

**COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY  
SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY  
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT  
U.S. HOUSE OF REPRESENTATIVES**

**HEARING CHARTER**

***Scientific Integrity in Federal Agencies***

Wednesday, July 17, 2019

10:00 a.m.

2318 Rayburn House Office Building

**PURPOSE**

The purpose of the hearing is to discuss the importance of scientific integrity policies within federal agencies that fund, conduct, or oversee research and to examine the status of current such policies. The Subcommittees will also receive testimony on H.R. 1709, the *Scientific Integrity Act*.

**WITNESSES**

- **Mr. Michael Halpern**, Deputy Director; Center for Science and Democracy; Union of Concerned Scientists
- **Mr. Joel Clement**, Arctic Initiative Senior Fellow; Belfer Center for Science and International Affairs; John F. Kennedy School of Government at Harvard University
- **Dr. Roger Pielke Jr.**, Director, Sports Governance Center; Professor, Environmental Studies Program; University of Colorado Boulder
- **Mr. John Neumann**, Managing Director; Science, Technology Assessment, and Analytics; U.S. Government Accountability Office (GAO)

**KEY QUESTIONS**

- What is the current state of federal scientific integrity policies?
- How can agency Scientific Integrity Officials uphold and implement scientific integrity policies most effectively?
- Do existing scientific integrity policies offer sufficient safeguards for federal scientific programs and employees, and the open communication of science?
- How can legislation, including the *Scientific Integrity Act*, strengthen scientific integrity protections for the creation, use, and dissemination of federal scientific research?

**BACKGROUND**

In the context of the federal government, scientific integrity refers to the process by which federal science is conducted, used to inform the policymaking process, and disseminated to the broader public. Scientific integrity exists within the government when “independent science fully

and transparently informs policy decisions, free from inappropriate political, ideological, financial, or other undue influence,” and it also includes “the open, reliable conduct, supervision, and communication of science as well as the appropriate use of science in policy creation.”<sup>1</sup>

The current framework for federal agency scientific integrity arose during the 2000s, in part as a response to a series of high-profile episodes of political interference with federal science. In response, Section 1009 of the *America COMPETES Act of 2007* directed the White House Office of Science and Technology Policy (OSTP) to “develop and issue an overarching set of principles” to guide federal agencies in creating their own scientific integrity policies.<sup>2</sup>

### **OSTP Guidance for Federal Scientific Integrity Policies**

On March 9, 2009, President Obama issued a Memorandum to federal agencies articulating six principles of scientific integrity and assigning oversight responsibilities to the OSTP Director.<sup>3</sup> In turn, OSTP issued implementing guidance in a four-page Memorandum to federal agencies on December 17, 2010. The 2010 Memo directed science agencies to create or update scientific integrity policies that meet certain criteria and to report back to OSTP on their efforts within 120 days.<sup>4</sup> The priorities OSTP directed agencies to consider in preparing their policies included:

- Shielding agency science from “inappropriate political influence;”
- Preventing political appointees from acting to “suppress or alter scientific or technological findings”;
- Strengthening the “credibility of Government research” through the appropriate use of merit-based personnel decisions, independent peer review, conflict-of-interest rules and whistleblower protections;
- Facilitating “the free flow of scientific and technological information” among agencies and the public;
- Establishing “principles for conveying scientific and technological information to the public” in a clear and accurate manner;
- Promoting “openness and transparency with the media and the American people” by permitting federal scientists to speak publicly about their work without interference; and
- Promoting openness and transparency by offering knowledgeable spokespersons to explain the scientific facets of the agency’s activities.

The 2010 Memo also addresses agency use of federal advisory committees (or FACA Committees) as a source of scientific advice. OSTP proposed that agencies adopt formalized standards for transparent member recruitment, merit-based member selections, and advisory

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<sup>1</sup> Union of Concerned Scientists, “Preserving Scientific Integrity in Federal Policymaking,” January 2017, <https://www.ucsusa.org/sites/default/files/attach/2017/01/preserving-scientific-integrity-in-federal-policymaking-ucs-2017.pdf>.

<sup>2</sup> *America COMPETES Act of 2007*, Public Law 11-69, August 9, 2007, <https://www.congress.gov/110/plaws/publ69/PLAW-110publ69.pdf>.

<sup>3</sup> Presidential Memorandum, “Scientific Integrity,” March 9, 2009, <https://obamawhitehouse.archives.gov/the-press-office/memorandum-heads-executive-departments-and-agencies-3-9-09>.

<sup>4</sup> OSTP Memorandum, “Scientific Integrity,” December 17, 2010, <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>.

committee autonomy in the completion of all reports and recommendations without being subject to agency revision. Finally, the OSTP guidance instructed agencies to support “the professional development of Government scientists and engineers” as an aspect of scientific integrity, including through the encouragement of federal scientists to publish their research in scholarly journals, serve in editorial capacities for scholarly journals, present their research at professional meetings, participate in professional societies, and receive professional honors and awards.<sup>5</sup>

While the OSTP memo established an important framework for agency scientific integrity policies, it did not direct agencies to designate Scientific Integrity Officials (SIOs) to oversee them or otherwise provide direction on how agency policies should be administered, defended and adjudicated. OSTP also did not direct agency SIOs to meet regularly with each other or with OSTP itself in order to share methods and best practices. OSTP omitted any guidance concerning the creation of agency procedures to investigate potential violations of scientific integrity policy and resolve any substantiated violations. Lastly, OSTP’s guidance only applied to internal agency staff and not to contractors.

### **Federal Agency Scientific Integrity Policies: A Diversity of Strategies**

Twenty-five federal agencies submitted scientific integrity policies to OSTP in response to *America COMPETES* and the 2010 OSTP Memo:

- Department of Agriculture (USDA)
- Department of Commerce
  - National Institute of Standards and Technology (NIST)
  - National Oceanic and Atmospheric Administration (NOAA)
- Department of Defense (DOD)
- Department of Energy (DOE)
- Environmental Protection Agency (EPA)
- Department of Health and Human Services (HHS)
  - Centers for Disease Control and Prevention (CDC)
  - Food and Drug Administration (FDA)
  - National Institutes of Health (NIH)
- Department of Homeland Security (DHS)
- Department of the Interior (DOI)
  - U.S. Geological Survey (USGS)
- Department of Justice (DOJ)
- Department of Labor
- Department of State
- Department of Transportation (DOT)
- Department of Veterans Affairs
- U.S. Agency for International Development (USAID)
- Environmental Protection Agency (EPA)
- Marine Mammal Commission

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<sup>5</sup> OSTP Memorandum, “Scientific Integrity,” December 17, 2010, <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>.

- National Aeronautics and Space Administration (NASA)
- National Science Foundation (NSF)
- Office of the Director of National Intelligence

These policies seek to implement the OSTP guidance and are broadly similar in their embrace of a common set of scientific integrity principles. Significant differences exist, however, in the leadership, structure and procedures established by the scientific integrity policies of different agencies. The shortest among them is 3 pages (NASA), while the longest is 31 pages (NIH). A few agencies have published elements of their policies in directives separate from the general policy, e.g. a media engagement policy. A few others have prepared a written handbook to accompany the policy directive (e.g. DOI).

### **GAO Review of Existing Scientific Integrity Policies**

The Government Accountability Office (GAO) released a report in April 2019 evaluating scientific integrity policies and their applications across nine federal agencies and sub-agencies that employ federal scientists to conduct scientific research and have among “the greatest levels of funding for intramural research” in the executive branch.<sup>6</sup> According to GAO, all nine of the agencies possess scientific integrity policies “that are generally consistent with OSTP’s guidance.”<sup>7</sup> GAO found that the agencies addressed OSTP’s principles of scientific integrity in a variety of ways, including their own scientific integrity policies as well as distinct but relevant policies and actions. In its review of agency support for these scientific integrity policies, as well as agency procedures for addressing potential violations, GAO found a broad commitment to the application of the policies but mixed results in their implementation:

- Seven of the nine agencies engage in at least some activities to communicate with their employees about scientific integrity policies;
- Four of the nine agencies actively evaluate the performance of their scientific integrity policies;
- Eight of the nine agencies possess a designated SIO to oversee the implementation of scientific integrity policies, but the nature of the position varies widely. The USGS and EPA have unique SIO positions, while NASA designates the Office of the Chief Scientist as the SIO-equivalent. The DOE has lacked an SIO since the implementation of its scientific integrity policy in January 2017;
- Two agencies – DOE and NASA – lack “specific, documented procedures for identifying and addressing alleged violations of their scientific integrity policies.” Instead, DOE and NASA rely on general personnel protections such as whistleblower laws to ensure that employees report violations of scientific integrity policies.

GAO made ten recommendations to six agencies at the conclusion of its report, and all six agencies pledged to address GAO’s recommendations.

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<sup>6</sup> GAO, “Scientific Integrity Policies: Additional Actions Could Strengthen Integrity of Federal Research,” April 2019, <https://www.gao.gov/assets/700/698231.pdf>. The selected agencies were ARS, EPA, FAA, FE, NIH, NASA, NIST, NOAA and USGS.

<sup>7</sup> Id.

## The Need for Stronger Federal Scientific Integrity Safeguards

The April 2019 GAO report indicates that federal agency policies are generally compliant with existing executive branch guidance. However, serious problems still exist concerning political interference in federal scientific activity. A number of high-profile episodes of interference and suppression in federal science by political officials have been reported in the press in recent months, with a particularly significant rate of occurrence around climate change science. A survey of federal scientists conducted by the Union of Concerned Scientists in 2018 found that political interference and censorship are widespread among federal scientific programs.<sup>8</sup> According to the survey, 50% of respondents across all agencies either agreed or strongly agreed that political considerations undermined science-based policymaking at their agency, including 81% of respondents from the EPA and 76% of respondents from the National Park Service. Another 20% of respondents went further to assert that political influence was a “top barrier” to science-based policymaking at their agency. 18% of respondents at agencies that engage on climate change issues reported censorship on climate change-related research. As a result of these violations of scientific integrity, the morale and effectiveness of federal scientific programs have declined, with 46% of respondents citing an overall decrease in personal job satisfaction over the previous year and 39% of respondents perceiving decreased effectiveness in their division or office.<sup>9</sup>

GAO found that the number of scientific integrity violations being alleged formally with the agency SIO varied by agency. Some agencies reported no alleged violations, while EPA reported 70 allegations between FY 2012 and FY 2017. NOAA had 11 alleged violations during the same period and USGS had 12 alleged violations between FY 2010 and FY 2017.<sup>10</sup> GAO noted that not all alleged violations were substantiated as violations of scientific integrity policies, and that strong scientific integrity policies could actually contribute to the number of complaints if federal scientists were educated about the process and possessed confidence in it. Nevertheless, a large number of alleged violations of an agency’s scientific integrity policies raises questions about the agency’s management of scientific research, data and personnel.

### **H.R. 1709 - *Scientific Integrity Act***

In March 2019, Representative Tonko introduced H.R. 1709, the *Scientific Integrity Act*.<sup>11</sup> He was joined by Chairwoman Johnson, Subcommittee Chairwoman Stevens, and Rep. Alan Lowenthal (D-CA) as original cosponsors. H.R. 1709 is 15 pages long and would elevate scientific integrity at federal agencies that fund, conduct, or oversee scientific research by codifying some general principles of scientific integrity and formalizing a structure within agencies to support those principles. H.R. 1709 amends the *America COMPETES Act* as follows:

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<sup>8</sup> Union of Concerned Scientists, “Science Under President Trump,” August 2018, <https://www.ucsusa.org/sites/default/files/attach/2018/08/science-under-trump-report.pdf>.

<sup>9</sup> Id.

<sup>10</sup> GAO, “Scientific Integrity Policies: Additional Actions Could Strengthen Integrity of Federal Research,” April 2019, <https://www.gao.gov/assets/700/698231.pdf>.

<sup>11</sup> <https://www.congress.gov/bill/116th-congress/house-bill/1709?q=%7B%22search%22%3A%5B%22scientific+integrity+act%22%5D%7D&r=1&s=1>.

- **Section 3(a):** Names prohibited conduct for federal employees or contractors engaged in science. Covered individuals shall not:
  - Engage in dishonesty and manipulation of agency science;
  - Suppress, alter or interfere with scientific or technical findings;
  - Intimidate or coerce individuals to alter or censor scientific findings;
  - Retaliate against individuals for failure to alter or censor scientific findings;
  - Implement institutional barriers to cooperation and timely communication of scientific or technical findings.
  
- **Section 3(b-e): Science Communications and Community Engagement.** Defines the rights and responsibilities of federal scientists in making public statements about their work to the media, the scientific community and the public. Provides that federal scientists may sit on scientific advisory boards and professional organizations, contribute to outside peer-review processes, and otherwise engage with the scientific community.
  
- **Section 3(f-h):** Directs federal agencies to develop, adopt and enforce updated scientific integrity policies that meet a number of specified criteria. Agencies must submit those policies to OSTP. Compliant policies will consider 10 tenets of scientific integrity named in the bill. E.g. “scientific conclusions are not made based on political considerations.”
  
- **Section 3(j): The Science Integrity Official.** Directs agencies to appoint a dedicated Scientific Integrity Officer - a career employee with substantial technical knowledge in conducting science - to direct the activities and duties described in the bill.
  
- **Section 3(k): Training.** Directs agencies to implement a plan for training and sharing information with agency employees on their agency’s scientific integrity policies and their consequent rights and responsibilities.
  
- **Section 3(l): Reporting.** Directs agency SIOs to issue a public annual report on their activities.
  
- **Section 3(n): OSTP responsibilities.** Directs OSTP to aggregate all agency scientific integrity information on its website and to convene the agency SIOs annually to discuss best practices.
  
- **Section 4: Existing policies clarification.**

The bill has been endorsed by over 60 outside groups, including the Union of Concerned Scientists, the Sunlight Foundation, the Project on Government Oversight, the National Partnership for Women and Families, the United Auto Workers, and the National Wildlife Federation.