnitude of financial ties that constitute a conflict of interest, and it should establish transparent guidelines on the degree to which a conflict of interest would disqualify nominees from participating in a particular committee.

## D. ENSURING ROBUST SCIENTIFIC INPUT TO FEDERAL DECISION MAKING

- For committees whose mission is purely to provide objective scientific advice (as opposed to committees designed to gather input from stakeholders), committee members should be appointed as SGEs and should be entirely free of financial conflicts of interest (IARC 2006).
- Scientists and researchers with conflicts of interest may provide their expertise to scientific advisory committees, but agencies should take steps to ensure that they do not have decision-making roles on those committees, and that their participation is limited to making presentations and responding to questions.
- Scientists who have taken public positions on issues should not be excluded from an advisory committee because of concerns about bias. Having a point of view does not preclude an objective assessment of the information presented to a committee. A scientist's membership in a scientific association should not be considered evidence of bias, even if that association has a stated policy agenda.

**D.2.1. Congress should enact legislation to close loopholes in the Federal Advisory Committee Act (FACA).** These changes should:

- Extend FACA rules to advisory committees organized by federal contractors, not just committees convened directly by an agency
- Extend the definition of committee membership, and FACA's "balance" requirements, to include representatives and non-voting members who regularly attend meetings and provide information
- Extend FACA rules to subgroups of federal advisory committees

**D.2.1. Agencies should track the work of their scientific advisory committees and respond to their findings and recommendations.**

- Agencies should clearly state what product they require of each advisory committee, and set a timeline and work plan for creating that product.
- Agencies should establish and enforce clear policies for how to incorporate committee findings and recommendations into agency decision making. Agencies should also publicly document any decision to overrule the recommendations of a scientific advisory committee, and provide a legitimate explanation of the decision.
- Agencies should review which scientific research and peer review work is being handled by outside contractors, with the goal of institutionalizing the input of independent advisory committees whenever feasible.

**D.3. Congress should reinstate the Office of Technology Assessment (OTA) by appropriating sufficient funds to create a successful office, and by appointing a widely respected scientist to lead it.** To create good policies, legislators must understand a wide range of highly technical subjects. An in-house research staff that can analyze technical information and distill it into a concise and useful form is an essential resource. From 1972 until its defunding in 1995, the OTA served this role, providing Congress with timely and objective scientific advice independent of executive branch agencies. The OTA garnered praise for its ability to concisely present a full gamut of scientific knowledge, and to work with both major political parties to objectively analyze a wide range of policy options.

D. ENSURING ROBUST SCIENTIFIC INPUT TO FEDERAL DECISION MAKING

None of Congress's research offices are equipped to provide the type of advice in which the OTA specialized. The National Academy of Sciences remains the gold standard for advice on scientific topics, but it operates on a longer timeline and is not designed to handle short-term congressional needs such as interpreting information and comparing policy options. The GAO and the Congressional Research Service are better able to meet the needs of legislators, but do not have a broad base of scientific expertise.

**D.3.1. Congress should also reauthorize the Administrative Conference of the United States (ACUS).** ACUS is a nonpartisan public-private think tank that, from its inception in 1968 until it lost its funding in 1995, advised Congress on how to improve the way federal agencies operate. ACUS would, with a modest budget of about $3 million to $4 million annually, help Congress make sense of agency procedures and measure the effectiveness of the agency regulatory process, producing better laws and agency oversight.

## E. Strengthening Monitoring and Enforcement

ISTOCKPHOTO.COM/BART COENDERS

**E.1. The president should value the information gathered by the many scientific monitoring programs and use it in decision making.** Consistent with the recommendations in B.5, a searchable, shareable, usable database of federal monitoring programs should be available to the public through *www.science.gov*. Examples of such monitoring programs include air pollution monitoring networks, satellite observations of Earth systems, and the collection of workplace injury statistics. Agencies should work to identify data gaps, restore important monitoring systems that have been downsized, and convene advisory committees to identify new monitoring needs.

**E.2. Congress should investigate the ways in which reduced or eliminated funding for monitoring and enforcement undermine the integrity of science.** Greater transparency in budget and spending decisions would help to expose instances where funding levels have been manipulated for political purposes. Congress should conduct oversight of this issue either through hearings or investigations by the GAO.

# Scientific Integrity Checklist for the 111th Congress

**We call on the 111th Congress to:**

**Protect Government Scientists**

- ☑ Pass the strongest possible whistle-blower protection legislation.
- ☑ Strengthen the Merit Systems Protection Board and Office of Special Counsel.
- ☑ Question agency nominees about their views on whistle-blowers and, once confirmed, hold them accountable for whistle-blower retaliations that occur in their respective agencies.

**Make Government More Transparent**

- ☑ Work with the president to close loopholes that keep valuable information out of the public record.
- ☑ Appropriate sufficient funds to the National Archives and Records Administration to house the Office of Government Information Services, which would act as the national ombudsman for Freedom of Information Act (FOIA) requests.
- ☑ Instruct the Government Accountability Office to report on the funding levels needed for various federal agencies to handle the FOIA requests they receive.
- ☑ Work with the president to pass a Historical Records Act that facilitates routine declassification of historically significant government information.
- ☑ Enact an Executive Branch Reform Act that strengthens enforcement of government ethics rules regarding conflicts of interest.
- ☑ Use the confirmation process and appropriations process to hold agency managers accountable for transparency and openness.

**Reform the Regulatory Process**

- ☑ Scrutinize all signing statements and executive orders for content that oversteps the intent of legislation.
- ☑ Amend and reauthorize the Paperwork Reduction Act.

**Strengthen Scientific Advice to the Government**

- ☑ Work with the president to reform and strengthen the federal scientific advisory committee system and close loopholes in the Federal Advisory Committee Act.
- ☑ Reinstate the Office of Technology Assessment by appropriating sufficient funds to create a successful office, and by appointing a widely respected scientist to lead it.
- ☑ Reauthorize the Administrative Conference of the United States.

**Strengthen Monitoring and Enforcement**

- ☑ Investigate the ways in which reduced or eliminated funding for monitoring and enforcement undermine the integrity of science.

## Scientific Integrity Checklist for the President

**We call on President Barack Obama to:**

**Protect Government Scientists**

- ☑ Ask Congress to pass strong, comprehensive whistle-blower protection legislation that protects scientists who expose efforts to alter or suppress research or technical data.
- ☑ Direct agency heads to refrain from retaliating against whistle-blowers.
- ☑ Instruct agencies to proactively educate government scientists regarding their rights and protections (provided whistle-blower reforms are enacted by Congress).

**Make Government More Transparent**

- ☑ Publicly commit to the principles of open government and create policy-making processes that presume all government information is public knowledge, to be withheld only when necessary.
- ☑ State in his inaugural address that he will oversee the most open, honest and accountable government ever.
- ☑ Immediately send a memo to agency heads (followed up by an executive order) outlining the principles of openness that will guide his administration.
- ☑ Appoint a Chief Technology Officer to work with the E-Government Administrator to improve the administration's use of technology to share information with the public, with the goal of making all government information searchable, shareable and usable.
- ☑ Instruct the science adviser to develop guidelines, and require agencies to adopt policies based on these guidelines, that ensure free and open communication between scientists and researchers, and the media, policy makers, and the public.
- ☑ Instruct the science adviser to review agency policies on the clearance of official and non-official publications, presentations, and other information.
- ☑ Clarify agency FOIA policies to ensure that their default position is one of disclosure rather than secrecy.
- ☑ Reform the classification process at federal agencies by establishing clear guidelines and a transparent appeal process.
- ☑ Issue a memo directing agencies to reduce the use of information control markings.
- ☑ Work with the agencies to improve conflict-of-interest policies for government employees.
- ☑ Work with Congress to restructure the Office of Governmental Ethics into an ethics enforcement entity and a central clearinghouse of public records on executive branch ethics rules, violations, and complaints.

**Reform the Regulatory Process**

- ☑ Restrict the role of the White House Office of Management and Budget (OMB) to prevent it from interfering in the scientific work of the executive branch agencies.
- ☑ Reverse the three major tenets of executive order 13422.
- ☑ Develop and publicly release criteria for the use of signing statements.
- ☑ Terminate inappropriate interagency review.
- ☑ Instruct the OMB to set forth broad guidelines for how cost-benefit analysis will be used in the regulatory process.

**Strengthen Scientific Advice to the Government**

- ☑ Work with Congress to reform and strengthen the federal scientific advisory committee system.
- ☑ Instruct the Office of Governmental Ethics to provide clear guidelines for conflicts of interest on federal advisory committees.
- ☑ Appoint a widely respected scientist to be a cabinet-level assistant to the president for science and technology (also known as the science adviser), and nominate the same person to be director of the Office of Science and Technology Policy.
- ☑ Instruct the heads of scientific and regulatory agencies that scientific integrity is a crucial component to achieving their missions.

**Strengthen Monitoring and Enforcement**

- ☑ Value the information gathered by the many scientific monitoring programs and use it in decision making.

# Scientific Integrity Checklist for New Agency and Department Heads

**We call upon the leaders of federal agencies to:**

**Protect Government Scientists**

- ☑ Refrain from retaliating against whistle-blowers.
- ☑ Proactively educate government scientists regarding their rights and protections (provided whistle-blower reforms are enacted by Congress).

**Make Government More Transparent**

- ☑ Issue openness memos to their staff and to implement the president's commitment to open government.
- ☑ Adopt policies that ensure free and open communication between scientists and researchers, and the media, policy makers, and the public.
- ☑ Institute a transparency policy for meetings with outside entities.
- ☑ Review agency policies on the clearance of official and non-official publications, presentations, and other information.
- ☑ Make public, in a searchable online format, the list of all requested documents being withheld under FOIA.
- ☑ Establish safeguards to protect against overclassification.
- ☑ Recuse themselves from decisions involving a former employer, whether or not they have current financial ties to that employer, and instruct their employees to do so as well.

**Reform the Regulatory Process**

- ☑ Expand rule-making dockets and make them more user-friendly.
- ☑ Disclose more information about how a regulation was developed, including all scientific documents in the agency's possession and all written communications in the interagency process.

**Strengthen Scientific Advice to the Government**

- ☑ Ensure that inappropriate criteria such as party affiliation and political opinions are never a part of the process for selecting members of scientific committees.
- ☑ Make the process for selecting advisory committee members more transparent.
- ☑ Pay closer heed to the findings and recommendations of their scientific advisory committees.

**Strengthen Monitoring and Enforcement**

- ☑ Identify data gaps, restore important monitoring systems that have been downsized, and convene advisory committees to identify new monitoring needs.

CHAPTER 2

# Patterns of Abuse

Political interference in the work of federal scientists has become widespread over the past several years. The media, the Union of Concerned Scientists, other nongovernmental organizations, and whistle-blowers have exposed incidents of abuse at agencies throughout the federal government, at every point where scientific expertise enters the policy-making process. Manipulating science has become a widespread strategy for winning debates about government policies.

To catalog these abuses, the Union of Concerned Scientists launched its A-to-Z Guide to Political Interference in Science, a webpage that now documents more than 80 examples of political interference involving 24 federal agencies and departments. (See *http://www.ucsusa.org/AtoZ*) This chapter outlines some of the patterns of abuse.

**You don't want Republican or Democratic scientific information. You want real scientific information.**

Richard Carmona,
former surgeon general (Carmona 2007)


U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

**Former Surgeon General Richard Carmona faced extensive political interference while in office.**

## Falsifying Data and Fabricating Results

Federal officials with little or no scientific background have misrepresented scientific data and presented scientific results not based on actual research.

- After the 9/11 terrorist attacks, the Environmental Protection Agency (EPA) informed rescue workers at ground zero that the air was safe without having actually tested the air (see box).*
- In 2006, the U.S. Election Assistance Commission reversed the findings of a report on voter fraud prepared by a bipartisan team of experts, replacing evidence that voter fraud is not widespread with language suggesting that it is pervasive.
- The Food and Drug Administration (FDA) cited a fabricated industry study in defense of its decision to approve the drug Ketek in 2004, despite widespread concerns among its own scientists that Ketek causes severe liver problems.
- The FDA referenced a nonexistent controversy about safety risks to teenage girls in its decision not to approve the emergency contraceptive drug Plan B for over-the-counter use. In so doing the agency overruled recommendations by two independent medical advisory committees that deemed the drug safe for nonprescription use. FDA staff protested that the decision was based on ideology instead of sound science.

* Unless otherwise cited, further information on examples in this chapter, including all primary documentation, can be found in the A-to-Z Guide to Political Interference in Science, online at *http://www.ucsusa.org/AtoZ*.

## World Trade Center Rescue Workers Believed the EPA and Ended Up Sick

In a series of public statements issued after the terrorist attacks of September 11, 2001, the Environmental Protection Agency (EPA) assured the people of New York that the air around ground zero was safe to breathe. A September 18, 2001, press release confidently quoted EPA Administrator Christine Todd Whitman: "Given the scope of the tragedy from last week, I am glad to reassure the people of New York and Washington, DC that their air is safe to breathe and their water is safe to drink" (EPA 2001).

Unfortunately, the agency lacked authoritative information on which to base this reassuring public posture—and even ignored internal data conflicting with it. A 2003 report from the EPA's Office of the Inspector General later documented how the White House Council on Environmental Quality pressed the EPA to "add reassuring statements and delete cautionary ones" from agency press releases (EPA 2003).

Condoleezza Rice, then national security adviser, also vetted the EPA's press releases and public statements after 9/11. These actions suggest that the White House placed politics over science when communicating about air quality at ground zero. Tragically, thousands of rescue workers now plagued by crippling lung ailments continue to feel the impact of this public deception.

ANDREA BOOHER/FEDERAL EMERGENCY MANAGEMENT AGENCY NEWS

**This photo of ground zero was taken on September 13, 2001.**

### Selectively Editing Documents and Creating False Uncertainty

Political appointees have deleted selected evidence from scientific documents so they reveal only part of the truth, and have exaggerated uncertainty in scientific findings.

- The U.S. Fish and Wildlife Service (FWS) has on multiple occasions manipulated economic analyses of its plans for protecting endangered species by counting only the costs of protection while ignoring the benefits. In 2004, for example, the FWS artificially

inflated the estimated cost of protecting the threatened bull trout. Two years later, the agency downplayed the benefits of protecting the California red-legged frog (see box below).

**If you rearrange your science to fit your goal, that's not really science.**

EPA scientist (Shogren 2004)

- A 2004 congressional report revealed that federally funded abstinence-only sex education programs presented misleading and false information on condom failure, and on the effects of abortion on future fertility in teenagers.
- White House officials heavily edited a series of government reports, including the EPA's 2003 Report on the Environment, to create an artificial impression of uncertainty in climate change science.

### Tampering with Scientific Procedures

Federal agencies have employed flawed methodologies that are biased toward predetermined results in place of standard scientific procedures designed to ensure unbiased analysis in testing and research.

- Despite warnings from government scientists, the Federal Emergency Management Agency (FEMA) used faulty testing procedures and failed to correctly test for dangerous levels of formaldehyde in mobile homes provided to victims of Hurricane Katrina.

## Rigged Cost-Benefit Analysis for the Endangered California Red-Legged Frog

In April 2006, the U.S. Fish and Wildlife Service (FWS) finalized plans to reduce the critical habitat set aside to protect a rare California frog by nearly 90 percent. The agency justified the move by arguing that the cost of designating habitat for the frog was too high, and would unfairly burden homeowners and ranchers (FWS 2006).

RYAN HAGERTY/U.S. FISH AND WILDLIFE SERVICE

**The critical habitat for the red-legged frog was slashed as a result of alleged interference by former Department of the Interior official Julie MacDonald.**

The agency based this conclusion on an analysis estimating the cost of the original designation of critical habitat as $1.5 billion over 20 years (CRA International 2005). However, that number assumes that protected land would provide no economic benefits. The *Los Angeles Times* reported that Jason Moody and David Sunding, the economists hired to perform the analysis, were "told by government officials not to calculate benefits of critical habitat." Instead, the economists were instructed to insert language prepared by the Office of Management and Budget contending that it was "not feasible to 'monetize' the benefits of land protection" (Wilson 2006).

Jason Moody charged that the administration's analysis inflated the cost of critical habitat and ignored the fiscal benefits. Such benefits could include clean water, tourism, and premium prices for houses located near open space—not to mention protection for the endangered species.

## Federal Agency Fails to Protect Children from Lead Lunches


CENTER FOR ENVIRONMENTAL HEALTH

**The Consumer Product Safety Commission's original testing procedure indicated this lunch box contained dangerous levels of lead.**

Lead is a powerful neurotoxin in children, and can cause brain damage, mental retardation, behavioral problems, liver and kidney damage, and, in extreme cases, death. The U.S. Consumer Product Safety Commission (CPSC) twice altered its scientific testing procedure before concluding that children's lunch boxes containing lead levels exceeding federal guidelines were safe.

The CPSC declared in September 2005 that it had found "no instances of hazardous levels" of lead when it tested 60 soft vinyl lunch boxes. However, the agency refused to release information on its experiments, saying federal regulations protected manufacturers from public release of that data. A year later, documents obtained through the Freedom of Information Act showed that the CPSC had actually tested fewer than 10 lunch boxes at the time of the statement, and that those tests had indicated high lead levels.

The CPSC had originally tested the bags by dissolving a sample of the vinyl and determining its actual lead content. Those tests showed that 20 percent of the lunch boxes contained lead levels greater than the federal safe level for paint. A Spider-Man lunch box had the highest recorded value: more than 16 times the federal standard.

The CPSC then changed its testing procedure to a "swipe test." The first round of these tests recorded the total amount of lead removed from a four-square-inch area after four wipes. When these tests yielded values greater than the FDA allows, the CPSC changed its procedure again, this time averaging rather than adding the amount of lead in the swipes, and increasing the number of swipes from 4 to 30. This new procedure significantly lowered the amount of lead reported for each lunch box. Because each swipe over the same area yielded less lead, the average amount of lead per swipe decreased with the number of swipes, although the total amount of lead that someone could ingest remained constant. (For primary documentation, see UCS 2007d.)

- The Consumer Product Safety Commission (CPSC) manipulated testing procedures to produce faulty results on the lead content of children's lunch boxes in 2005 (see box above).

- The EPA allowed North Dakota to alter the way it measured air quality in 2004, to bring Theodore Roosevelt National Park into compliance with air quality standards without actually reducing pollution.

### Intimidating and Coercing Scientists

High-level administration officials have bypassed the chain of command at federal agencies to directly pressure staff researchers to alter scientific findings on sensitive issues. Scientists who fail to comply have been threatened, demoted, defunded, and dismissed for faithfully fulfilling their duties as both scientists and civil servants.

- Reports that Julie MacDonald, former deputy assistant secretary for fish, wildlife, and parks, "had bullied, insulted, and harassed the professional staff of the U.S. Fish and Wildlife service" led to an investigation by the inspector general of the Department of the Interior in 2007. The investigation found that MacDonald had circumvented the chain of command

"to have reports reflect what she wanted" on numerous occasions, and had "demoralized the FWS program with her interference in endangered species studies" (DOI 2007).

- The Occupational Safety and Health Administration (OSHA) threatened to suspend a scientist in 2006 who refused to cite industry-funded science downplaying the dangers of asbestos in a safety warning for auto mechanics.

- In 2005 the Department of Justice demoted the head of the Bureau of Justice Statistics when he refused to downplay the findings of a study which found statistical evidence of racial profiling by police officers.

### Censoring and Suppressing Scientists

Federal officials have prevented scientists from communicating with their colleagues, the media, and the public. Preventing scientists from speaking about their research and participating fully in the scientific community compromises the quality of their research and withholds taxpayer-funded information from the American people.

**It's one thing for the department to dismiss our recommendations, it's quite another to be forced (under veiled threat of removal) to say something that is counter [to] our best professional judgment.**

Scientist from the Fish and Wildlife Service, Region 7 (UCS 2005b)

The Consumer Product Safety Commission delayed a report on the dangers of ATVs.

ISTOCKPHOTO.COM/VOLKER KREINACKE

- Officials at the OMB heavily edited testimony given by Dr. Julie Gerberding, director of the Centers for Disease Control and Prevention (CDC), at a congressional hearing in October 2007 on the public health risks from climate change. The OMB cut the director's statement in half, deleting her discussion of the potential public health consequences of climate change, and the need to identify vulnerable populations (Hebert 2007).

- Former Surgeon General Richard H. Carmona revealed that the White House extensively censored his public communications, forcing

Abnormal procedures authorized by the EPA allow North Dakota to move forward with new coal-fired power plants that will jeopardize the air quality of Theodore Roosevelt National Park.

ERIC FOLTZ

his statements to align with administration policy and pressuring him to participate in partisan political activity.

- The Bush administration has repeatedly prevented federal scientists from speaking publicly about climate change. For example, press officers at the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA) have obstructed scientists' access to the media and restricted the topics they can discuss at conferences. In 2006 NASA officials specifically targeted Dr. James Hansen, NASA's top climate scientist, seeking to filter his public statements and press interviews to limit his ability to express scientific opinions that clashed with the administration's views on global warming.

**The interest of the American people lies in having full disclosure of the facts.**

Russell Train, former administrator of the Environmental Protection Agency (Train 2003)

### Hiding, Suppressing, and Delaying Release of Scientific Findings

Federal officials have sequestered knowledge by burying scientific findings. Federal agencies can legally keep inconvenient reports in draft form and refuse to release them. Some agencies have found that simply delaying the release of time-sensitive information can render it impotent.

- For nine months, White House officials suppressed a 2002 EPA report detailing the harmful effects of mercury, a known neurotoxin emitted by coal-fired power plants, on children's health while the agency was considering new pollution control rules for power plants. The agency released the report only after it was leaked to the media.

JOHN FLECK/FEDERAL EMERGENCY MANAGEMENT AGENCY

**Hurricane Katrina evacuees are suffering from formaldehyde exposure because FEMA failed to correctly test their trailers.**

- The FDA suppressed studies from its own scientists indicating that the drug Vioxx significantly increases the risk of heart attack, and approved the drug against the recommendations of those scientists.

- For two years, NASA refused to release the responses of nearly 30,000 commercial and general aviation pilots to a survey on airline safety. Responding to a congressional order, NASA finally released the results in December 2007 (Wilber 2008; AP 2007).

- In 2004, the CPSC's general counsel, who had represented the all-terrain vehicle (ATV) industry as a private-sector attorney, pressured CPSC statisticians to claim that the risks

DAVE MENKE/U.S. FISH AND WILDLIFE SERVICE

**Former Department of the Interior official Julie MacDonald greatly altered scientific documents to prevent the protection of the greater sage grouse.**

of riding ATVs were declining, even though their findings didn't support that conclusion. When the general counsel was unsuccessful in getting the statisticians to change the report, he delayed its release for three months (Ingle 2007).

## Disregarding Legally Mandated Science

While science is often only one factor in policy decisions, some statutes require federal officials to base their decisions strictly on science. When the decision-making process cuts out legally mandated science, this approach is no longer a matter of discretion but of compliance with the law.

- The EPA has repeatedly violated the Clean Air Act, which requires the agency to protect public health by basing air quality standards for major air pollutants, such as fine particulate matter (known as $PM_{2.5}$), on the best available science. In 2005, for example, the EPA declined to lower the maximum allowable threshold for $PM_{2.5}$, despite evidence from the agency's own scientists and its independent advisory committee showing that the standard was too weak to protect millions of elderly Americans.

- The FWS has consistently failed to comply with the Endangered Species Act, which requires the agency to use the "best scientific data available" when determining if threatened species merit federal protection. Administration officials have illegally disregarded scientific evidence in the cases of numerous species, including the Sacramento splittail (a fish), the white-tailed prairie dog, the Preble's meadow jumping mouse, and the greater sage grouse.

- The Office of Surface Mining disregarded scientific evidence showing that its proposed mountaintop mining rule failed to comply with the requirements of the Surface Mining Reclamation and Control Act, the agency's founding charter.

## Allowing Conflicts of Interest

Officials throughout the federal government who are responsible for making key decisions on public health and safety have clear conflicts of interest, given their personal financial stakes in the outcome of those decisions.

- The Bush administration has repeatedly filled leadership positions in federal regulatory agencies with individuals who come directly from, and return directly to, the industries that their agency regulates. For example, the White House recruited an official who worked on climate change policy from the American Petroleum Institute, and ExxonMobil hired that official immediately after he resigned. The former deputy secretary of the interior, charged in part with regulating the mining industry, was a former lobbyist for the National Mining Association. And two former heads of the EPA Office of Air and Radiation came directly from a law firm that represented the timber and energy industries.

- In 2002, the Department of Health and Human Services (HHS) placed a number of individuals with known ties to the paint industry on a lead-poisoning advisory panel, while rejecting highly qualified candidates nominated by HHS scientists. The panel did not support lowering the lead-poisoning threshold, despite strong scientific evidence that even very low lead levels harm children.

- In 2004, the EPA released a report concluding that a controversial mining technique known as hydraulic fracturing—wherein the bedrock surrounding oil reservoirs is cracked open under high pressure—posed little threat to underground drinking water supplies, and thus did not merit further study or regulation. The agency claimed the report had passed peer review by an independent expert advisory panel. However, a whistle-blower stepped forward to reveal that five of the seven peer reviewers stood to personally benefit from the industry-friendly finding.

## Corrupting Scientific Advisory Panels

Independent scientific advisory panels provide federal agencies with objective technical advice. The members of those panels should have extensive expertise in the topic at hand, and be capable of making unbiased decisions. Administration officials have tampered with the panel selection process by subjecting nominees to political litmus tests that have no bearing on their expertise, and by selecting members with financial conflicts of interest. The administration has disbanded some advisory committees altogether.

- From 2001 to 2003, the administration rejected 19 of 26 candidates for an advisory board at the National Institutes of Health's Fogarty International Center. Administration officials told the director of the center that they had rejected at least three of the 19 candidates because of their views on abortion or their public criticism of the president.

- In 2002, scientists interviewing for positions at the National Institute on Drug Abuse were questioned about and later dismissed based on their political views.

- Two scientists were removed from the President's Council on Bioethics for expressing opinions contrary to administration policy on stem cell research.

- HHS Secretary Tommy Thompson dismissed three well-qualified experts on a peer review panel at the National Institute for Occupational Safety and Health for supporting a health standard opposed by the administration.

- In 2003, White House officials abolished a highly distinguished expert committee that advised the National Nuclear Security Administration because some of its members had published papers on the ineffectiveness of "bunker buster" nuclear weapons, which the administration planned to develop.

VIVIAN STOCKMAN, OHIO VALLEY ENVIRONMENTAL COALITION

**The Office of Surface Mining has attempted to scale back environmental restrictions on mountaintop-removal coal mines such as this operation in Lincoln County, West Virginia.**

CHAPTER 3

# Changing the Rules


JESSE SPRINGER/UCS

The political interference documented in Chapter 2 represents a systematic attempt to covertly influence policy by manipulating the scientific basis for decision making. This interference spans dozens of federal agencies and reaches into many venues where scientific expertise enters the policy-making process.

Even more troubling than the system-wide epidemic of interference are the many ways the Bush administration has tried to rewrite the rules to enshrine politicized science indefinitely. These changes represent an infection that has sunk into the marrow of government, which must be cured before science can again provide impartial information to policy makers and the public.

## Centralizing Decision Making and the Unitary Executive

Many of these deeper changes are best understood in the context of a legal theory of government, advanced by the Bush administration and its supporters, known as the "unitary executive." Since the founding of the country, the balance and interaction of power between the three branches of government have proved contentious. The creation of the modern regulatory state—in particular, the ability of agencies to promulgate regulations with the force of law—has raised new questions about this balance. According to proponents of the theory of the unitary executive, it is unconstitutional for Congress to establish executive-branch agencies independent from presidential control, or to create positions (such as special prosecutors)

that the president cannot fire or discipline (Yoo, Calabresi, and Colangelo 2005).

With this philosophical inspiration, the Bush administration has proclaimed its intention to bypass Congress and the court system when it believes they have improperly infringed on executive power. Nobel Prize-winning biologist and former Caltech president David Baltimore has identified the theory of the unitary executive as key to understanding the Bush administration's assault on science, asserting that, "It's no accident that we are seeing such an extensive suppression of scientific freedom. It's part of the theory of government now, and it's a theory we need to vociferously oppose" (Dean 2006).

### *Signing Statements*

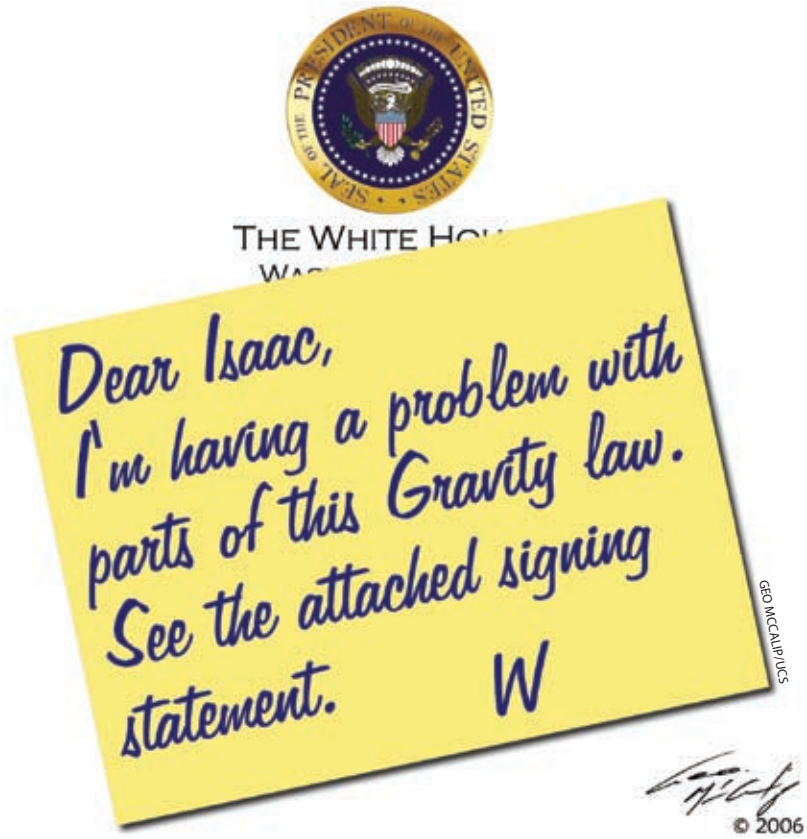
President Bush has greatly expanded the use of signing statements, which are statements issued upon signing a bill that explain the president's interpretation of the law. President Bush has used these statements to assert his right to ignore or disobey any laws he considers unconstitutional (Savage 2006). As of January 2008, President Bush had issued 157 signing statements challenging more than 1,100 provisions of federal law—many more "constitutional objections" than any previous president. These statements make at least 145 direct references to the power of the "unitary executive" (Green 2008; see also Halstead 2007).

While many of these statements have focused on national security or civil liberties, some directly affect the transparency and integrity of federal science. For example, in December 2005 Congress passed an appropriations bill requiring government researchers to provide requested scientific information to Congress "uncensored

**It's no accident that we are seeing such an extensive suppression of scientific freedom. It's part of the theory of government now, and it's a theory we need to vociferously oppose.**

David Baltimore, Nobel Prize-winning biologist and former president of Caltech (Dean 2006)

**The Bush administration has centralized regulatory decision making in the White House and extended its control over federal regulatory agencies.**




and without delay." In his signing statement, President Bush asserted the right to "regulate submission of information to the Congress" if he judges it to be detrimental to foreign relations, national security, or the workings of the executive branch (Bush 2005a). In other examples, President Bush asserted the right to ignore whistle-blower protections specifically granted to employees of the Department of Energy and the Nuclear Regulatory Commission, and the right to control the actions of the director of the independent Institute of Education Sciences (Bush 2005b; Bush 2002).

***Executive Orders***

The Bush administration has also used executive orders to centralize decision making in the White House and exercise a high level of control over regulatory agencies. Executive orders (EOs) are issued by the president, usually to direct the operation of executive-branch agencies. The Supreme Court has ruled that EOs have the force of law only when authorized by an act of Congress (Youngstown Sheet & Tube Co. v. Sawyer 1952), and controversy often arises when presidents are seen as attempting to legislate by EO. This section examines one EO that centralizes regulatory decision making in the White House, although other EOs also affect federal science. (For example, see the discussion below on classification policies.)

In January 2007, President Bush issued EO 13422, which extended White House control over federal regulatory agencies. The order, which amended the Clinton-era EO 12866, has three main components: (1) it requires that a political appointee in each agency serve as the gatekeeper for any proposed regulation; (2) it extends White House review beyond regulations to include "significant" guidance documents; and (3) it requires agencies to prove that a regulation is justified because it addresses a "market failure" (UCS 2007a).

The White House entity responsible for implementing these changes is the OMB, especially its Office of Information and Regulatory Affairs (OIRA). Since the Reagan administration, OIRA has had a role in reviewing and approving all regulations, with a particular emphasis on performing cost-benefit analyses. EO 13422 dramatically expands that role. Although its full impact remains to be seen, this EO is a "clear expansion of presidential authority over rulemaking agencies" (Copeland 2007).

Congress created regulatory agencies, giving them responsibility for crafting regulations in support of goals such as workplace safety and environmental protection. The elevation of "market failure" as a crucial criterion for issuing a regulation undermines these mandates, and limits the ability of the agencies to accomplish their lawful missions. And by placing political gatekeepers at the head of the regulatory process, this EO substitutes political considerations for an independent assessment of regulatory needs.

OIRA recently hired a handful of scientists with the goal of creating in-house scientific expertise in an office traditionally dominated by economists (OMB Watch 2003). Following this change, OIRA began, for the first time, to review and criticize the scientific basis for agency decisions (OMB Watch 2007c). While such experts are undoubtedly helpful in interpreting scientific documents, it is inappropriate for OIRA to second-guess the consensus of agency specialists with decades of experience, and advisory committees composed of internationally respected experts in their field.

### Homogenizing Agency Decision Making

As another means of centralizing decision making, the White House has sought to create uniform procedural guidelines for federal agencies. To this end, the OMB has issued guidance bulletins—on scientific topics such as peer review and risk analysis—that replace the policies of individual agencies. Such a mindset ignores the reality that federal agencies are not all cut from the same cloth, and that each needs the appropriate tools to best fulfill its mission.

#### *Peer Review Guidelines*

In late 2004, the OMB released a bulletin establishing strict guidelines for how agencies may obtain peer review for technical and scientific information (OMB 2004). The guidelines required all "significant information" used in creating regulation to undergo both peer review and a public comment period. The OMB claimed that the new guidelines were necessary to implement the Data Quality Act (DQA), although the act did not specifically require such guidelines, and the OMB failed to identify any inherent flaws in the agency's existing peer review processes (see below for more on the DQA).

The bulletin drew strong objections from scientists, scientific societies, and even some industry groups. These objections focused on two major flaws. First, the proposed rules would create a serious imbalance in the selection of peer reviewers, in that they would prohibit most scientists who receive government research funds from serving, but allow scientists employed or funded by industry to serve (unless they had a direct financial interest in the issue under review).

**OMB and the White House have, in some cases, compromised the integrity of EPA rules and policies; their influence, largely hidden from the public and driven by industry lobbying, has decreased the stringency of proposed regulations for non-scientific, political reasons. Because the real reasons can't be stated, the regulations contain a scientific rationale with little or no merit.**

EPA scientist (UCS 2008b)

Second, scientists charged that the changes would not only needlessly replace acceptable peer review practices already in place at most agencies, but would also lead to increased costs and delays in promulgating new health, safety, and environmental regulations. Bruce Alberts, president of the National Academy of Sciences (NAS), stated that "the highly prescriptive type of peer review that the OMB is proposing differs from accepted practices of peer review in the scientific community, and if enacted in its present form is likely to be counterproductive" (Alberts 2003). In response to these criticisms, the OMB revised the bulletin to give agencies more flexibility in conducting peer review. Yet concerns remain that excessive and protracted review will delay needed regulation.

#### *Risk Assessment Bulletin*

A strongly worded rebuke from the National Research Council (NRC), an arm of the NAS, prevented the OMB from implementing centralized

standards for risk assessment in federal agencies similar to the guidance it had issued for peer review (OMB 2006). The NRC described the draft bulletin as "fundamentally flawed" and recommended that it be withdrawn (NRC 2007). Among its flaws, the NRC highlighted that the bulletin deviated from established risk-assessment principles and public health practice, and that its one-size-fits-all philosophy was inappropriate to the diversity of agencies and missions to which it would apply.

Rather than withdrawing the bulletin, the OMB repackaged its recommendations as a memo. However, while the approach in this memo is not as damaging to agency functioning, it is still cause for concern. For instance, the memo asserts the OMB's right to review all agency risk assessments. This is troubling because such assessments are not policy documents but technical evaluations best performed by expert staff in the agencies (OMB Watch 2007b).

### *Cost-Benefit Analysis*

In 2003, the OMB required federal agencies to adhere to inflexible and unrealistic rules for conducting required regulatory impact assessments. The OMB has long been responsible for assessing the impacts of regulations—a wholly reasonable oversight role. However, the OMB's directive cemented in place a particularly narrow form of cost-benefit analysis that is prone to inaccuracy and vulnerable to manipulation (OMB 2003).

Cost-benefit analysis is a highly formalized analytical tool that seeks to evaluate policies by converting all of their consequences into monetary terms. In an ideal world, this would allow policy makers to select policies that "maximize overall social welfare" (CPR 2007). In the real world, however, incomplete information and ill-defined policy outcomes make cost-benefit analysis almost impossible to apply in a useful manner. Furthermore, the benefits of regulation—from better public health to greater natural beauty—are notoriously difficult to monetize (Melberth 2007).

**Fish and Wildlife Service scientists were pressured to distort a cost-benefit analysis used in deciding how much critical habitat to set aside for the endangered bull trout.**

ISTOCKPHOTO.COM/JEFF STRAUSS

Finally, cost-benefit analysis is very easy to rig, and the Bush administration has been caught multiple times trying to inflate the costs and minimize the benefits of proposed regulations. For example, the OMB distorted both the costs and the benefits when assessing the ozone National Ambient Air Quality Standards rule (OMB Watch 2007c). The OMB also pressured the U.S. Fish and Wildlife Service, in a cost-benefit analysis, to remove any reference to the economic benefits of protecting critical habitat for two endangered species: the bull trout and the red-legged frog (UCS 2004; UCS 2006b). (See box, page 8.)

### *Program Assessment Rating Tool*

A tool that the OMB uses to measure the effectiveness of federal programs applies arbitrary and unfair criteria to science programs, undermining their ability to compete for funding. Begun in 2001, the Program Assessment Rating Tool (PART) has drawn criticism for applying an overly simplified rating scale to federal programs. PART is particularly ill-suited to evaluate programs—especially those entailing scientific research—that do not produce easily identifiable short-term results.

In its PART report on the proposed 2006 budget, OMB penalized both the CPSC and OSHA for failing to incorporate economic analyses into their decision making, despite the fact that both agencies are statutorily prohibited from allowing economic factors to influence their operations. Similarly, the OMB classified every EPA research program as "results not demonstrated," even if the research was not directly results-oriented. In another case, the administration severely cut funding for the EPA's Clean Water Revolving Fund, which helps finance better water and waste management infrastructure, because OMB used an unscientific measure of "success": the number of pollution advisories rather than actual pollution levels (OMB Watch 2005).

## Reducing Transparency

The centralization of decision making in the executive branch has serious consequences for government transparency and accountability. Early discussions between federal agencies and the OMB (or between the OMB and a regulated industry) can profoundly influence the scope and direction of any actions those agencies pursue. Yet these discussions take place entirely out of public view, and months, if not years, before any public comment occurs (see, for example, Smith 2007). These closed-door meetings often do not appear in the public docket, and a record of what transpired is difficult to obtain through FOIA requests.

The Bush administration has also taken steps to limit public disclosure of information on the internal workings of the federal government, and on public health and safety.

### *Jailing the Freedom of Information Act*

For decades, FOIA has been the public's primary tool for prying open closed doors and allowing sunlight to shine into the sometimes opaque workings of the government. Federal agencies are required by law to release requested information to the public, unless that information falls under one of nine exemptions. These include exemptions for national security, personal information, and, more controversially, "predecisional" information.

In October 2001, U.S. Attorney General John Ashcroft issued a memorandum to the heads of all federal departments and agencies regarding release of information under FOIA (Ashcroft 2001). The memo reversed a 1993 statement by Ashcroft's predecessor, Janet Reno, changing the government's "presumption" in favor of disclosure to a presumption opposing disclosure wherever legally possible. A similar memo in March 2002 from White House chief of staff Andrew Card urged agencies and departments to safeguard "sensitive but unclassified" documents through the aggressive use of FOIA exemptions (Card 2002).

**When a government agency is not transparent with the American people, particularly on an issue like safety, they are not fulfilling their responsibilities and earning their pay.**

Jim Hall, former chair of the National Transportation Safety Board (Wilber 2008)

In 2003, the GAO found that a significant number of FOIA officers reported that the Ashcroft memo led to a lower likelihood of discretionary release of information and a change in the use of specific exemptions (GAO 2003). The Open Government Act of 2007 significantly reformed the FOIA process, but did not explicitly reverse the Ashcroft memo (Aftergood 2008).

### *Overclassification*

Like the Ashcroft memo, executive order 13292 encourages greater secrecy in dealing with classified information. That EO, issued by President Bush in March 2003, reverses a 1995 executive order mandating "automatic declassification," encourages reclassification of previously declassified material, and creates a presumption of secrecy in deciding what information should be classified (Public Citizen 2003).

Following this order, the number of classified documents rose to 15.6 million new records in 2004—nearly double the number in 2001—whereas the number of declassified pages dropped sharply (ACLU 2005). Many observers, including former Secretary of Defense Donald Rumsfeld and former CIA Director Porter Goss, have commented that this "overclassification" represents an unnecessary level of secrecy (Fuchs 2007).

**New EPA rules drastically reduce the amount of publicly available information on toxic chemical releases.**

PHOTODISC

The Bush administration has also expanded the use of vaguely defined designations such as "sensitive but unclassified," and has taken steps to remove such information from the public view. In the months following 9/11, thousands of nonclassified scientific and technical documents were pulled from government websites and withheld from public circulation (Broad 2002). Much of this information remains unavailable to researchers and the public, including information essential to emergency planning and public safety. A 2003 report from the Congressional Research Service noted a lack of "uniformity in Federal agency definitions, or rules to implement safeguards for 'sensitive but unclassified' information" (Knezo 2003).

### *The Public's Right to Know*

The EPA's Toxics Release Inventory (TRI) requires manufacturers to provide annual reports on their use and releases of toxic chemicals into our land, water, and air. The TRI is widely credited with enhancing public knowledge and triggering significant voluntary reductions in emissions of many pollutants. Yet in early 2007, the EPA finalized a plan to scale back reporting requirements by raising the threshold below which facilities are allowed to submit only minimal information (EPA 2006).

The new rule drew widespread criticism for significantly reducing the amount of useful information that the TRI made available to the public. A GAO investigation found that pressure from the OMB led the EPA to rush its analysis of the new rule, that the estimated savings from the rule are "likely overstated," and that the EPA's analysis "masked" the large impact the rule would have on communities across the country (GAO 2007).

## Adding Unnecessary Bureaucracy

A common tactic for delaying science-based decisions is to overemphasize the uncertainty in scientific knowledge, and to exploit the natural caution of scientists in order to cast doubt on even the most secure findings. New and excessive analytical requirements have provided opportunities for industry groups to highlight uncertainty in agency science, and have prevented federal agencies from responding promptly to urgent threats to public health and safety.

### *The Data Quality Act*

The Data Quality Act (DQA) is a two-paragraph provision tacked onto larger legislation that passed through Congress in 2000 mostly unnoticed. Those few lines have grown into a highly contentious element in the regulatory process. The DQA instructs the OMB to create government-wide guidelines for ensuring the quality of information disseminated by the government. In practice, the DQA gives industry groups the ability to challenge any government regulation by filing frivolous DQA challenges to the underlying information.

Many agencies have felt the consequences of the DQA, including the EPA, the U.S. Forest Service, and the National Toxicology Program (NTP, part of the National Institutes of Health). One of the NTP's most important functions is the annual release of its Report on Carcinogens, a comprehensive list of all chemicals known or reasonably anticipated to cause cancer. Industry groups have used the DQA to challenge the NTP on many of these classifications (OMB Watch 2007a). While these challenges are rarely successful, they draw scarce resources away from the task of studying toxic chemicals, and can delay the release of information critical to public health.

### *Reviewing EPA Science*

The Department of Defense (DOD) and other federal agencies are seeking greater control over the scientific information in the EPA's Integrated Risk Information System (IRIS), a database containing toxicology profiles of more than 500 chemicals. The new framework would allow the OMB, NASA, the Department of Energy, and the DOD to declare certain chemicals "mission critical," and to require additional or modified studies on them (*Inside EPA* 2007a). This additional analysis could add years of delay to the release or updating of toxicological information on chemicals posing a significant threat to public health.

> **I believe the line has been crossed between science informing public policy and policy manipulating the science (and trying to influence its outcome).**
>
> Climate scientist at the EPA (UCS and GAP 2007)

The EPA has also recently proposed that the agency will consider no longer publishing numerical assessments of toxicity in its draft reports on IRIS chemicals. This is a major blow to the public and to other regulatory agencies, which often rely on draft reports for information on these chemicals while waiting for the reports to be finalized, which can take several years (*Inside EPA* 2007b).

Besides leading to excessive delay and reducing transparency, this interagency interference is troubling because federal agencies themselves are often part of the regulated community, and thus have significant conflicts of interest in determining the outcome of the toxicity assessment. For example, information from IRIS on the toxicity of perchlorate may mean that the DOD and its contractors can be held liable for billions of dollars in cleanup costs. For this reason, the DOD has long sought to weaken any scientific standard that would mandate cleanup (Sass 2004).

This example highlights the extent to which science has become the preferred battleground for tough policy questions. Exempting the DOD and other agencies from the cleanup of environmental pollution may in certain instances be in the nation's best interest, but such an exemption should be an explicit policy decision. Manipulating scientific data to support such a decision is unacceptable. IRIS is a scientific database that serves as a source of objective information in enforcing environmental laws and assessing environmental cleanup efforts. To sully this database through political interference does a serious disservice to the scientists working with the IRIS data, and to the public.

**I have never seen so many findings and recommendations by the field be turned around at the regional and Washington level. All we can do at the field level is ensure that our administrative record is complete and hope we get sued by an environmental or conservation organization.**

Biologist from the Fish and Wildlife Service, Region 1 (UCS 2005b)

### Retaliating against Whistle-Blowers

A corollary of the Bush administration's penchant for secrecy and centralization is a corresponding weakening of protections for federal whistle-blowers. Federal employees who blow the whistle on government waste, fraud, or abuse have long faced retribution for their actions, despite legal protections. However, in the words of Tom Devine, legal director for the Government Accountability Project, "There has never been anything close to this degree of aggressive government secrecy enforced by relentless oppression," and that cracking down on whistle-blowers is "an obsession with the leadership of this administration" (Devine 2008). A recent investigation by the Center for Investigative Reporting found that "whistle-blowers almost never receive legal protection after they take action," and that the legal system "has in reality enabled the punishment of employees who speak out" (Sandler 2007).

Following the Watergate scandal, two institutions were created to provide a safe conduit for federal employees to report abuses. The Merit Systems Protection Board (MSPB) was created to adjudicate whistle-blower cases, and the Office of Special Counsel (OSC) to investigate claims of retaliation. Both are widely considered to have failed in their purpose. The OSC has run a large backlog of cases for years, and Scott Bloch, the OSC's special counsel, has faced criticism for not responding to complaints of retaliation, and for summarily dismissing hundreds of cases (GAP 2005). Since 1994, fewer than 4 percent of whistle-blowers have won their cases at the MSPB, a rate so low as to have a profound and chilling effect on potential whistle-blowers (Sandler 2007).

### Foxes Guarding the Henhouse

In contrast to federal whistle-blowers who risk their careers to expose abuses of science, the political appointees responsible for such abuses are often promoted, or they land well-paying jobs in industry after they leave government. This revolving door between industry and the government—in which industry employees take high-level government jobs regulating their former employers, only to return to the private sector—has harmed the integrity of federal science.

Notable examples include Philip Cooney, the former oil industry lobbyist who edited government scientific reports on climate change to amplify scientific uncertainty and downplay consequences (Waxman 2007), and Stephen Griles, the Department of the Interior official who oversaw the weakening of regulations on mountaintop-removal mining that directly benefited his former clients (UCS 2007b). The

legacy of these political appointees with conflicts of interest lives on in the agencies after they leave, through both the flawed policies they helped enact and the erosion of public trust in agency integrity.

## Removing Science from Decision Making

Finally, in many cases, scientists and scientific information have simply been shut out of the policy discussion entirely. This section provides a few representative examples of this type of change in the decision-making process, which has made it harder for quality science to make its way to our policy makers.

### *Demoting the Science Adviser*

For decades, the presidential science adviser was appointed as an "assistant to the president"—a near-cabinet-level position akin to the national security adviser. However, President Bush's choice for the position, Dr. John Marburger, admits that "that title was never offered to me" (Mooney 2001). This means that the science adviser, who also serves as director of the Office of Science and Technology Policy, has less access to the president, less ability to ensure that the best scientific information is available to the president and the cabinet, and less influence with federal agencies and departments. As a result, scientific experts have not been as involved in high-level policy discussions on crucial issues such as climate change, stem cell research, and bioterrorism. Furthermore, neither federal scientists nor the scientific enterprise have had a strong advocate in the White House.

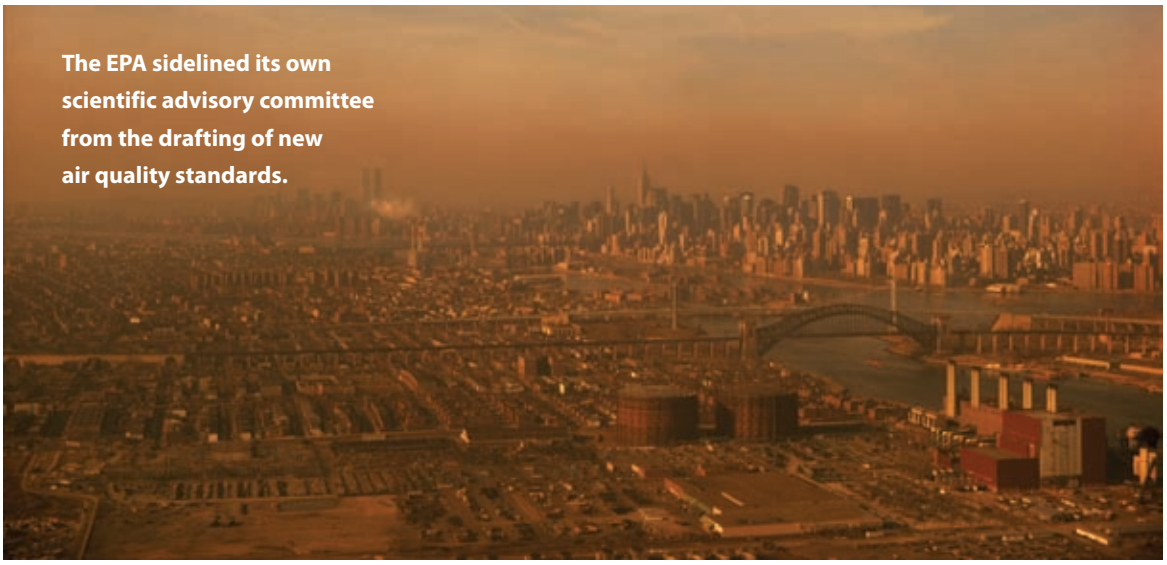
### *Changing NASA's Mission*

In February 2006, the phrase "to understand and protect the home planet" was quietly removed from NASA's official mission statement, marking the first time since NASA's founding in 1958 that the mission statement does not explicitly mention Earth. According to a NASA spokesperson, the mission statement was rewritten "to square the statement with President Bush's goal of pursuing human spaceflight to the Moon and Mars" (Revkin 2006). Many scientists were not only surprised to discover the change, but were also concerned that more funding would be shifted away from studies of Earth, including climate change, and redirected to spaceflight.

A NASA atmospheric chemist commented, "As civil servants, we're paid to carry out NASA's mission. When there was that very easy-to-understand statement that our job is to protect the planet, that made it much easier to justify

ISTOCKPHOTO.COM/CRISTIAN MATEI

**Scientists are concerned that changes to NASA's mission statement signal a shift in prioirities and funding away from studies of Earth.**



**The EPA sidelined its own scientific advisory committee from the drafting of new air quality standards.**



this kind of work" (Revkin 2006). Scientists' funding fears are already more than hypothetical. A 2006 NRC report noted that funding cuts currently in place at NASA will mean canceling or not replacing several of the agency's Earth observation satellites, causing a "severe deficit" in Earth observation capabilities (NRC 2006).

### *Limiting Scientific Advice on Air Pollution*

In 2006, the EPA altered its internal policy governing the role of one of its most important independent scientific advisory panels, significantly minimizing the role of independent science in determining acceptable levels of air pollution.

The Clean Air Act requires the EPA to create National Ambient Air Quality Standards (NAAQS) for six harmful pollutants using the best available science. For decades, EPA scientists have worked with the independent Clean Air Science Advisory Committee (CASAC) to review the latest scientific assessments of risks and recommend appropriate standards. Only after the scientific review was complete would the EPA administrator create the final policy.

In December 2006, the EPA announced a new "streamlined policy" for setting the NAAQS. Under these new rules, high-level political appointees now work directly with staff scientists during the drafting process. Instead of a purely scientific assessment from staff scientists, the new rules call for a document of "policy-relevant" science that "reflects the agency's views." CASAC is entirely cut out of the process until after the EPA has announced its proposed standard.

At a meeting in December 2007 on the NAAQS for lead, CASAC members were very outspoken that the new process had "failed miserably," with one scientist going so far as to say that the process "questions the legitimacy of CASAC's mission" (*Inside EPA* 2007c).

### *Endangering Species*

From 2001 through 2007 the Bush administration listed only 58 species for protection under the Endangered Species Act (ESA), despite a backlog of more than 250 species that are candidates for listing. By comparison, the George H.W. Bush administration listed 234 species during its four years in office (Center for Biological Diversity 2007). During the current Bush administration, overt political manipulation of assessments by scientists at the FWS has become commonplace. Former Department of the Interior appointee Julie MacDonald was responsible for much of this interference. However, even after her resignation, the policies she and others have put in

place continue to wreak havoc on the scientific basis for FWS listing decisions.

FOIA documents obtained by the nonprofit Center for Biological Diversity show that MacDonald and other FWS appointees promoted a new administrative procedure for dealing with citizen petitions to list a species as threatened or endangered. The new process creates an impossibly high standard for judging the merit of such petitions. FWS scientists can use their expertise to augment the scientific information in a petition only if such information refutes the petition; they are barred from introducing science that might support it (UCS 2007c).

This process directly contradicts the ESA mandate that the agency should base listing decisions solely on the "best scientific data available," and creates a powerful institutional bias toward not protecting species. This is not the only policy created by this administration to systematically weaken ESA protections. Other new policies involve ignoring the findings of species-recovery plans, skewing cost-benefit analyses used to delineate critical habitat, and prohibiting the use of "historic range" in considering the status of endangered species (Defenders of Wildlife 2007).

## Weakening Enforcement and Monitoring

Finally, it is important to note that even the wisest government policies can be completely undone by weak or inconsistent enforcement. Many federal agencies, including the CPSC, the FDA, and the EPA, have seen their ability to adequately enforce the nation's laws decline under the Bush administration.

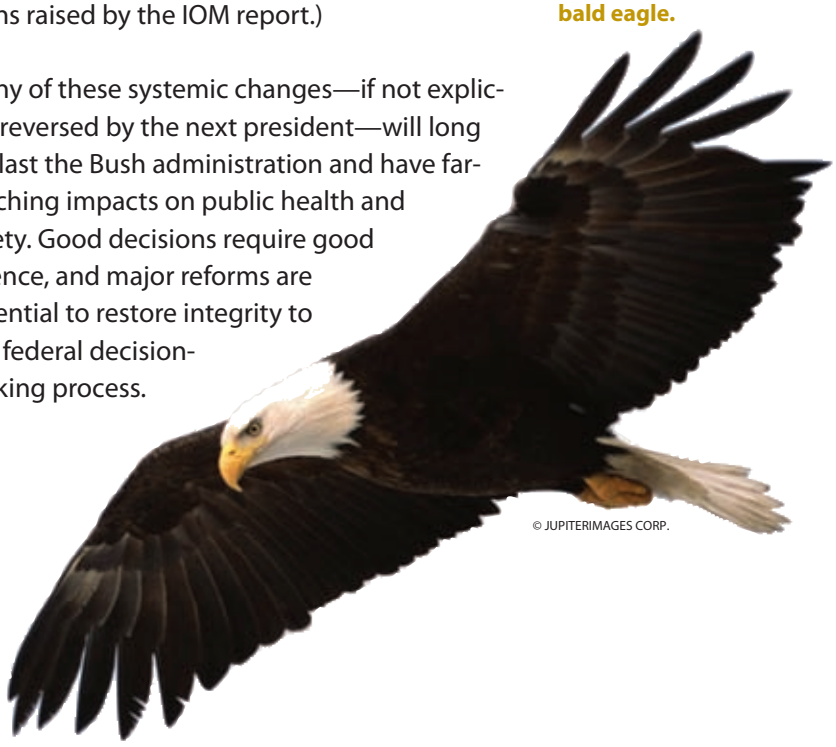
In the past five years, for example, the EPA has opened fewer criminal investigations, filed fewer lawsuits, and levied smaller fines against polluters, with the result that it "now costs less to pollute" (Environmental Integrity Project 2007). The number of EPA criminal investigators has also fallen below the minimum set by Congress (Beamish 2007). And the Bush administration has undercut EPA lawsuits already under way by weakening regulations to allow aging power plants to emit more pollution (Eilperin 2005).

A crucial component of effective enforcement is monitoring, and in many critical areas agencies are simply not collecting the needed data. Examples noted above include the reductions in TRI reporting requirements, and the funding cuts to Earth observation satellites. In another example, the network for monitoring lead air pollution has shrunk drastically over the past decade: only two of the 27 worst sources of such pollution have a monitor within one mile (EPA 2007).

A 2007 report by the Institute of Medicine (IOM) found serious flaws in the FDA's monitoring of the safety of drugs after they have been introduced into the market. The IOM called the system for tracking adverse reactions to drugs "outdated and inefficient," and made several recommendations "to expand the data on drug risks and benefits." The IOM also recommended that the FDA be given more authority to "enforce sponsor compliance with regulatory requirements" (IOM 2007). (The FDA Amendments Act, approved by Congress in September 2007, addresses some but not all of the concerns raised by the IOM report.)

Many of these systemic changes—if not explicitly reversed by the next president—will long outlast the Bush administration and have far-reaching impacts on public health and safety. Good decisions require good science, and major reforms are essential to restore integrity to the federal decision-making process.

**A new procedure limiting the use of science in endangered species decisions contributed to the loss of protections for the southwestern bald eagle.**



# References


21st Century Right to Know Project. 2008. *Moving toward a 21st century right-to-know agenda: Recommendations to president-elect Obama and Congress*. Washington, DC. Online at *http://www.ombwatch.org/21strtkrecs.pdf*.

Aftergood, S. 2008. New FOIA law does not "restore presumption of openness." *Secrecy News*, January 2. Washington, DC: Federation of American Scientists. Online at *http://www.fas.org/blog/secrecy/2008/01/new_foia_law_does_not_restore_.html*.

Alberts, B. 2003. Comments on OMB's proposed bulletin on peer review and information quality. December 15. Online at *http://www.whitehouse.gov/OMB/inforeg/2003iq/115.pdf*.

American Civil Liberties Union (ACLU). 2005. *Science under siege: The Bush administration's assault on academic freedom and scientific inquiry.* New York, NY. Online at *http://www.aclu.org/privacy/gen/15329pub20050620.html*.

Ashcroft, J. 2001. Memorandum for heads of all federal departments and agencies, subject: The Freedom of Information Act. Washington, DC: Office of the Attorney General. October 12. Online at *http://www.doi.gov/foia/foia.pdf*.

Associated Press. 2007. NASA releases redacted information on unprecedented survey of pilots. December 31.

Bass, G.D., M. Bird, C.S. DeWaal, N.B. Duthu, D.J. Goldston, M. Greenwood, F. Grifo, J. Irons, E.S. Jayne, S. Johnson, D. Michaels, R.W. Parker, B. Radin, R. Rushing, J.R. Shull, P.L. Strauss, and W. Warren. 2008. *Advancing the public interest through regulatory reform: Recommendations for President-elect Obama and the 111th Congress*. Washington, DC.

Beamish, R. 2007. White House trims investigators tracking environmental crimes, below level ordered by Congress. Associated Press, July 26.

Broad, W. 2002. U.S. is tightening rules on keeping scientific secrets. *New York Times*, February 17. Online at *http://query.nytimes.com/gst/fullpage.html?res=9501E6DD113FF934A25751C0A9649C8B63&sec=&spon=&partner=permalink&exprod=permalink*.

Bush, G.W. 2005a. Statement on signing the Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2006. Online at *http://www.presidency.ucsb.edu/ws/index.php?pid=65260*.

Bush, G.W. 2005b. Statement on signing the Energy Policy Act of 2005. Online at *http://www.presidency.ucsb.edu/ws/index.php?pid=64861*.

Bush, G.W. 2002. Statement on signing legislation to provide for improvement of federal education research, statistics, evaluation, information, and dissemination, and for other purposes. Online at *http://www.presidency.ucsb.edu/ws/index.php?pid=73176*.

Card, A. 2002. White House memorandum for the heads of executive departments and agencies, subject: Action to safeguard information regarding weapons of mass destruction and other sensitive documents related to homeland security, March 19. Online at *http://www.usdoj.gov/oip/foiapost/2002foiapost10.htm*.

Carmona, R. 2007. Oral testimony (video) before the House Committee on Oversight and Governmental Reform, hearing titled "The surgeon general's vital mission: Challenges for the future." July 10. Online at *http://oversight.house.gov/story.asp?ID=1398*.

Center for Biological Diversity. 2007. *Politicizing extinction: The Bush administration's dangerous approach to endangered wildlife.* Tucson, AZ. Online at *http://www.biologicaldiversity.org/publications/papers/PoliticizingExtinction.pdf*.

Center for Progressive Reform (CPR). 2007. Comments on draft 2007 report to Congress on the costs and benefits of federal regulations. June 11. Online at *http://www.progressiveregulation.org/articles/Comments_OMB_2007.pdf*.

Copeland, C.W. 2007. *Changes to the OMB regulatory review process by executive order 13422*. Washington, DC: Congressional Research Service. February 5.

CRA International. 2005. Economic effects of critical habitat designation for the red-legged frog in 23 California counties. Prepared for the U.S. Fish and Wildlife Service. Washington, DC. October 19. Online at *http://www.fws.gov/sacramento/ea/Documents/Red-Legged%20Frog%20DEA%2010-19-05.pdf*.

Dean, C. 2006. At scientific gathering, U.S. policies are lamented. *New York Times*, February 19. Online at *http://www.nytimes.com/2006/02/19/national/19science.html.*

Defenders of Wildlife. 2007. New Bush administration policy limits endangered species listings. Washington, DC. Online at *www.defenders.org/resources/publications/policy_and_legislation/spr_opinion_fact_sheet.pdf.*

Degette, D. 2007. *The NewsHour with Jim Lehrer* (transcript). November 2. Degette is a U.S. representative (D-CO).

Department of the Interior (DOI). 2007. Investigative report on allegations against Julie MacDonald, deputy assistant secretary, fish, wildlife and parks. Washington, DC: DOI Office of the Inspector General. March. Online at *http://www.doioig.gov/upload/Macdonald.pdf.*

Devine, T. 2008. Interview, January 16. Devine is the legal director of the Government Accountability Project, which advocates for occupational free speech, litigates whistle-blower cases, and develops reforms of the federal whistle-blower law.

Edwards, C. 2006. Testimony before Senate Committee on Homeland Security and Government Affairs, Subcommittee on Federal Financial Management, Government Information, and International Security. May 25. Online at *http://www.cato.org/testimony/ct-ce05252006.html.*

Eilperin, J. 2005. New rules could allow power plants to pollute more. *Washington Post*, August 31. Online at *http://www.washingtonpost.com/wp-dyn/content/article/2005/08/30/AR2005083001949.html.*

Environmental Integrity Project. 2007. Press release: Pollution enforcement efforts under Bush administration's EPA drop on four out of five key fronts. Washington, DC. May 23. Online at *http://www.environmentalintegrity.org/pubs/052307%20EIP%20EPA%20enforcement%20data%20news%20release%20FINAL3.pdf.*

Environmental Protection Agency (EPA). 2007. Review of the National Ambient Air Quality Standards for lead: Policy assessment of scientific and technical information. NAAQS staff paper. Washington, DC. November. Online at *http://www.epa.gov/ttnnaaqs/standards/pb/data/20071101_pb_staff.pdf.*

Environmental Protection Agency (EPA). 2006. Toxics Release Inventory burden reduction final rule, December 18. Washington, DC. Online at *http://www.epa.gov/tri/tridata/modrule/phase2/TRIphase2final.pdf.*

Environmental Protection Agency (EPA). 2003. EPA's response to the World Trade Center collapse: Challenges, successes, and areas for improvement. Washington, DC: EPA Office of the Inspector General. August 21. Online at *http://www.epa.gov/oig/reports/2003/WTC_report_20030821.pdf.*

Environmental Protection Agency (EPA). 2001. Press release: Whitman details ongoing agency efforts to monitor disaster sites, contribute to cleanup efforts. Washington, DC. September 18. Online at *http://www.epa.gov/wtc/stories/headline_091801.htm.*

Fish and Wildlife Service (FWS). 2006. Press release: Fish and Wildlife Service establishes cooperating rancher rule to encourage protection of the California red-legged frog. Washington, DC. April 13. Online at *http://www.fws.gov/sacramento/ea/news_releases/2006%20News%20Releases/CRLF_fCH_2006_NR.htm.*

Fuchs, M. 2007. Testimony before the House Permanent Select Committee on Intelligence, Subcommittee on Intelligence Community Management. July 12. Online at *http://www.gwu.edu/~nsarchiv/news/20070712/index.htm.*

Government Accountability Office (GAO). 2007. Toxic chemical releases: EPA actions could reduce environmental information available to many communities. Washington, DC. Online at *http://www.gao.gov/new.items/d08128.pdf.*

Government Accountability Office (GAO). 2004. Legal principles applicable to selection of federal advisory committee members. Washington, DC. Online at *http://www.gao.gov/decisions/other/303767.pdf.*

Government Accountability Office (GAO). 2003. Freedom of Information Act: Agency views on changes resulting from new administration policy. Washington, DC. Online at *http://www.gao.gov/new.items/d03981.pdf.*

Government Accountability Project. 2005. Statement in support of complaint of prohibited personnel practices against U.S. Special Counsel Scott J. Bloch. Washington, DC. May 23. Online at *http://www.whistleblower.org/template/page.cfm?page_id=122.*

Green, J.A. 2008. Presidential signing statements: Frequently asked questions. Online at *http://www.coherentbabble.com/signingstatements/FAQs.htm*.

Halstead, T.J. 2007. Presidential signing statements: Constitutional and institutional implications. Washington, DC: Congressional Research Service. September 17. Online at *http://www.coherentbabble.com/signingstatements/CRS/RL33667-9172007.pdf.*

Hebert, J. 2007. White House edits Gerberding testimony. Associated Press, October 23.

Ingle, R. 2007. Which toys are okay? Don't ask the safety police. *Washington Post*, December 23. Online at *http://www.washingtonpost.com/wp-dyn/content/article/2007/12/21/AR2007122101555.html.*

*Inside EPA*. 2007a. EPA infighting stalls interagency pact on chemical risk review process. Arlington, VA. August 17.

*Inside EPA*. 2007b. Administration may halt EPA use of numerical values in draft risk studies. Arlington, VA. December 14.

*Inside EPA*. 2007c. Citing lead standard, CASAC will urge new NAAQS review process. Arlington, VA. December 27.

Institute of Medicine (IOM). 2007. *The future of drug safety: Promoting and protecting the health of the public.* Washington, DC: National Academies Press. Online at *http://www.nap.edu/catalog.php?record_id= 11750*.

International Agency for Research on Cancer (IARC). 2006. Meeting participants. In Preamble to the IARC Monographs, General Principles and Procedures. World Health Organization, January 23. Online at *http://monographs.iarc.fr/ENG/Preamble/currenta5participants0706.php.*

Knezo, G.J. 2003. *"Sensitive but unclassified" and other federal security controls on scientific and technical information: History and current controversy.* Washington, DC: Congressional Research Service. July 2. Online at *http://www.ombwatch.org/info/CRS_SBU.pdf.*

Melberth, R. 2007. Testimony before the House Committee on Science and Technology, Subcommittee on Investigations and Oversight. February 13. Online at *http://www.ombwatch.org/regs/PDFs/Melberth_testimony.pdf.*

Mooney, C. 2001. Political science: The Bush administration snubs its science adviser. *American Prospect*, December 3. Online at *http://www.prospect.org/cs/articles?article=political_science.*

The National Academies (NAS). 2008. *Science and technology for America's progress: Ensuring the best presidential appointments in the new administration*. Washington, DC: National Academies Press. Online at *http://www.nap.edu/catalog/12481.html.*

National Research Council (NRC). 2007. *Scientific review of the proposed risk assessment bulletin from the Office of Management and Budget.* Washington, DC: National Academies Press. Online at *http://www.nap.edu/catalog.php?record_id=11811*.

National Research Council (NRC). 2006. Space studies board annual report 2005. Washington, DC: National Academies Press. Online at *http://www.nap.edu/catalog.php?record_id=11716.*

Office of Management and Budget (OMB). 2006. Proposed risk assessment bulletin. Washington, DC. January 9. Online at *http://www.whitehouse.gov/omb/inforeg/proposed_risk_assessment_bulletin_010906.pdf.*

Office of Management and Budget (OMB). 2004. Memorandum for heads of departments and agencies, subject: Issuance of the OMB's "Final Information Quality Bulletin for Peer Review." Washington, DC. December 16. Online *at http://www.whitehouse. gov/omb/memoranda/fy2005/m05-03.pdf.*

Office of Management and Budget (OMB). 2003. Circular A-4: To the heads of executive agencies and establishments, subject: Regulatory analysis. Washington, DC. September 17. Online at *http://www.ombwatch.org/regs/OIRA/a-4-2003.pdf.*

Office of Science and Technology Policy (OSTP). 2008. Memorandum from John H. Marburger III, subject: Principles for the release of scientific research results. May 28. Washington, DC. Online at *http://www.ostp.gov/galleries/default-file/Research%20Results.pdf.*

OMB Watch. 2007a. An attack on cancer research: Industry's obstruction of the National Toxicology Program. Washington, DC. Online at *http://www.ombwatch.org/info/NTPDataQuality.pdf.*

OMB Watch. 2007b. New White House guidelines fit into broad attack on federal protections. Washington, DC. September 25. Online at *http://www.ombwatch.org/article/articleview/3991/1/381?TopicID=1*.

OMB Watch. 2007c. Polluted logic: How EPA's ozone standard illustrates the flaws of cost-benefit analysis in regulatory decision making. Washington, DC. December 5. Online at *http://www.ombwatch.org/regs/PDFs/PollutedLogic.pdf*.

OMB Watch. 2005. PART backgrounder. Washington, DC. Online at *http://www.ombwatch.org/regs/2005/performance/PARTbackgrounder.pdf*.

OMB Watch. 2003. OMB expands influence over scientific decisions. Washington, DC. May 28. Online at *http://www.ombwatch.org/article/articleview/1541/1/418?TopicID=1*.

Public Citizen. 2003. Analysis of executive order 13292. Washington, DC. *Online at http://www.bushsecrecy.org/page.cfm?PagesID=31&ParentID=2&CategoryID=2*.

Revkin, A. 2006. NASA's goals delete mention of home planet. *New York Times*, July 22. Online at *http://www.nytimes.com/2006/07/22/science/22nasa.html*.

Ruckelshaus, W.D. 1983. Memorandum to all EPA employees, subject: Contacts with persons outside the agency. Washington, DC: Environmental Protection Agency. May 19. Online at *http://www.epa.gov/history/topics/policy/fishbowl.htm*.

Sandler, J. 2007. The war on whistle-blowers. *Salon*, November 1. Online at *http://www.salon.com/news/feature/2007/11/01/whistleblowers*.

Sass, J. 2004. U.S. Department of Defense and White House working together to avoid cleanup and liability for perchlorate pollution. *International Journal of Occupational and Environmental Health* 10:330–334. Online at *http://www.ijoeh.com/pfds/1003_Sass.pdf*.

Savage, C. 2006. Bush challenges hundreds of laws. *Boston Globe*, April 30. Online at *http://www.boston.com/news/nation/washington/articles/2006/04/30/bush_challenges_hundreds_of_laws/*.

Shogren, E. 2004. Air quality experts decry new Bush policy. *Los Angeles Times*, April 29. Online at *http://www.commondreams.org/headlines04/0429-09.htm*.

Smith, E. 2007. A prologue to a farce. *Mine Safety and Health News*, February 26. Online at *http://www.minesafety.com/index.php?pageStewardLink=2816*.

Train, R.E. 2003. When politics trumps science. Letter to the editor. *New York Times*, June 21. Online at *http://query.nytimes.com/gst/fullpage.html?res=9A06E5D6163BF932A15755C0A9659C8B63*.

Union of Concerned Scientists (UCS). 2008a. Voices of federal scientists. Online at *http://www.ucsusa.org/surveys*.

Union of Concerned Scientists (UCS). 2008b. *Interference at the EPA: Science and politics at the U.S. Environmental Protection Agency*. Cambridge, MA. Online at *http://www.ucsusa.org/EPAscience*.

Union of Concerned Scientists (UCS). 2007a. Presidential mandate centralizes regulatory power, endangers citizens. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/presidential-mandate.html*.

Union of Concerned Scientists (UCS). 2007b. Mining agency buries streams and science. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/mining-agency-buries-streams.html*.

Union of Concerned Scientists (UCS). 2007c. FWS decrees the southwestern bald eagle is safe, in spite of science. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/us-fish-and-wildlife.html*.

Union of Concerned Scientists (UCS). 2007d. Federal agency fails to protect children from lead lunches. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/federal-agency-fails-to.html*.

Union of Concerned Scientists (UCS). 2006a. Summary of the FDA scientist survey. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/summary-of-the-fda-scientist.html*.

Union of Concerned Scientists (UCS). 2006b. Endangered frog loses, developers win as critical habitat is reduced. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/red-frog.html*.

Union of Concerned Scientists (UCS). 2005a. Summary of National Oceanic & Atmospheric Administration Fisheries Service scientist survey. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/survey-noaa-fisheries.html*.

Union of Concerned Scientists (UCS). 2005b. U.S. Fish and Wildlife Service survey summary. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/us-fish-wildlife-service.html*.

Union of Concerned Scientists (UCS). 2004. Suppressing analyses on bull trout habitat. Cambridge, MA. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/science-undermined-at-fws.html#Trout*.

Union of Concerned Scientists (UCS) and the Government Accountability Project (GAP). 2007. *Atmosphere of pressure: Political interference in federal climate science*. Cambridge, MA, and Washington, DC. Online at *http://www.ucsusa.org/scientific_integrity/abuses_of_science/atmosphere-of-pressure.html*.

Waxman, H. 2007. White House engaged in systematic effort to manipulate climate change science. Washington, DC: House Committee on Oversight and Government Reform. Online at *http://oversight.house.gov/story.asp?ID=1653*.

Weintraub, R. 2007. Written testimony before the House Appropriations Subcommittee on Financial Services and General Government, hearing on consumer protection issues. February 28. Online at *http://www.consumerfed.org/pdfs/CFA_Testimony_House_Fin_Serv_Approps_22807.pdf*.

Wilber, D. 2008. Redacted air-traffic safety survey released. *Washington Post*, January 1. Online at *http://www.washingtonpost.com/wp-dyn/content/article/2007/12/31/AR2007123101689.html*.

Wilson, J. 2006. Habitats may shrink by leaps, bounds. *Los Angeles Times*, November 4.

Yoo, C.S., S.G. Calabresi, and A.J. Colangelo. 2005. The unitary executive in the modern era, 1945–2004. *Iowa Law Review* 90(2):601. Online at *http://ssrn.com/abstract=690822*.

Youngstown Sheet & Tube Co. v. Sawyer. 343 U.S. 579 (1952). Online at *http://www.law.cornell.edu/supct/html/historics/USSC_CR_0343_0579_ZS.html*

Zitner, A. 2002. Advisors put under a microscope. *Los Angeles Times*, December 23.

# Federal Science and the Public Good

SECURING THE INTEGRITY OF SCIENCE IN POLICY MAKING

## Presidential Transition Update

The United States has enjoyed prosperity and health in large part because of its strong and sustained commitment to independent science. As the nation faces new challenges at home and growing competitiveness abroad, the need for a robust federal scientific enterprise remains critical.

Unfortunately, an epidemic of political interference in federal science threatens this legacy, promising serious and wide-ranging consequences. Furthermore, recent changes in the structure of the federal government impair the ability of federal scientists to fulfill their responsibility to serve their agencies and the public interest.

This interference in science threatens our nation's ability to respond to complex challenges to public health, the environment, and national security. It risks demoralizing the federal scientific workforce and raises the possibility of lasting harm to the federal scientific enterprise. Most important, it betrays public trust in our government and undermines the democratic principles upon which this nation was founded.

Reversing these systemic changes will be difficult—but not impossible. Leadership and an unwavering commitment to scientific integrity from our next president, continued oversight from the legislative branch, and the persistent and energetic engagement of many different stakeholders will be essential in creating significant and lasting reform.

**National Headquarters**
Two Brattle Square
Cambridge, MA 02238-9105
Phone: (617) 547-5552
Fax: (617) 864-9405

**Washington, DC, Office**
1825 K Street NW, Suite 800
Washington, DC 20006-1232
Phone: (202) 223-6133
Fax: (202) 223-6162

**West Coast Office**
2397 Shattuck Ave., Ste. 203
Berkeley, CA 94704-1567
Phone: (510) 843-1872
Fax: (510) 843-3785

**Website** www.ucsusa.org **Email** ucs@ucsusa.org

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

Printed on 100% post-consumer, process chlorine-free, recycled paper using vegetable-based inks.