

# Federal Science and the Public Good

---

**SECURING THE INTEGRITY OF SCIENCE IN POLICY MAKING**

---

Union of Concerned Scientists  
Scientific Integrity Program

**FEBRUARY 2008**

© 2008 Union of Concerned Scientists  
All rights reserved.

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](http://www.ucsusa.org/scientific_integrity).

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

UCS Publications  
2 Brattle Square  
Cambridge, MA 02238-9105

Or email [pubs@ucsusa.org](mailto:pubs@ucsusa.org) or call (617) 547-5552.

DESIGN: David Gerratt/NonprofitDesign.com

COVER PHOTOS: Jupiter Images

# Contents

<b>Contributors</b>	<b>v</b>
<b>Acknowledgments</b>	<b>vi</b>
<b>Executive Summary</b>	<b>1</b>
<b>Introduction</b>	<b>5</b>
<b>1. Patterns of Abuse</b>	<b>6</b>
Falsifying Data and Fabricating Results	6
Selectively Editing Documents and Creating False Uncertainty	7
Tampering with Scientific Procedures	8
Intimidating and Coercing Scientists	9
Censoring and Suppressing Scientists	10
Hiding, Suppressing, and Delaying Release of Scientific Findings	11
Disregarding Legally Mandated Science	12
Allowing Conflicts of Interest	12
Corrupting Scientific Advisory Panels	13
<b>2. Changing the Rules</b>	<b>14</b>
Centralizing Decision Making and the Unitary Executive	14
<i>Signing Statements</i>	15
<i>Executive Orders</i>	16
Homogenizing Agency Decision Making	17
<i>Peer Review Guidelines</i>	17
<i>Risk Assessment Bulletin</i>	17
<i>Cost-Benefit Analysis</i>	18
<i>Program Assessment Rating Tool</i>	18
Reducing Transparency	19
<i>Jailing the Freedom of Information Act</i>	19
<i>Overclassification</i>	20
<i>The Public's Right to Know</i>	20
Adding Unnecessary Bureaucracy	21
<i>The Data Quality Act</i>	21
<i>Reviewing EPA Science</i>	21

Retaliating against Whistle-Blowers	22
Foxes Guarding the Henhouse	22
Removing Science from Decision Making	23
<i>Demoting the Science Adviser</i>	23
<i>Changing NASA's Mission</i>	23
<i>Limiting Scientific Advice on Air Pollution</i>	24
<i>Endangering Species</i>	24
Weakening Enforcement and Monitoring	25
<b>3. Restoring Scientific Integrity to Federal Policy Making</b>	<b>26</b>
Protecting Government Scientists	26
<i>Putting Whistle-Blower Rights on the Books</i>	27
<i>Enforcing Whistle-Blower Protections</i>	28
Making Government More Transparent	29
<i>Committing to Open Government</i>	29
<i>Giving the Public Access to Federal Science</i>	29
<i>Reforming Agency Media Policies</i>	30
<i>Reforming the Freedom of Information Act</i>	31
<i>Ending Overclassification</i>	32
<i>Disclosing and Mitigating Conflicts of Interest</i>	32
Reforming the Regulatory Process	33
<i>Restraining OMB Interference</i>	33
<i>Reversing Executive Order 13422</i>	33
<i>Increasing Transparency in Rule Making</i>	33
<i>Terminating Inappropriate Interagency Review</i>	34
Ensuring Robust Scientific Input to Federal Decision Making	34
<i>Reforming the Scientific Advisory Committee System</i>	34
<i>Reinstating the Office of Technology Assessment</i>	35
<i>Strengthening Science Advice to the President</i>	36
Depoliticizing Monitoring and Enforcement	37
Concluding Thoughts	37
<b>References</b>	<b>38</b>

## Executive Summary

**T**he 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. 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 are critical. The balance of power among the three branches of government should be restored, to enable each to play its part in keeping science independent.

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.



COURTESY OF HILTON KELLEY

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

### 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:

- **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 next 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 Office of Management and Budget (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.



ISTOCKPHOTO

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

- **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.
- **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.

### Restoring Scientific Integrity to Federal Policy Making

These systemic problems can be resolved only through an unwavering commitment to scientific integrity from the next president, vigorous congressional oversight, and the engagement of a variety of public stakeholders. Specifically, policy makers should take concrete steps to restore scientific integrity in five crucial areas:

- **Protecting government scientists.** Federal scientists have a profound responsibility, 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 next administration should enact policies that presume that government information is public knowledge, to be withheld only when essential. The public also needs greater access to federal science through better disclosure of regulatory decision making, smarter use of information technology, and reform of agency communication policies. Agencies 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 next administration should respect the scientific expertise of the regulatory agencies, and restrain revisions of agency science by both the OMB and other agencies. The next president should repeal executive order 13422, which greatly expanded the role of the OMB, and should develop guidelines on the use of presidential signing statements.
- **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 next president should appoint a cabinet-level science adviser, and should greatly expand the network of advisers providing scientific expertise to the president.

- **Depoliticizing monitoring and enforcement.** The next 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.

### 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 the next president will be essential in creating significant and lasting reform.