

**TESTIMONY OF RICK PILTZ
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WASHINGTON, D.C.**

**BEFORE THE
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION
UNITED STATES SENATE**

**HEARING ON
CLIMATE CHANGE RESEARCH AND SCIENTIFIC INTEGRITY**

FEBRUARY 7, 2007

Chairman Inouye, Co-Chairman Stevens, Members of the Committee — I greatly appreciate the opportunity to present testimony at this hearing, which addresses a subject of crucial importance for good policymaking and an informed society. I am currently the Director of Climate Science Watch, a program of the Government Accountability Project in Washington, D.C. The Government Accountability Project, a 29-year-old nonprofit public interest group, is the Nation's leading whistleblower protection organization. Climate Science Watch engages in investigation, communication, and reform advocacy aimed at holding public officials accountable for how they use climate research in addressing the challenge of global climate change.

Since 1988, my primary professional focus has been on the relationship between science and policy on global climate change.¹ From April 1995 until March 2005, I worked in the program coordination office of the multiagency U.S. Government program that supports scientific research on climate and associated global change.² The program was originally established as the U.S. Global Change Research Program (USGCRP) under the Global Change Research Act of 1990. In 2002, the Bush Administration established the U.S. Climate Change Science Program (CCSP), incorporating the USGCRP and the President's Climate Change Research Initiative.

¹ I studied Political Science at the University of Michigan, earning an M.A. and Ph.D. Candidate status. I have worked on issues of environmental and energy research and policy both inside and outside of government since 1979. From 1991 through 1994 I served as a Majority Professional Staff Member of the Committee on Science, Space and Technology of the U.S. House of Representatives. During that time I supported the Committee's oversight of climate and global change research and policy issues.

² The Climate Change Science Program Office, where I worked, supports this research effort by performing interagency coordination, strategic planning, communications, and reporting functions, and serving as the program secretariat. I worked directly with the program leadership, career federal science program managers, and the senior professional staff in the program office. At the time I resigned in March 2005 my position was Senior Associate. During the time I worked in the program office I was employed by the University Corporation for Atmospheric Research (UCAR), based in Boulder, Colorado. UCAR is a nonprofit consortium of North American member universities that grant doctoral degrees in the atmospheric and related sciences. I was assigned to work in the program office under a grant from the National Science Foundation to the UCAR Joint Office of Science Support.

Key Issues Addressed in My Testimony

We currently face major, interrelated problems with the U.S. Climate Change Science Program and with how the Administration is undercutting climate science assessment, communication, and research. In my judgment, the following are of particular significance for the public interest and for Congressional oversight at this time:

- 1. The Administration suppressed official use of the National Assessment of Climate Change Impacts and has failed to continue the National Assessment process, thus undermining national preparedness for dealing with the challenge of global climate change. (See pages 2-8 below.)**
- 2. The Administration has acted in a variety of ways to impede and manipulate communication about climate change by federal scientists and career science program leaders to wider audiences, including Congress and the media. (See pages 8-13.)**
- 3. The Administration has cut the climate change research budget to its lowest level since 1992 and is presiding over what appears to be a growing crisis in the global climate observing system, thus undermining a critical national intelligence-gathering process. (See pages 13-18.)**

My testimony deals with each of these problems and concludes with a set of recommendations.

- 1. The Administration suppressed official use of the National Assessment of Climate Change Impacts and has failed to continue the National Assessment process, thus undermining national preparedness for dealing with the challenge of global climate change.**

During the 2001-2005 time frame, I came to the conclusion that politicization of climate science communication by the current Administration was undermining the credibility and integrity of the Climate Change Science Program in its relationship to the research community, to program managers, to policymakers, and to the public interest. Among the key issues that I viewed as particularly significant in the politicization of the program, foremost was the treatment by the current Administration of the National Assessment of the Potential Consequences of Climate Variability and Change (“National Assessment”).

The National Assessment to this day remains the most comprehensive, scientifically based assessment of the potential consequences of climate change for the United States. No national climate change assessment process or reporting of comparable subject matter and regionally-based, nationwide scope has subsequently been undertaken with the support of the federal government. The National Assessment was a pioneering experiment in societal relevance for climate change research.

I see the Administration's treatment of the 2000 National Assessment, and the abandonment of high-level support for an ongoing process of scientist-stakeholder interaction, as the central climate science scandal of the Administration – the action that has done, and continues to do, the greatest damage in undermining national preparedness in dealing with the challenge of global climate change. Thus, I believe it would be appropriate for the Committee to investigate the Administration's treatment of the 2000 National Assessment, as part of oversight of the White House's political intervention in the U.S. Climate Change Science Program and in particular its assessment and communication activities.

The National Assessment was initiated, carried out, and published between 1997 and 2000, during the time I worked in the program office. The Global Change Research Act of 1990 mandates the production and submission to the President and the Congress "no less frequently than every 4 years" scientific assessment reports of global change that include the impacts of such change on the environment and on various socioeconomic sectors. To be responsive to this statutory mandate, the program sponsored the National Assessment. The process involved communication between scientists and a variety of "stakeholders," from the public and private sectors and academia. It was intended to initiate a process of interaction and reporting that would be ongoing and developed and improved over time.

A National Assessment Synthesis Team made up of leading scientists and other experts, was established as a federal advisory committee to guide the process. It produced a National Assessment report that integrated key findings from regional and sectoral analyses and addressed questions about the implications of climate variability and change for the United States. The report was forwarded to the President and Congress in November 2000.

Climate change impacts vary by region and sector, as do response strategy options. University-based teams led 19 regional workshops and assessments across the United States. that focused on interrelated environmental and socioeconomic issues. In addition, five sectoral reports focused on issues that were national in scope and related to the goods and services on which society and the economy depend, including reports on agriculture, water, human health, forests, and coastal areas and marine resources.

Every Member has an interest in the kind of information such an assessment can make available for consideration in developing national policy. These were groundbreaking, integrative efforts that were designed to be of use to Congress and the federal agencies, state and local officials, regional and sectoral planners and resource managers, educators, and the general public. They exemplified a vision of a democratic process for societally relevant environmental assessment, based on dialogue between interdisciplinary teams of scientific experts and a wide range of stakeholders and the general public. Through this process, the agenda for ongoing research and assessment would be informed by a better understanding of the concerns of policymakers and the public, and policymakers and the public would learn about issues of climate change and its potential consequences so as to better equip them for making decisions.

In June 2001, the Committee on the Science of Climate Change of the National Research Council (NRC) issued a report titled *Climate Change Science: An Analysis of Some Key Questions*. The study originated from a White House request in May 2001 to help inform the

Administration's review of U.S. climate change policy. The Committee was made up of 11 eminent climate scientists. It was chaired by Ralph J. Cicerone of the University of California, who is today the President of the National Academy of Sciences. The section of the NRC report on "Consequences of Increased Climate Change of Various Magnitudes" is based almost entirely on the findings of the National Assessment. The NRC Committee did not in any way call into question the scientific legitimacy or significance of the National Assessment, but rather drew on it as a core text in this advisory report to the White House.

The Administration's treatment of the National Assessment

Despite the utility of the National Assessment, the Administration, most aggressively from the second half of 2002 onward, acted to essentially bury the National Assessment, i.e., by suppressing discussion of it by participating agencies for purposes of research planning by the Climate Change Science Program; suppressing references to it in published program documents including annual program reports to Congress; withdrawing support from the coordinated process of scientist-stakeholder interaction and assessment that had been initiated by the first National Assessment; and making clear that no second National Assessment would be undertaken. The Administration failed to consider and utilize the National Assessment in the *Strategic Plan for the U.S. Climate Change Science Program* issued in July 2003. From my experience, observation, analysis of documentation, and personal communications with others in the program, I believe it is clear that the reasons for this were essentially political, and not based on scientific considerations. I believe this is generally understood within the program.

In late May 2002 the Administration issued the report *U.S. Climate Action Report 2002: Third National Communication of the United States of America Under the United Nations Framework Convention on Climate Change*. This Climate Action Report was one of a series of reports required periodically pursuant to U.S. responsibilities under the Framework Convention on Climate Change, the foundational climate treaty. Chapter 6 of the Climate Action Report, "Impacts and Adaptation," drew substantially on the findings of the National Assessment for its discussion of the potential consequences of climate change for the United States. This was appropriate, considering that the National Assessment had recently been published and represented the most systematic, in-depth study of this subject that had been done to that point (and remains so at the present time).

The "Impacts and Adaptation" chapter prompted press coverage, including a prominent story in the *New York Times*, on how the chapter suggested a new acknowledgement by the Administration of the science pointing to the reality of human-induced climate change and a range of likely adverse societal and environmental consequences. This appeared to cause a public relations problem for the Administration. Asked about the report and the press coverage of it, the President replied in a way that distanced himself from it by referring to it as "a report put out by the bureaucracy."

My understanding at that point, which I believe was coming to be more widely shared, both inside and outside the program, was that the Administration was uncomfortable with the mainstream scientifically based communications suggesting the reality of human-induced climate change and the likelihood of adverse consequences. Straightforward acknowledgement

of the growing body of climate research and assessment suggesting likely adverse consequences could potentially lead to stronger public support for controls on emissions and could be used to criticize the Administration for not embracing a stronger climate change response strategy. It was the concern about this linkage that seemed to underlie much of what I perceived to be the Administration's intervention in managing communications by the Climate Change Science Program.

In this context, for the Administration to have released a U.S. Climate Action Report with a chapter on climate change impacts that identified a range of likely adverse consequences, based on scientific reports including the National Assessment, could rightly be seen as an anomaly and appeared to be seen as a significant political error by Administration allies dedicated to denying the reality of human-induced global warming as a significant problem. On June 3, 2002, Myron Ebell of the Competitive Enterprise Institute sent an e-mail message addressed to Philip Cooney, Chief of Staff at the White House Council on Environmental Quality (CEQ), offering to help manage this "crisis" and help "cool things down." (This document was obtained by a nongovernmental organization via a Freedom of Information Act request). In the e-mail to Cooney, Ebell said: "If it were only this one little disaster we could all lock arms and weather the assault, but this Administration has managed, whether through incompetence or intention, to create one disaster after another and then to expect its allies to clean up the mess." He told Cooney the Administration needed to get back on track with disavowals of the Climate Action Report and the National Assessment. Shortly thereafter, Cooney began to play a more visible role in Climate Change Science Program governance as the CEQ liaison to the interagency principals committee, and in intervening to manage and edit Climate Change Science Program communications.

Immediately prior to taking the position of CEQ Chief of Staff, Cooney had been employed as a lawyer-lobbyist at the American Petroleum Institute (API), the primary trade association for corporations associated with the petroleum industry. He was the climate team leader at API, leading the oil industry's fight against limits on greenhouse gas emissions. CEI also had a close relationship with the oil industry, having reportedly received \$2 million in funding between 1998 and 2005 from ExxonMobil.

In July 2003 the program issued its *Strategic Plan for the Climate Change Science Program*. The document was submitted to Congress under the signatures of Secretary of Energy Spencer Abraham, Secretary of Commerce Donald L. Evans, and Office of Science and Technology Policy Director John H. Marburger. In the plan, the existence of the National Assessment was mentioned only in a single sentence, which did not even include the title of the report. There was no description of the structure, process, scope, purpose, or contents of the National Assessment. The National Assessment did not appear in the bibliography of the plan. No information was given to suggest how copies might be obtained. In effect, mention of the National Assessment had almost completely vanished from the CCSP Strategic Plan.

National Research Council's criticism of the CCSP on the National Assessment

The final report of the National Research Council's Committee to Review the U.S. Climate Change Research Program Strategic Plan, issued in February 2004, was critical of the failure of

the program to incorporate and build on the National Assessment in its Strategic Plan for assessment and “decision support” activities. On the subject of the National Assessment’s scientific credibility the report said:

It is especially important that CCSP synthesis and assessment products be independently prepared, or evaluated, by the science community. This will provide a level of credibility that reports produced exclusively within the government sometimes fail to achieve. The only previous centralized assessment effort by the CCSP agencies, the U.S. National Assessment on the Potential Consequences of Climate Variability and Change, followed these credibility assurance guidelines. The National Assessment’s Overview and Foundation reports are important contributions to understanding the possible consequences of climate variability and change. (National Research Council, Committee to Review the U.S. Climate Change Science Program Strategic Plan, *Implementing Climate and Global Change Research: A Review of the Final U.S. Climate Change Science Program Strategic Plan* (National Academies Press, 2004, p.13).

On the value of the National Assessment’s process of engaging scientists and “stakeholders” in dialogue, the NRC review said:

The processes of stakeholder engagement and transparent review of the National Assessment reports were exemplary....The strategic plan...should more effectively build upon a growing capability within the U.S. climate and global change research community to interact with potential users of climate and global change science, as was demonstrated in the U.S. National Assessment of the Potential Consequences of Climate Variability and Change (NAST, 2001). The revised plan generally overlooks the insights and relationships that were developed by the National Assessment... (pp. 13-14)

On the significance of the regional-scale assessments included as part of the National Assessment, the NRC review said:

The plan also does not include areas of research relevant to regional-scale assessments identified as a result of the National Assessment....This deficiency needs to be remedied quickly so that the program’s decision support activities reflect what the scientific community now knows, what it can accomplish, and what users would like to know. (p. 14)

On the Administration’s apparent refusal to provide any scientific rationale for the disappearance of any acknowledgement of the National Assessment, the NRC review said:

For the most part the CCSP’s revisions to the strategic plan are quite responsive to comments expressed at the workshop, in written input, and by this committee. One notable exception is the fact that the revised plan does not acknowledge the substantive and procedural contributions of the U.S. National Assessment of the Potential Consequences of Climate Variability and Change (NAST, 2001), a major focus of the Global Change Research Program (GCRP) in the late 1990s. Many participants at the [CCSP] December [2002] workshop criticized how the draft strategic plan treated the National Assessment, as did this

committee in its first report. The revised plan does not reflect an attempt to address these concerns, and no rationale for this decision has been provided. (pp. 29-30).

Although OSTP Director John Marburger has referred to the National Academy of Sciences as the “gold standard” of scientific advice to the government, and despite the criticism of the plan for failing to provide any rationale for the disappearance of the National Assessment, Dr. Marburger, then-CCSP Director James R. Mahoney, and other Administration officials and CCSP leaders offered no response to this criticism of how they treated the National Assessment. No changes were made to the Strategic Plan in response to the NRC’s criticism. It appeared to me that something akin to a conspiracy of silence was being enforced within the federal government, which had nothing to do with the scientific merits of the National Assessment.

The role of the Council on Environmental Quality

The Administration, without ever clarifying the issue forthrightly, has allowed a perception to persist that the suppression of the National Assessment was required by a legal agreement pursuant to a joint stipulation to dismissal of a 2001 lawsuit filed by the Competitive Enterprise Institute et al. seeking to halt the distribution of the National Assessment. White House and Climate Change Science Program officials have never offered an honest public explanation of why the terms of that dismissal would have legally required (as distinct from an unofficial, secret political agreement) that the White House and the federal agencies suppress a taxpayer-funded, scientifically based assessment sponsored by the federal global change research program, even for purposes of using it as a scientific document or in program planning for research and future assessments.

I have examined the official court records on lawsuits filed by CEI et al. in 2001 and 2003 and find no basis for such suppression. Rather, it appears that, although the CEI lawsuits were dismissed, the Administration decided nevertheless to award what I have termed the global warming denial machine a political victory that they could not have won had their lawsuits gone to trial. Myron Ebell of CEI has been quoted as saying of the National Assessment, “To the degree that it has vanished, we have succeeded.” (*Greenwire*, October 3, 2006)

It is my understanding that the White House directed CCSP Director Mahoney to suppress the use of and references to the National Assessment in program planning and publications. It is my understanding that this directive was likely given by Philip Cooney at CEQ, acting as an agent of CEQ Chairman James Connaughton and, by extension, the White House policy and political apparatus. One of the CCSP agency principals informed me that a subsequent directive to the agencies to refrain from referencing the National Assessment had come from Mahoney’s office. Mahoney later confirmed to *Environmental Science & Technology*, a journal of the American Chemical Society, that federal researchers were restricted from referring to the National Assessment (*Environmental Science & Technology Online*, October 12, 2005).

Unlike the other representatives on the program’s interagency principals committee, the great majority of whom were career science program management professionals, CCSP Director Mahoney was a Senate-confirmed Presidential appointee, as the Assistant Secretary of Commerce for Oceans and Atmosphere and Deputy Administrator of the National Oceanic and

Atmospheric Administration, and thus a political representative of the Administration. On the matter of not citing or using the National Assessment, I believe it was well-understood by the agency principals that to challenge the chairman would, in effect, have been to challenge the White House – in particular CEQ.

Building appropriately on the pioneering work of the National Assessment could have had a salutary influence on developing the priorities of the CCSP Strategic Plan and surely would have led the program toward a different overall configuration of follow-up scientific and assessment priorities. It could have led to a different approach to evolving the discourse between scientists and users of information – a freer relationship and one less constrained than is the current process by political gatekeepers concerned with controlling the flow of communications about climate change and its implications for the United States.

2. The Administration has acted in a variety of ways to impede and manipulate communication about climate change by federal scientists and career science program leaders to wider audiences, including Congress and the media.

The ability of our society and public officials to make good decisions about important issues depends on a free, honest, and accurate flow of scientific research and findings. Unfortunately, the Administration and industry-funded special interest groups have acted to impede and manipulate essential communication about global climate change and its implications for society and the environment. The many climate scientists in the employ of the federal government represent a tremendous resource. Their knowledge and advice should be heeded, rather than manipulated or ignored. Without strong action to protect and restore integrity of federal climate science communication, our nation will be ill-prepared to deal with the challenge of global climate change.

Atmosphere of Pressure: The Union of Concerned Scientists – Government Accountability Project joint report

On January 30, 2007, the Union of Concerned Scientists and the Government Accountability Project³ released their joint report, *Atmosphere of Pressure: Political Interference in Federal Climate Science*. The *Atmosphere of Pressure* study found that 150 federal climate scientists report personally experiencing at least one incident of political interference in the past five years, for a total of *at least* 435 such incidents. I have transmitted the report to the committee as a supplement to my written testimony.

³ 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 Government Accountability Project (GAP) is the nation's largest whistleblower organization. GAP attorneys and organizers assist whistleblowers in taking their evidence of wrongdoing to appropriate government agencies, committees, and officials to investigate, expose, and rectify the problems they have identified. More information about GAP is available online at www.whistleblower.org.

As a part of this study, UCS sent surveys to 1,600 climate scientists at seven federal agencies and departments, to gauge the extent to which politics was playing a role in scientists' research. 279 scientists responded to the survey. At the same time, GAP conducted 40 in-depth interviews with federal climate scientists and other officials and analyzed thousands of pages of government documents, obtained through the Freedom of Information Act (FOIA) and inside sources, regarding agency media policies and Congressional communications.

These two complementary investigations arrived at similar conclusions regarding the state of federal climate research and the need for strong policies to protect the integrity of science and the free flow of scientific information. The following is taken from the Executive Summary of the UCS-GAP joint report:

Political Interference With Climate Science

The federal government needs accurate scientific information to craft effective policies. Political interference with the work of federal scientists threatens the quality and integrity of these policies. As such, no scientist should ever encounter any of the various types of political interference described in our survey questions. Yet unacceptably large numbers of federal climate scientists personally experienced instances of interference over the past five years:

- Nearly half of all respondents (46 percent of all respondents to the question) perceived or personally experienced pressure to eliminate the words "climate change," "global warming" or other similar terms from a variety of communications.
- Two in five (43 percent) perceived or personally experienced changes or edits during review that changed the meaning of scientific findings.
- More than one-third (37 percent) perceived or personally experienced statements by officials at their agencies that misrepresented scientists' findings.
- Nearly two in five (38 percent) perceived or personally experienced the disappearance or unusual delay of websites, reports, or other science-based materials relating to climate.
- Nearly half (46 percent) perceived or personally experienced new or unusual administrative requirements that impair climate-related work.
- One-quarter (25 percent) perceived or personally experienced situations in which scientists have actively objected to, resigned from, or removed themselves from a project because of pressure to change scientific findings.
- Asked to quantify the number of incidents of interference of all types, 150 scientists (58 percent) said they had *personally experienced* one or more such incidents within the past five years, for a total of *at least* 435 incidents of political interference.

The more frequently a climate scientist's work touches on sensitive or controversial issues, the more interference he or she reported. More than three-quarters (78 percent) of those survey respondents who self-reported that their research "always" or "frequently" touches on issues that could be considered sensitive or controversial also reported they had personally experienced at least one incident of inappropriate interference. More than one-quarter (27 percent) of this same group had experienced six or more such incidents in the past five years.

Barriers to Communication

Federal scientists have a constitutional right to speak about their scientific research, and the American public has a right to be informed of the findings of taxpayer-supported research. Restrictions on scientists who report findings contrary to an administration's preferred policies undermine these basic rights. These practices also contribute to a general misunderstanding of the findings of climate science and degrade our government's ability to make effective policies on topics ranging from public health to agriculture to disaster preparation.

The investigation uncovered numerous examples of public affairs officers at federal agencies taking a highly active role in regulating communications between agency scientists and the media—in effect serving as gatekeepers for scientific information.

Among the examples taken from interviews and FOIA documents:

- One agency scientist, whose research illustrates a possible connection between hurricanes and global warming, was repeatedly barred from speaking to the media. Press inquiries on the subject were routed to another scientist whose views more closely matched official administration policy.
- Government scientists routinely encounter difficulty in obtaining approval for official press releases that highlight research into the causes and consequences of global warming.
- Scientists report that public affairs officers are sometimes present at or listen in on interviews between certain scientists and the media.
- Both scientists and journalists report that restrictive media policies and practices have had the effect of slowing down the process by which interview requests are approved. As a result, the number of contacts between government scientists and the news media has been greatly reduced.

Highly publicized incidents of interference have led at least one agency to implement reforms; in February 2006, NASA adopted a scientific openness policy that affirms the right of open scientific communication. Perhaps as a result, 61 percent of NASA survey respondents said recent policies affirming scientific openness at their agency have improved the environment for climate research. While imperfect, the new NASA media policy stands as a model for the type of action other federal agencies should take in reforming their media policies.

The investigation also highlighted problems with the process by which scientific findings are communicated to policy makers in Congress. One example, taken from internal documents provided to GAP by agency staff, shows edits to official questions for the record by political appointees, which change the meaning of the scientific findings being presented.

Inadequate Funding

When adjusted for inflation, funding for federal climate science research has declined since the mid-1990s. A majority of survey respondents disagreed that the government has done a good job funding climate science, and a large number of scientists warned that inadequate levels of

funding are harming the capacity of researchers to make progress in understanding the causes and effects of climate change. Budget cuts that have forced the cancellation of crucial Earth observation satellite programs were of particular concern to respondents.

Poor Morale

Morale among federal climate scientists is generally poor. The UCS survey results suggest a correlation between the deterioration in morale and the politicized environment surrounding federal climate science in the present administration. One primary danger of low morale and decreased funding is that federal agencies may have more difficulty attracting and keeping the best scientists.

A large number of respondents reported decreasing job satisfaction and a worsening environment for climate science in federal agencies:

- Two-thirds of respondents said that today's environment for federal government climate research is worse compared with 5 years ago (67 percent) and 10 years ago (64 percent). Among scientists at NASA, these numbers were higher (79 percent and 77 percent, respectively).

A Case Study of Political Interference From My Experience

I worked on many projects during the 10 years I served in the program office. One key ongoing project for which I was responsible involved coordinating the development of and editing nine editions of the program's annual report to Congress, *Our Changing Planet*. The report is distributed to all Members of Congress and all Congressional committees and subcommittees with relevant oversight or budget jurisdiction. The report also is distributed more widely and is one of the principal means by which information about the highlights of recent research and research plans of the federal program as a government-wide entity is communicated. I also provided senior advisory and editorial support on a number of aspects of the development of the *Strategic Plan for the U.S. Climate Change Science Program*, issued in July 2003 and distributed to Congress and more widely in both print and electronic form.

In developing program publications and on other matters, I worked with a large network of career science program managers in the participating agencies. In producing a particular edition of the *Our Changing Planet* report, I would work with as many as 90 individual contributors, spanning as many as 13 participating agencies, to solicit, coordinate, and edit their submissions and review comments into a completed, integrated document. Before being issued, this report had to be reviewed and approved, first by career science program managers in all participating agencies, then by Administration officials in the Executive Office of the President (EOP), including OSTP, OMB, and CEQ.

Starting in October 2002, in this final-stage editorial review and clearance process, it came to my attention that CEQ Chief of Staff Philip Cooney was extensively marking up reports in a manner that had the cumulative effect of adding an enhanced sense of scientific uncertainty about global

warming and minimizing its likely consequences, while also deleting even minor references to the National Assessment.

For example, in a memorandum dated October 28, 2002, he marked-up the first draft of the CCSP Strategic Plan after it was approved by CCSP agency principals and before it was released for NRC review and public comment. Most of his roughly 200 text changes were incorporated in the review draft. A number of these changes in text relating to questions of climate science altered the content of the draft as it had been developed by federal science program professionals. Taken in the aggregate, the changes had a cumulative effect of shifting the tone and content of an already quite cautiously-worded draft to create an enhanced sense of scientific uncertainty about climate change and its implications. The draft Strategic Plan was legitimately criticized by reviewers who charged that the CCSP had adopted a vocabulary with an exaggerated emphasis on scientific uncertainties. To my knowledge this CEQ mark-up was not shared with or vetted by CCSP principals or CCSP agency science program managers. The process was quintessentially non-transparent and, in my view, a policy-driven political interference in a key science program document

As another example, the CEQ Chief of Staff made about 100 revisions to the final draft of the FY 2003 *Our Changing Planet*, some of which substantially changed or deleted text relating, for example, to decision support on mitigation and adaptation options, integration of climate science with comparative analysis of response strategies, ongoing regional assessments of global change consequences, and the relationship between energy-related emissions, climate change, and ecosystem impacts.

I could give additional examples, but I will conclude with a few summary observations about this process:

- (a) From my observation, a few examples of relatively heavy-handed interventions sufficed to send a message to the program leadership about White House political sensitivities. Under those circumstances, I believe a kind of anticipatory self-censorship kicks in, and reports begin to be drafted with an eye to what will be able to obtain CEQ approval – which appeared to be the final step in the White House clearance process.
- (b) Although this matter has received a good deal of media and political attention, I have always regarded it as essentially a single graphic case study illustration of a much larger pattern of Administration interference with and spinning of climate change science communication. I believe it is an indicative and revealing case study, but I believe we should focus primarily on the larger pattern and take steps to correct a whole set of problems. The former CEQ Chief of Staff has moved on to a position with ExxonMobil, but rearranging the deck chairs does not make the problems go away and, as part of his legacy, the National Assessment he played a role in suppressing remains suppressed.
- (c) It has been suggested by some critics that, since neither I nor Cooney is a scientist, this issue is simply a matter of competing editorial viewpoints. I believe this view betrays a fundamental misunderstanding of the problem, calling for some clarification. My job was to work closely with career science professionals to communicate climate research information clearly and

accurately in such a way that it would be readily understandable and of value to general attentive readers such as those in Congressional offices. There was no political agenda other than to encourage a bipartisan appreciation for the value of this national research program. The science professionals I worked with will attest to the appropriateness of my role, the integrity with which I played it, and my grasp of the subject matter, as will the fact that I was asked to continue in this role throughout my tenure with the program. I was aligned with and accountable to the mainstream climate science community every step of the way. CEQ was not. What CEQ was doing with its interventions was something quite different, and in my view of clearly questionable legitimacy. I see that as the essential difference in our roles.

3. The Administration has cut the climate change research budget to its lowest level since 1992 and is presiding over what appears to be a growing crisis in the global climate observing system, thus undermining a critical national intelligence-gathering process.

Funding for climate and global change research under the Global Change Research Program (FY1989- FY2002) and Climate Change Science Program (FY2003-present) is shown in the table on the following page, which is taken from the CCSP web site. The table shows that, in real terms, funding is currently at the lowest level since 1992.

The President's FY2007 budget request for the CCSP was 26% less than the program's budget in 1995, the high-water mark. The FY2007 request was 13% less than the program's budget in FY2001, the last budget before the current Administration took office.

The Administration's response to criticism on climate change is often to point to how much is spent on research. The Climate Change Science Program is indeed a large program, with a budget that supports a wide range of both governmental and nongovernmental scientific research, as well as climate observing systems, in particular NASA's space-based remote-sensing observing system. But, notwithstanding the importance that Administration officials purport to give to the issues addressed by the program, the Administration is now steadily reducing the budget request for the program. Why?

A review of the CCSP budget tables as presented in the FY2006 and FY2007 editions of *Our Changing Planet* indicates generally that the steady cuts in the overall CCSP budget from FY2004 onward are almost entirely attributable to cuts in the NASA Earth Science research and observations budget. The NASA budget figures as arrayed in *Our Changing Planet* during the past several years are difficult to interpret in any detail, nor is the discussion in the report of NASA's program at all illuminating about the reasons for and implications of the cutbacks in NASA's program, nor about how these cutbacks are allocated across specific clearly identifiable program activities. However, the report says that, from FY2005 to the FY2007 request, NASA's CCSP budget was cut by 17%, from \$1.241 billion to \$1.029 billion. (The inflation-adjusted cut would be greater.) This includes a 13% cut in the "Scientific Research" portion of the budget, and a 20% cut in "Space-Based Observations."

**Funding for Global Change Research under the CCSP and USGCRP,
Fiscal Years 1989 - 2007 (\$millions)**

Past, present and future budget data are key components of the information transmitted to Congress in *Our Changing Planet*. This table shows the evolution of funding for the program since 1989. Note that the scope of activities included within the budget is not constant over the period. In some cases (as in 1989-1990), a substantial portion of the year-to-year budget change results from shifting activities into or out of the program. These changes in program definition are the result of changing scientific priorities and other factors.

The table is posted on the Climate Change Science Program web site at: <http://www.climatechange.gov/infosheets/highlight2/default.htm#funding>. The table was updated November 2006.

Fiscal Year	Actual \$	Constant (2005) \$
1989	134	209
1990	659	975
1991	954	1,355
1992	1,110	1,531
1993	1,326	1,775
1994	1,444	1,885
1995	1,760	2,234
1996	1,654	2,039
1997	1,656	1,995
1998	1,677	1,989
1999	1,657	1,925
2000	1,687	1,896
2001	1,728	1,886
2002	1,667	1,792
2003	1,766	1,857
2004	1,977	2,023
2005	1,865	1,865
2006 (estimate)	1,709	1,674
2007 (request)	1,715	1,643

Without going into further detail in this written testimony, I suggest that this extraordinary scaling back of the Administration's commitment to a strong Earth Science research and observations program at NASA has very serious implications for the strength of the nation's climate change science capability. The Administration must be held accountable for this indirect method of undermining the ability to understand, assess, and communicate what is happening with climate and associated global change — especially if we also take into consideration the extraordinary and disturbing developments with the NPOESS next-generation weather-climate satellite system that are taking place on the watch of Administration officials at DoD, NOAA, and NASA.

The NPOESS crisis

The National Polar-orbiting Operational Environmental Satellite System (NPOESS) was created by a Presidential Decision Directive in 1994, under which the military and civil meteorological programs were merged into a single program. NPOESS was intended as an operational system to provide state-of-the-art data for weather forecasting and climate system monitoring. Within NPOESS, NOAA is responsible for satellite operations, the Department of Defense (DoD) is responsible for major acquisitions, and NASA is responsible for the development and infusion of new technologies.

To continue climate-quality measurements beyond the first series of NASA's Earth Observing System (EOS) research satellites (NASA is not developing a second series of EOS satellites), it was assumed that the NPOESS system would continue, in an operational environment, the mature EOS measurements, many of which address the nation's climate monitoring needs.

NPOESS, as originally configured, would have represented a significant step forward in the nation's ability to deploy a comprehensive climate observing system. Many key climate variables would be measured for decades. However, cost estimates for the program skyrocketed from \$6.5 billion to \$10 billion and the scheduled launch of its first satellite slipped from May 2006 to at least April 2008 — a gap that the Government Accountability Office concluded could leave the United States with gaps in vital climate and weather forecasting data.

As a result of the massive cost overrun, NPOESS was subjected to a statutorily required re-scoping in 2006. During the re-scoping process, ground rules endorsed by the NPOESS Executive Committee stipulated that a higher priority would be placed on the continuity of operational capabilities in support of weather measurements, which resulted in a lower priority for climate-focused measurements. The Office of the Secretary of Defense (OSD) led a tri-agency process culminating in the certification of a restructured NPOESS Program on June 5, 2006. The result was a decision to reduce the overall number of satellites and eliminate climate sensors from the system.

Climate Science Watch has obtained a December 11, 2006, joint document prepared by the NASA Earth Science Division and the NOAA Climate Observations and Analysis Program that describes the impacts of the Nunn-McCurdy Certification of NPOESS on the climate program goals of NASA and NOAA. The document was developed at the direction of the Office of Science and Technology Policy (OSTP) as a result of a meeting on June 26, 2006.

On the importance of a continuous climate-quality data record, the report says:

Detecting climate change, understanding the associated shifts in specific climate processes, and then projecting the impacts of these changes on the Earth system requires a comprehensive set of consistent measurements made over many decades. Many climate trends are small and require careful analysis of long time series of sufficient length, consistency, and continuity to distinguish between the natural long-term climate variability and any small, persistent climate changes. *Interruptions in the climate data records make the resolution of small differences uncertain or even impossible to detect.* To confidently detect small climate shifts requires instrument accuracy and stability better than is generally required for weather research and most other scientific uses. For more than thirty years, NASA research-driven missions, such as the EOS, have pioneered remote sensing observations of the Earth's climate, including parameters such as solar irradiance, the Earth's radiation budget, ozone vertical profiles, and sea surface height. Maintaining these measurements in an operational environment provides the best opportunity for maintaining the long-term, consistent, and continuous data records needed to understand, monitor, and predict climate variability and change.

On the implications of losing the NPOESS climate sensors, the report concludes:

For NASA, NPOESS was not only a converged civilian and military weather observing system but also the cornerstone of the nation's future climate research program. For NOAA, NPOESS represented a key component of the operational climate observing program and a cornerstone of its Climate Goal....

Unfortunately, the recent loss of climate sensors due to the NPOESS Nunn-McCurdy Certification places the overall climate program in serious jeopardy.

These shortfalls are characterized in a letter from the Chair of the Joint Science Committee from the World Climate Research Programme (WCRP) and from the Chair of the Steering Committee from the Global Climate Observing System (GCOS) to the Chair of the Committee on Earth Observation Satellites (CEOS). The Chairs from WCRP and GCOS stated:

Some of the difficulties in establishing and maintaining climate observations from space are currently being highlighted by the de-scoping of NPOESS, in which climate observations have been seriously compromised...[U]nless revised plans compensate for the anticipated shortcomings in climate observations, gaps in several key climate data records (some that go back almost 30 years) are highly likely....WCRP and GCOS assert that our ability to address critical climate issues, with profound societal implications, will be strongly limited unless observation of climate variables is given higher priority. We urge that this be done. [emphasis added]

The report contains joint NASA-NOAA recommendations as to how the impacted climate-related observations and related science might be recovered. However, there is no indication as

to the projected cost of even a partial recovery of the observing capability to be lost under the current re-scoping of NPOESS. Nor is there any indication of whether the Administration will request the funding needed in order to implement a recovery.

Who is accountable for the mismanagement and failure of leadership of this essential program? A May 2006 investigative report by the Commerce Department Inspector General was sharply critical of high-level federal management for failing to deal effectively with the long delays and major cost overruns in the development and deployment of NPOESS.⁴

Conclusions and Recommendations

1. Revitalize the National Assessment process

Reports of a steady stream of scientific findings on global climate change, in particular reports on observed and projected consequences of global warming, have increased the level of concern among policymakers and the public. Debate on appropriate climate change policy and response strategies at the international, national, and state levels has also increased in urgency in the U.S. public arena. In this context, re-activating the National Assessment process and producing a second National Assessment report would make a major contribution to the nation's preparedness for addressing the challenge of global warming and climate change.

The essential idea is not to replicate the 2000 National Assessment in its particulars, but rather to move forward with a strong, updated, coordinated, integrative effort, employing the method of having climate scientists and other experts communicate directly with policymakers and other stakeholders, geographical region-by-region, and socioeconomic sector-by-sector, to diagnose vulnerabilities and develop response strategies, without political interference with free and open communication. Climate change impacts vary by region and sector, as do response strategy options. Every Member has an interest in the kind of information such an assessment could make available for consideration in developing national policy.

2. Address the problems of the Council on Environmental Quality, agency media policies, and public communication by the Climate Change Science Program

On the White House Council on Environmental Quality

The UCS-GAP report does not substantially address the higher levels in the chain of command that has resulted in political interference with climate science communication, starting with the President. In particular, the report does not focus on the role of the Council on Environmental Quality. CEQ is a White House policy office, not a science office. In my view it was problematic from day one that CEQ officials, whose essential job was to advance the President's policy and political position on global climate change, were at the table participating directly in the governance of the Climate Change Science Program and shaping its communication of

⁴ U.S. Department of Commerce, Office of Inspector General, National Oceanic and Atmospheric Administration – *Poor Management Oversight and Ineffective Incentives Leave NPOESS Program Well Over Budget and Behind Schedule*. Audit Report No. OIG-17794-6-0001/May 2006

climate change research. In my judgment, CEQ should be put back on the policy side of the science-policy fence – as was the case under the previous Administration. And management of the CCSP should be back on the science side of the fence.

On agency media policies

The Government Accountability Project has prepared a critical analysis of the new media policy developed at NASA in 2006 in the wake of publicity surrounding NASA's scandalous attempt to muzzle public communication by Dr. James Hansen, Director of the NASA Goddard Institute of Space Studies. While the NASA media policy appears to be an improvement over the prior situation, GAP's analysis raises concerns about agency media policies and identifies legislative action that the Committee should consider. A statement and memorandum prepared by Tom Devine, Legal Director at GAP, is included with this testimony as an Appendix.

On public communication by the Climate Change Science Program

Congressional oversight should include a focus on the Climate Change Science Program and the CCSP Office as well as the agencies. In order to ensure the scientific independence and credibility of the program and its products, the CCSP should develop CCSP-wide principles and policies on communications to ensure the scientific independence of climate change science communications.

Currently, there is no procedure under which the CCSP, or the CCSP Office, can communicate on behalf of the federal climate research enterprise as a whole. Media inquiries to the CCSP are channeled to the NOAA Public Affairs Office – an office that, as discussed in the UCS-GAP report, has been politically compromised in its climate science communication by the Department of Commerce and by the Administration political appointees at the head of NOAA. One key example has been communication on the scientific question of the relationship between global warming and increased hurricane intensity.

Congress, the media, and the public need to be able to receive communications directly from the Climate Change Science Program that are not filtered through the public and governmental affairs offices of a single agency. One alternative would be to give the Climate Change Science Program Office the resources, staffing with scientific expertise, and freedom from White House political manipulation, to communicate, and to coordinate communications, on behalf of the full range of scientific research supported by the CCSP participating agencies.

3. Implement the recommendations of the Union of Concerned Scientists – Government Accountability Project report

The UCS-GAP report, *Atmosphere of Pressure – Political Interference in Federal Climate Science* has brought to light numerous ways in which U.S. federal climate science has been filtered, suppressed, and manipulated in the last five years. I fully support the UCS and GAP recommendations of the following reforms and actions:

- Congress must act to specifically protect the rights of federal scientists to conduct their work and communicate their findings without interference and protect scientists who

Speak out when they see interference or suppression of science.

- The federal government must respect the constitutional right of scientists to speak about any subject, including policy-related matters and those outside their area of expertise, so long as the scientists make it clear that they do so in their private capacity. Scientists should also be made aware of these rights and ensure they are exercised at their agencies.
- Ultimate decisions about the communication of federal scientific information should lie with scientists themselves. While non-scientists may be helpful with various aspects of writing and communication, scientists must have a "right of last review" on agency communications related to their scientific research to ensure scientific accuracy has been maintained.
- Pre-approval and monitoring of media interviews with federal scientists by public affairs officials should be eliminated. Scientists should not be subject to restrictions on media contacts beyond a policy of informing public affairs officials in advance of an interview and summarizing the interaction for them afterwards.
- Federal agencies should clearly support the free exchange of scientific information in all venues. They should investigate and correct inappropriate policies, practices, and incidents that threaten scientific integrity, determine how and why problems have occurred, and make the necessary reforms to prevent further incidents.
- Congress should immediately exert pressure on the Executive branch to comply with its statutory duty under federal law and undertake periodic scientific assessments of climate change that address the consequences for the United States. (The last national assessment was conducted in 2000.)
- Funding decisions regarding climate change programs should be guided by scientific criteria, and must take into account the importance of long-term, continual climate observation programs and models.
- All branches of the government must have independent scientific advice.

3. End the cutbacks and restore support for space-based observations and long-term monitoring of essential climate and global change variables

The scaling back of the Administration's commitment to a strong Earth Science research and observations program at NASA should be the subject of in-depth Congressional oversight. The Committee should investigate the implications of these cutbacks for the nation's climate change research capability and should seek to rectify this situation with appropriate funding levels and program oversight.

Congress should also hold Administration officials accountable for allowing essential climate sensors to be dropped from NPOESS, the next-generation DoD-NOAA environmental satellite

system, at the same time NASA is not developing a next generation of its Earth Observing System satellites. The Committee's oversight should include investigation of recommendations for mitigation of the crisis that have been developed under the guidance of the NASA Earth Science Division and the NOAA Climate Observations and Analysis Program.

In each case, I recommend that the Committee not limit itself to hearing testimony from Administration political appointees, such as the NASA Administrator, the NOAA Administrator, or the Director of the Office of Science and Technology Policy. Officials whose primary commitment is to advance White House policy and political objectives will tend to put the best face on a bad situation and be less than fully forthcoming with the Committee with explanations of the real problems. Instead, I recommend that the Committee hear from and ask the tough questions of senior career officials with both programmatic and technical expertise, such as Jack Kaye of the NASA Earth Science Division and Thomas Karl of the NOAA National Climatic Data Center. Hopefully they will feel free to tell you a straight story.

APPENDIX

GOVERNMENT ACCOUNTABILITY PROJECT STATEMENT ON NASA MEDIA POLICY

January 30, 2007

NASA and other agencies have trumpeted new media policies as proof of their good intentions and new-found respect both for scientific freedom and freedom of speech. Indeed, the policies have appealing rhetoric that can help change bureaucratic attitudes. That matters. Depending on the political cycle, the rhetoric could be sufficient to sustain an open environment within scientific agencies.

Unfortunately, the policies' fine print exposes them as a trap that could be used to fire, or potentially prosecute, almost any scientist if the political environment becomes hostile again. First let's consider what's in them. The Achilles' heel is a loophole that cancels all the new free speech rights if a scientist discloses information in new, pseudo-classified, hybrid secrecy categories. These categories, with new names such as "Sensitive but Unclassified" or "Sensitive Security Information," do not purport to have the national security significance of classified documents. In fact, they are just new names for longstanding categories like "For Official Use Only," that primarily are secrecy shields of convenience for virtually any information the agency wants to keep off the market of public discourse, either to control timing or avoid embarrassment. Although the SBU or SSI brands can be issued arbitrarily, the potential criminal liability can be even more severe than for genuinely classified information.

Even worse, information can be designated as SBU or SSI after-the-fact. For example, one GAP air marshal client has been fired three years after the fact for disclosing Sensitive Security Information, even though it was not marked as restricted at the time. The whistleblower was challenging a security breakdown, and his dissent was vindicated as the agency quickly canceled a reckless decision when it became public. Depending on the next election results or other factors that should be irrelevant, under NASA's fraudulent media policy reform, every NASA scientist communicating with this committee could be fired several years from now for disclosing Sensitive but Unclassified information.

Not only is the policy disingenuous, it is illegal. It violates the Whistleblower Protection Act on its face, because that law only permits blanket restrictions on public speech if information is properly classified.

Let's also consider what the policy doesn't include. The Anti-Gag Statute, an appropriations rider passed unanimously by Congress for the last 18 years, bans any spending to implement or enforce any nondisclosure policy, form or agreement, unless it also has an addendum with specific congressional language that, in the event of a conflict with the policy, the Whistleblower Protection Act and the Lloyd Lafollette Act protecting safe communications with Congress will supersede any contradictory language and prevail. The NASA media policy does not contain this addendum. Any funds spent to implement and enforce it have been and will be illegal expenditures.

There is no possibility that this was a good faith error. GAP's legal director Tom Devine spent over an hour tutoring the NASA Office of General Counsel lawyer who wrote the phony reform, both on the requirements of the Whistleblower Protection Act and the Anti-Gag Statute. The lawyer reassured GAP that he understood what those laws required. But NASA issued a policy that is a custom fit for violating these fundamental merit system and whistleblower rights for scientific freedom. The illegality is deliberate.

Legislation co-sponsored in the last Congress by Representatives Waxman, Davis, and Platts and marked up unanimously in committee (H.R. 1317 and H.R. 5112) directly addresses this type of back door scientific repression. It codifies and provides a remedy for the Anti-Gag Statute, and establishes checks and balances on the currently-unrestrained use of pseudo-classification gag orders. The media policy's fine print illustrates why your committee should act immediately to pass this badly needed reform. The committee also should have GAO audit how much money has been spent illegally to implement and enforce the NASA media policy. An April 1, 2006, memorandum GAP prepared on the policy is attached.

For further information, contact:
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MEMORANDUM

To: Climate Scientists
From: Government Accountability Project
Re: Analysis of NASA's Recently Released Media Policy

The Government Accountability Project (GAP) is issuing advisory comments on NASA's new media policy that it released yesterday, March 30. The new policy came in response to public outcry over NASA's suppression of climate science research inconsistent with the Bush administration's political agenda. NASA is touting the development as a free-speech breakthrough for agency scientists.

GAP identified the areas *in which the new policy is an improvement:*

- NASA Administrator Michael Griffin's reassuring rhetoric is of symbolic value, demonstrating official respect for scientific freedom.
- The new media policy does not cover scientific reports, web postings, or professional dialogue such as at conferences, allowing scientists to share information with their colleagues without going through public affairs political appointees.
- The policy officially recognizes the free speech right for scientists to express their "personal views" when they make clear that their statements are not being made on behalf of NASA.

However, *in six critical areas the new policy falls short* of genuine scientific freedom and accountability, and potentially undermines the positive guarantees:

- While recognizing the existence of a "personal views" exception, the policy doesn't announce the circumstances when that right cancels out conflicting restrictions, which are phrased in absolute terms applying to contexts such as "any activities" with significant media potential. This leaves a cloud of uncertainty that translates into a chilling effect for scientists.
- The policy fails to comply with the legally-mandated requirements of the Anti-Gag Statute to explicitly include notice that the Whistleblower Protection Act and Lloyd Lafollette Act (for congressional communications) limit and supersede its restrictions.
- The policy institutionalizes prior restraint censorship through "review and clearance by appropriate officials" for "all NASA employees" involved in "preparing and issuing" public information. This means that scientists can be censored and will need advance permission from the "appropriate" official before anything can be released.
- The policy defies the WPA by requiring prior approval for all whistleblower disclosures that are "Sensitive But Unclassified" (SBU). The legal definition of SBU is broad and vague, to the point that it can be interpreted to sweep in virtually anything. The WPA

only permits that restriction for classified documents or those whose public release is specifically banned by statute.

- The policy bans employees' free speech and WPA rights to make anonymous disclosures, requiring them to work with NASA public affairs “prior to releasing information” or “engaging in any activities or events... that have the potential to generate significant media or public interest or inquiry.”
- The policy gives NASA the power to control the timing of all disclosures, which means scientists can be gagged until the information is dated and the need for the public to know about critical scientific findings has passed.

In December of last year, NASA climatologist Dr. James Hansen was threatened with “dire consequences” by a political appointee for statements he made about the consequences of climate change. According to GAP’s legal director, Tom Devine, “Under this so-called reform, Dr. Hansen would still be in danger of ‘dire consequences’ for sharing his research, although that threat is what sparked the new policy in the first place. The new policy violates the Whistleblower Protection Act, the Anti-Gag Statute, and the law protecting communications with Congress, the Lloyd-Lafollette Act. The loopholes are not innocent mistakes or oversights. GAP extensively briefed the agency lawyer on these requirements, who insisted he understood them fully. NASA is intentionally defying the good government anti-secrecy laws.”