
Federal Agency Scientific Integrity Policies: A Comparative Analysis

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The following pages contain analysis of 22 federal agency scientific integrity policies developed in response to a December 9, 2010 memorandum by Dr. John P. Holdren, director of the Office of Science and Technology Policy.

We evaluated the policies to see how effectively they would advance the goals we outlined in our 2009 comments on President Obama's March 2009 memo to Dr. Holdren, which began this process: protecting government scientists, increasing the transparency of government science, and strengthening the quality of government scientific information and advice.

Six agencies submitted policies that actively promote and support a culture of scientific integrity; five submitted policies that also promote and support scientific integrity but need additional work to ensure long-term change at the agencies. Eleven agencies submitted policies that do not make adequate commitments to achieve the preservation and promotion of scientific integrity. The agencies are presented on the following pages in alphabetical order within these three groups.

To find out more about our scientific integrity work, visit www.ucsusa.org/scientific_integrity

Centers for Disease Control and Prevention

Summary: Great policies on releasing and sharing data. Although it does not explicitly allow scientists the right of last review, it has many useful aspects to its media and communications policies.

Strengths

- Media and communications policies are broad and detailed
- Thorough guidance regarding timely dissemination of data to the public
- Establishes clear procedures for how allegations of scientific misconduct will be investigated and resolved
- Contains specifics on how to make scientific information more accessible and transparent
- Addresses conflicts-of-interest in the peer review process and on federal advisory committees
- Excellent provisions for training
- Repeats the principles from December 9, 2010 Holdren memorandum

Weaknesses

- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- This passage is a red flag “Although CDC may conduct research in areas relevant for making policy decisions, the goal of such research is to provide the best evidence to drive policy in the right direction.”
- Although the clearance process is initiated by the first author, there is no explicit provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document for which they are not authors but that relies on their research or identifies them as a contributor.
- Although the policy states CDC accepts scientific debate, we could find no procedure for reporting and resolving differing scientific opinions outside of or before the clearance process.
- No commitment to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.

Department of the Interior

Summary: One of the most detailed and comprehensive policies. It explicitly states that it applies to all employees – not just scientists!

Strengths

- Applies to all employees including political appointees, supervisors, contractors, and career employees.
- Establishes clear procedure for how allegations of scientific misconduct will be investigated and resolved
- Contains procedures for reporting and resolving differing scientific opinions
- Asks employees to distinguish between official public communications and other communications made in their private capacity
- Provides supplemental forms and procedures including conflict of interest statements and waivers and scientific misconduct notifications.
- Repeats the principles from December 9, 2010 Holdren memorandum

Weaknesses

- Missing details in the communications policy (470 DM) such as disclaimer language and publication policy.
- Supports but does not adequately explain scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Right of last review limited to news releases to the extent practicable and no explicit rights regarding allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No commitment to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.
- No user-friendly online portal dedicated to scientific integrity where the policy and supplemental information could be found.

Environmental Protection Agency

Summary: Breaks new ground in the areas of personal views exception and giving scientists the right of last review.

Strengths

- Applies to all employees including political appointees, supervisors, contractors, and career employees. Makes roles and responsibilities of each explicit.
- States clearly and comprehensively scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Grants scientists the responsibility to review, approve and comment on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Repeats principles from December 9, 2010 Holdren memorandum.
- Made a draft policy available for public comment and incorporated many comments into the final policy.

Weaknesses

- While the Scientific Integrity Policy “mandates the Scientific Integrity Official to develop a transparent mechanism for Agency employees to express differing scientific opinions” we could not locate this on EPA’s website. This policy should also include more details on procedures for resolving differing scientific opinions.
- The Scientific Integrity Policy promises “the EPA Scientific Integrity Committee will develop an Agency wide framework for the approval of scientific communications”. We could not locate this document on the EPA website.
- Commits to developing procedure for how allegations of scientific misconduct will be investigated, resolved and publicly reported.
- Provides for annual publicly available reporting on the status of scientific integrity within the agency but these reports could not be located on the website.

NASA

Summary: This is a list of existing policies with little narrative. Although there are good elements, agency scientists would have to spend hours to find and understand them.

Strengths

- References strong NASA policies with regard to communications and whistleblower protections.
- Provides clear and concise guidance on data sharing.
- Referenced media policy allows scientists to express personal opinions with appropriate disclaimers.
- Repeats some principles from December 9, 2010 Holdren memorandum

Weaknesses

- Policy is a list of extant policies. Many agencies such as the CDC drew on multiple existing policies, but they summarized them into a user-friendly document.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.

National Oceanic and Atmospheric Administration

Summary: Excellent policy that is easy to access on the NOAA website; so long as the weaker Department of Commerce policy does not supersede.

Strengths

- Applies to all employees including political appointees, supervisors, contractors, and career employees and makes roles and responsibilities of each explicit.
- Exceptionally easy to understand FAQ section on website.
- Released an annual report on implementation of the policy.
- States clearly and comprehensively scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Includes procedural handbook for addressing allegations of scientific misconduct.
- Draft policy was available for public comment and incorporated many comments into the final policy.
- Has a Scientific Integrity Commons section of its website with links to multiple resources.
- Repeats principles from December 9, 2010 Holdren memorandum

Weaknesses

- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No data sharing specifics or firm commitments.
- Should release a procedure for reporting and resolving differing scientific opinions.
- Less well intentioned Administrations could use Department of Commerce policies to restrict scientific integrity at NOAA.

National Science Foundation

Summary: The strongest media policy of all the agencies but missing some other key protections.

Strengths

- Very strong communications policy.
- States clearly and comprehensively scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Establishes responsibilities for both scientists and public affairs officials.
- Cites procedure on how allegations of scientific misconduct will be investigated and managed.
- Information is easy to find on the NSF website.
- Repeats principles from December 9, 2010 Holdren memorandum.

Weaknesses

- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- No commitment to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.
- Research publication guidance is weak.

Department of Commerce

Summary: Cedes important details to its bureaus with an interest in science so don't look here to see how the department will ensure the integrity of science.

Strengths

- Confirms scientist and researcher rights to express personal opinions to the public and the media.
- Repeats some principles from December 9, 2010 Holdren memorandum.

Weaknesses

- Not explicit that the policy applies to political appointees, supervisors, contractors in addition to career employees.
- Fails to address many guidelines put forth in the December 9, 2010 memorandum.
- Lacks specifics and details as to how stated principles will be enforced and upheld.
- Implies the scientists must seek approval from public affairs officials.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- No commitment to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.
- No procedure for reporting and resolving differing scientific opinions.
- Fails to provide specifics on open government requirements, research dissemination and data sharing.

Department of Homeland Security

Summary: This policy is missing many key elements.

Strengths

- Repeats some principles from December 9, 2010 Holdren memorandum

Weaknesses

- Fails to address most of the guidelines put forth in the December 9, 2010 memorandum.
- Not explicit that policy applies to political appointees, and supervisors, in addition to career employees.
- Policies excessively restrictive and vague, even given the nature of the Office.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No provision for scientist and researcher rights to express personal opinions with appropriate disclaimers.
- No procedure for reporting and resolving differing scientific opinions.
- No procedure for data sharing with other agencies or commitment to timely releases of scientific information.
- No commitment to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.
- Very scientist focused with little mention of the role of non-scientist supervisors.

Department of State

Summary: This policy fails to address many of the guidelines put forth in the December 9, 2010 memorandum and its communications policy is excessively restrictive.

Strengths

- Applies to all employees including, supervisors, contractors, and career employees.
- Allows scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Refers to established procedures for how allegations of scientific misconduct will be investigated and managed.
- Repeats some principles from December 9, 2010 Holdren memorandum.

Weaknesses

- Fails to address many of the guidelines put forth in the December 9, 2010 memorandum.
- All communication of scientific topics, policies, and research to the media must be cleared through the Bureau of Public Affairs.
- Unofficial scientific communications of official concern must be approved by the Bureau of Public Affairs and requires a disclaimer.
- No commitment to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.
- No procedure for reporting and resolving differing scientific opinions.

Food and Drug Administration (FDA)

Summary: Principles are there but specific provisions and guidance are missing.

Strengths

- Taking strong steps toward limiting conflicts of interest on scientific advisory panels.
- Repeats principles from December 9, 2010 Holdren memorandum.

Weaknesses

- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- Promises FDA written media relations policy but this could not be found on the FDA website.
- Requires permission from public affairs to speak to the media in an official capacity.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No procedure detailing how allegations of scientific misconduct will be investigated, managed and reported.
- No data sharing and dissemination specifics. Unnecessary hurdles prevent data and research from being made public.
- Especially important at the FDA – scientific integrity principles should pertain to scientific information submitted to the agency from interested parties.
- Lacks specifics as to how stated principles will be enforced and upheld.
- Less well-intentioned Administrations could use Department of Health and Human Services policies to restrict scientific integrity.

Marine Mammal Commission

Summary: Commissions were not required to create scientific integrity policies. Although some key features are missing, everything in here is good.

Strengths

- Confirms scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Contains clear and concise guidelines for the selection and retention of Commission staff.
- Has clear data quality and dissemination guidelines.
- Repeats principles from December 9, 2010 Holdren.
- Mandatory financial disclosure for commissioners and scientific advisory committee members.
- No current members have financial conflicts of interest.

Weaknesses

- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- Supports but does not adequately explain scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Scientists must seek approval from public affairs officials to speak to the media.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions.

Department of Defense

Summary: This policy is excessively restrictive and vague, even given the nature of the Office.

Strengths

- Repeats some principles from December 9, 2010 Holdren memorandum
- DOD approval to speak to the media or the public shall not be unreasonably delayed or withheld.

Weaknesses

- Fails to address most of the guidelines put forth in the December 9, 2010 memorandum.
- Not explicit that policy applies to political appointees, contractors, and supervisors, in addition to career employees.
- Policies excessively restrictive and vague, even given the nature of the Office.
- Scientists may only speak to the media or the public with appropriate coordination with their organization.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No provision for scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions.
- No procedure for data sharing with other agencies or commitment to timely releases of scientific information.
- Policy is difficult to find on DOD website.

Department of Education

Summary: This policy was released in draft form nearly a year ago and we could not locate a final policy or the draft policy on the department's website. The draft lacked many crucial details.

Strengths

- Applies to all employees including, supervisors, contractors, and career employees.
- Repeats principles from December 9, 2010 Holdren memorandum.
- Made draft policy available for public comment.

Weaknesses

- Lacks specifics and details as to how stated principles will be enforced and upheld.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No provision for scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions.
- Fails to provide specifics on open government requirements, research dissemination and data sharing.

Department of Energy

Summary: This policy is less than three pages long and hence has many significant gaps. Does not fully embrace the principles in the OSTP guidance memo and has many additional missing elements.

Strengths

- Repeats principles from December 9, 2010 Holdren memorandum.

Weaknesses

- Not explicit that policy applies to political appointees, supervisors, contractors in addition to career employees.
- Fails to address many of the guidelines put forth in the December 9, 2010 memorandum.
- Lacks specifics and details as to how stated principles will be enforced and upheld.
- Weak media and communications policy.
- States but does not adequately support scientist and researcher rights to express personal opinions with appropriate disclaimers.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions.

Department of Health and Human Services

[Final policy](#)

Summary: HHS could have set the gold standard by calling on the depth of experience with scientific integrity at the NIH. But they did not.

Strengths

- Repeats principles from December 9, 2010 Holdren memorandum.
- Allows individual HHS agencies to develop agency-specific scientific integrity principles, policies, and procedures of their own.
- States scientist and researcher rights to express personal opinions with appropriate disclaimers.

Weaknesses

- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Does not allow use of HHS title or affiliation even for identification purposes when presenting personal or individual views.
- Scientists must seek approval from public affairs officials to speak to the media.
- This policy does not address how allegations of scientific misconduct will be investigated, managed and reported.
- No HHS- wide guidance for reporting and resolving differing scientific opinions.
- Defers to HHS agencies for specifics on open government requirements, research dissemination and data sharing.
- Leaves all specifics and details as to how stated principles will be enforced and upheld to individual HHS agencies.

Department of Justice

Summary: Very decentralized draft policy that could lead to problems for scientists and very limited commitments to transparency. No final policy could be found on the DOJ website.

Strengths

- Applies to all employees including, supervisors, contractors, and career employees.
- Repeats principles from December 9, 2010 Holdren memorandum.
- Commitments to maintaining and strengthening scientific integrity and credibility are strongly stated.
- Prohibits employees from inappropriately suppressing or altering scientific research.

Weaknesses

- Implementation plans are left up to individual offices rather than establishing a department-wide policy.
- Communications policy is excessively restrictive even given the DOJ's position. The policy requires public affairs officers to coordinate all interactions with the media.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No provision for scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Commits to developing a procedure for reporting and resolving differing scientific opinions but does not indicate when it will be released.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- Limited transparency commitments.

Department of Labor

Summary: The final policy is exactly the same as the draft policy in spite of a large response to a public comment period. Although the principles from the December 9, 2010 memorandum are repeated, there are many flaws, weaknesses, and gaps.

Strengths

- Establishes clear procedure for how allegations of scientific misconduct will be investigated and managed.
- Repeats principles from December 9, 2010 Holdren memorandum.

Weaknesses

- Not explicit that the policy applies to political appointees, supervisors, and contractors in addition to career employees.
- Scientists may only speak to the media on matters related to their official work and only if assigned by their immediate supervisor and in coordination with their public affairs office.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Supports but does not adequately explain scientist and researcher rights to express personal opinions with appropriate disclaimers.
- No procedure to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.
- No procedure for reporting and resolving differing scientific opinions.
- No data dissemination commitments.
- Lacks specifics and details as to how stated principles will be enforced and upheld.

Department of Transportation

Summary: The draft policy is no longer available on the department's website, and it was not replaced by a final policy. The draft failed to address most of the guidelines put forth in the December 9, 2010 memorandum.

Strengths

- Repeats some principles from December 9, 2010 Holdren memorandum

Weaknesses

- Fails to address most of the guidelines put forth in the December 9, 2010 memorandum.
- Lacks specifics for any of the commitments.
- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- No provision for scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Scientists must coordinate with public affairs officials prior to speaking to the media.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Lacks procedures on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions
- Commits to developing an implementation guide but has not made this public.

Department of Veterans Affairs

Summary: The final policy could not be located on their website. There was a public comment period but there is no evidence these comments were ever used to create a final policy. Many important features are missing from this draft.

Strengths

The March 27, 2012 draft policy:

- Confirms scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Establishes that allegations of scientific misconduct will be investigated and managed in accordance with Federal Policy on Research Misconduct.
- Makes strong commitments to transparency and the dissemination and publication of scientific information.
- Repeats principles from December 9, 2010 Holdren memorandum.
- Made draft policy available for public comment but we could not locate a final policy on their website.

Weaknesses

- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- Scientists must seek approval from public affairs officials before speaking to the media.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No commitment to publicly report the aggregate number of scientific misconduct allegations and the specifics on cases of confirmed misconduct.
- No procedure for reporting and resolving differing scientific opinions.

Office of the Director of National Intelligence

Summary: This policy could not be found on the ODNI website and had to be obtained through FOIA. The policy is excessively restrictive and vague, even given the nature of the Office.

Strengths

- Repeats some principles from December 9, 2010 Holdren memorandum
- In principle supports the separation of fundamental scientific and technological information from national intelligence capabilities so that more science may be released.

Weaknesses

- Fails to address most of the guidelines put forth in the December 9, 2010 memorandum.
- Lacks specifics for any of the commitments.
- Not explicit that policy applies to political appointees, supervisors, and contractors in addition to career employees.
- No provision for scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Scientists must coordinate with public affairs officials prior to speaking to the media.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Lacks procedures on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions
- Commits to developing an implementation guide but has not made this public.

USAID

Summary: Implies that scientists must seek approval from public affairs before speaking to the media which could have a chilling effect on transparency.

Strengths

- Applies to all employees including, supervisors, contractors, and career employees.
- Confirms scientist and researcher rights to express personal opinions.
- Repeats principles from December 9, 2010 Holdren.
- Contains strong principles to protect science from inappropriate interference.

Weaknesses

- Weak communications and media policies.
- Scientists must seek approval from public affairs officials to speak to the media.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions.

USDA

Summary: This policy has significant gaps and expired over a year and a half ago with no indication of plans for revisiting it.

Strengths

- Applies to all employees including, supervisors, contractors, and career employees.
- Repeats some principles from December 9, 2010 Holdren memorandum.
- Makes some good commitments regarding federal scientific advisory committees

Weaknesses

- Fails to address many of the guidelines put forth in the December 9, 2010 memorandum.
- Implies scientists must seek approval from public affairs officials to communicate with the media.
- No provision allowing scientists the right to review, approve and comment publicly on the final version of any scientific document that relies on their research or identifies them as a contributor.
- No provision for scientist and researcher rights to express personal opinions with appropriate disclaimers.
- Lacks procedure on how allegations of scientific misconduct will be investigated, managed and reported.
- No procedure for reporting and resolving differing scientific opinions.
- Lacks specifics and details as to how stated principles will be implemented, enforced and upheld.
- States that the policy will only be in effect for one year defeating the purpose of the policy.