EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
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MEMORANDUM TO THE HEADS OF AGENCIES AND DEPARTMENTS, CHIEF SCIENCE OFFICERS, AND SCIENTIFIC INTEGRITY OFFICIALS

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SUBJECT: Delivery of the Framework for Federal Scientific Integrity Policy and Practice

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The White House Office of Science and Technology Policy (OSTP) is pleased to deliver the attached Framework for Federal Scientific Integrity Policy and Practice (the Framework) to support agencies in advancing and sustaining the critical work of protecting Federal science and enabling Federal scientists. Developed alongside our agency partners and the American public, this Framework will have an immediate impact and will sustain these scientific integrity practices well into the future.

In this memorandum, I review President Biden's agenda on scientific integrity and detail the processes expected of Federal agencies to uphold these values and objectives. The Framework included with this memorandum is a National Science and Technology Council policy guidance document. I also provide detailed implementation instructions for Federal agencies in this Memorandum under the header "Deliverables and Timelines."

Together, we are taking vital steps to ensure that Federal science is protected and scientists are empowered with robust scientific integrity policies and practices.

Background

In his first week of office, President Biden issued a Presidential Memorandum on *Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking* (the Presidential Memorandum). Accordingly, a historic interagency Task Force was established under the National Science and Technology Council (NSTC) and OSTP was charged with carrying out two phases of the Presidential Memorandum: reviewing, updating, and creating a framework for Federal scientific integrity policies to ensure the highest level of integrity in all aspects of executive branch involvement with scientific and technological processes.

Phase 1 was completed in January 2022, concluding with the publication of the NSTC report *Protecting the Integrity of Government Science* (the Report), which describes the landscape of scientific integrity policies and practices across Federal agencies, and identified areas of improvement for fostering a culture of scientific integrity in Federal agencies.

Phase 2 focused on developing the Framework, which carries out directives laid out in the Presidential Memorandum, including development of a process for assessment and improvement of scientific integrity policies and practices, roles and responsibilities of agency scientific integrity officials, and expectations for building and sustaining a robust culture of scientific integrity. The Framework is based on the foundational work of the Report, interagency deliberations, public engagement, and prior Federal actions on scientific integrity.

In 2009, the White House identified six principles of scientific integrity:

- Science and technology positions in the executive branch should be filled by candidates with appropriate experience;
- Agencies should have rules to ensure the integrity of their scientific process;
- Research that informs agency decisions should be subject to peer review;
- Barring restrictions, scientific or technological findings that inform policy decisions should be available to the public;
- Agencies should address instances in which the integrity of scientific and technological processes and information may be compromised; and
- Agencies should adopt procedures that ensure the integrity of scientific and technological processes and information used to inform decision-making.

Drawing on the 2021 NSTC report, OSTP proposed five additional principles that will foster a culture and practice of scientific integrity in the Federal government:

- *Dissent.* Science benefits from dissent within the scientific community to sharpen ideas and thinking. Scientists' ability to freely voice the legitimate disagreement that improves science should not be constrained.
- *Whole of Government.* Because evidence-based policymaking happens across government, scientific integrity policies should apply not only to "science agencies," but to all Federal agencies and departments engaged in the production, analysis, communication, and use of science These policies must also apply to everyone who works for the government, including career employees, contractors, and political appointees.
- *Science at the policy table.* For science to inform policy and management decisions, it needs to be understood and actively considered during decision-making. This requires having scientists participate actively in policy-making.
- *Transparency in sharing science.* Transparency underpins the robust generation of knowledge and promotes accountability to the American public. Federal scientists should be able to speak freely, if they wish, about their unclassified research, including to members of the press.
- *Accountability.* Violations of scientific integrity policies should be taken as seriously as violations of government ethics rules and must come with appropriate consequences.

These principles, and the content of this Memo and Framework build upon the principles and direction in the 2009 Presidential Memorandum, 2010 OSTP Memorandum, 2021 Presidential Memorandum, and 2022 Scientific Integrity Report.

In delivering this Framework, OSTP also emphasizes several important and emerging issues that connect to scientific integrity as identified in the Presidential Memorandum and have broadened traditional views on scientific integrity. These issues permeate all aspects of the Federal scientific enterprise and should be central to Federal agency actions on scientific integrity. As such, these issues are included in the below Framework:

- Recognition that identity-based and other forms of harassment, discrimination and bias, unsafe work environments, and other issues related to improving diversity, equity, inclusion, and accessibility in Federal science intersect with issues of scientific integrity.[1] These factors must be considered in scientific integrity practices, along with efforts to ensure that scientific integrity practices support the equitable delivery of the Federal Government's programs;
- Recognition that scientific integrity policies and practices must evolve as the Federal Government develops and uses new technologies, such as artificial intelligence, in order to provide for efficacy, accountability, and equity in the specific context of use;[2] and,
- Assurance that other modes of producing scientific knowledge, such as citizen science, community-engaged research, and crowdsourcing, have the recognition, support, and resources to meet the same high standards of scientific integrity that traditional modes are expected to uphold. Further, scientific integrity practices must be applied in ways that are inclusive of these other modes of science. This may necessitate expanded scientific integrity practices and expectations, such as granting communities more autonomy over research questions, respect for data and knowledge sovereignty, elevation of qualitative data gathering, and inclusion of multiple forms of evidence, such as Indigenous Knowledge.[3,4]

In order to strengthen scientific integrity across the government and uphold the above principles, several foundational steps have already been taken by Federal agencies, in response to the Presidential Memorandum. Specifically, under Sections 3, 6, and 7, each agency head was directed to:

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[1] White House Office of Science and Technology Policy. 2022. FACT SHEET: Biden Harris Administration Announces Bold Multi-Sector Actions to Eliminate Systemic Barriers in STEMM. https://www.whitehouse.gov/ostp/news-updates/2022/12/12/fact-sheet-biden-harris-administration-announces-bold-multi-sector-actions-to-eliminate-systemic-barriers-in-stemm/

[2] White House Office of Science and Technology Policy. 2022. Blueprint for an AI Bill of Rights. https://www.whitehouse.gov/ostp/ai-bill-of-rights/

[3] National Academies of Sciences, Engineering and Medicine. 2022. Event: Co-Producing Knowledge with Communities: Equity in Federal Research Programs. https://www.nationalacademies.org/event/05-12-2022/co-producing-knowledge-with-communities-equity-in-federal-research-programs

[4] White House Office of Science and Technology Policy and Council on Environmental Quality. 2022. Guidance for Federal Departments and Agencies on Indigenous Knowledge. https://www.whitehouse.gov/ostp/news-updates/2022/12/01/white-house-releases-first-of-a-kind-indigenous-knowledge-guidance-for-federal-agencies/

- Designate a Scientific Integrity Official (SIO);
- Designate a Chief Science Officer (CSO) for agencies that fund, conduct, or oversee scientific research;
- Review agency scientific and technological advisory committees; and,
- Review agency website content, reports, data, and materials inconsistent with the principles set forth in the Presidential Memorandum.

For agencies with both a CSO and SIO, the CSO and SIO must have relevant qualifications and be different individuals at an agency, with the SIO reporting to the CSO on all matters involving scientific integrity policies. The name of the individuals designated to these positions, as well as whether or not agencies reported to OSTP that their website and advisory committee reviews were completed pursuant to the Presidential Memorandum, will be made public by OSTP. To ensure the long-term viability of Federal scientific integrity policies and practices, and to maintain a measure of independence for those officials, these senior-level officials should be Federal career employees, where legally permissible. From time to time, OSTP may convene with agencies to ensure that their SIOs and CSOs continue to conform to the policy recommendations laid out by the Biden-Harris Administration and to discuss emerging scientific integrity issues and how agencies plan to respond. The SIO and CSO should collaborate regularly with other senior officials responsible for evidence-based policymaking, including the Evaluation Officer, Statistical Official, and Chief Data Officer. OSTP emphasizes the importance of making sure that the above responsibilities have been discharged.

This memorandum marks the completion of the second phase of the Presidential Memorandum, which required OSTP, in coordination with Federal agencies, to develop a Framework for scientific integrity assessment and iterative improvement. The forthcoming phase tasks Federal agencies and OSTP with taking the next steps to strengthen scientific integrity across the government.

The eighteen-month process which produced this Framework is the most robust effort undertaken by the U.S. government to study and improve scientific integrity policies and outcomes to date. This was an all-agency effort that drew on expertise from more than 70 members across 30 agencies. It also included significant external engagement: we received input from over 1,000 individuals and organizations through three listening sessions, three roundtables, and two requests for information. Development of the Framework included the Scientific Integrity Framework Interagency Working Group, the National Science and Technology Council's Fast-Track Action Committee on Scientific Integrity, engagement with Federal SIOs and other relevant agency staff, and opportunities for public and stakeholder input to help shape the Framework.

The Scientific Integrity Framework

Upholding the highest standards of scientific integrity across the Federal government is of vital importance for keeping all of America safe, healthy, and secure. Indeed, the nation and the world

benefit when Federal science is open, honest, equitable, fair, objective, democratic, reliable, robust, independent, and accessible to the community at large. Federal scientific integrity is also essential for building and sustaining public trust in science and government. In order to ensure evidence-based decisionmaking across the government, scientists must have a seat at the table and scientific information must reach decisionmakers without inappropriate influence.

The attached Framework will serve as the roadmap for strengthening scientific integrity policies and practices across the government. This Framework includes **four key features** that will sustain protections for Federal science and scientists for years to come.

These features include:

- A consistent Federal *definition* of scientific integrity for all Federal agencies (Framework Chapter 1);
- Detailed *guidance* for regular assessment and iterative improvement of agency scientific integrity policies and practices (Framework Chapters 2 and 3);
- A *model scientific integrity policy* that includes examples of detailed policy provisions for adaptation to agency needs (Framework Chapter 4), and critical policy features that will be used for assessment of policies (Chapter 5); and
- The *charter* of a new National Science and Technology Council Subcommittee on Scientific Integrity (Subcommittee) that will serve as a permanent advisory body and community of practice for interagency scientific integrity issues charged with recognizing agency progress on scientific integrity as well as assessing agency policies and practices (Framework Appendix E).

Further, OSTP lays out the following guidance for agencies in response to the Presidential Memorandum to advance this effort:

- OSTP recognizes the need for agency flexibility and autonomy in implementation of scientific integrity policies and practices, while also recognizing the critical need to ensure comprehensive and consistent implementation and iterative improvement across the Federal government. As described in the attached Framework, these elements are indeed reflected, with areas that will be assessed for consistency across agencies, while allowing agencies the space to ensure scientific integrity policies and practices meet their agencies' culture and context.
- All agencies should develop or revise their agency scientific integrity policy based on the Framework's suggested policy features for assessing scientific integrity policies (Framework Chapter 5), and use the critical metrics for assessment of agency policies and practices implementation (Framework Chapter 3) on their respective specified timelines.
- All Federal agencies, not just those that fund or conduct scientific research, should strengthen practices and culture of scientific integrity on a continuous basis. OSTP

values the importance of leadership and workplace culture for ensuring high levels of scientific integrity in Federal agencies.

Consistent with Report and this Framework, OSTP expects agencies to provide adequate resources and staffing for ensuring scientific integrity. We understand that such resourcing can be challenging in Federal agencies and concur with recent Government Accountability Office reports that call upon additional steps to be taken to support scientific integrity.

Federal Definition of Scientific Integrity

A substantial gap identified in the Report was that the Federal Government lacked a consistent definition of scientific integrity. A definition was developed and agreed upon by the National Science and Technology Council 2022 Scientific Integrity Framework Interagency Working Group and the 2021 Scientific Integrity Fast Track Action Committee (Framework Chapter 1). OSTP recommends that agencies adopt this definition, incorporate it into their scientific integrity policy, and communicate it to their workforce.

> *Scientific integrity is the adherence to professional practices, ethical behavior, and the principles of honesty and objectivity when conducting, managing, using the results of, and communicating about science and scientific activities. Inclusivity, transparency, and protection from inappropriate influence are hallmarks of scientific integrity.*

The National Science and Technology Council Subcommittee on Scientific Integrity

OSTP has established a Subcommittee on Scientific Integrity under the Committee on Science of the National Science and Technology Council. The Subcommittee will be comprised of SIOs and will be charged with functions including recognition of agency progress on fostering vibrant culture of scientific integrity, assessment of agency scientific integrity policies and practices; coordination and shared learning across SIOs; coordination with other relevant Councils such as the Evaluation Officer Council, Chief Data Officer Council, and Interagency Council on Statistical Policy; and assessment and, when appropriate, sharing of analysis or commentary on public allegations of scientific integrity violations that cannot be suitably handled at an individual agency-, department-, or Executive Office of the President component-level, such as allegations involving senior-level officials, political appointees, SIOs, or interagency science. The first meeting of the Subcommittee was held on September 9, 2022.

Deliverables and Timeline

It is critical that this work continue to move forward expeditiously to expand an empowering culture and appropriate protections for Federal science and scientists as soon as feasible. In order to ensure full compliance with the Presidential Memorandum and the implementation of

scientific integrity policies and practices in a near-term time frame, all agencies should adopt the following timeline:

- **Within 60 days from public posting of the Framework:** Agencies should submit new or updated agency and department draft scientific integrity policies for review by OSTP and the Subcommittee via the mailbox ScientificIntegrity@ostp.eop.gov. The intent of this review is to assist agencies in meeting the Framework's critical policy features for agency scientific integrity policies and in adhering to the good practices articulated in the Report and Framework. It is expected that agencies will submit pre-decisional draft policies for review.
- **Within 120 days from public posting of the Framework:** OSTP and the Subcommittee will complete the reviews using the Framework's critical policy features for assessment (Framework Chapter 5). Agencies need not send this draft through their internal agency clearance processes before sending to OSTP for this initial review.
- **Within 180 days after public posting of the Framework:** Agencies should provide an opportunity for public input on their scientific integrity policies and practices, such as through a listening session or request for comment on their draft policy. Agencies are encouraged to publicly post a draft policy for review and comment.
- **Within 270 days from public posting of the Framework:** Final policies are due to OSTP. OSTP will compile and make public all agency policies as well as all agencies' designated CSOs and SIOs on a Federal webpage.
- **Within 360 days from public posting of the Framework and every two years thereafter:** All agencies report to OSTP on their progress towards implementing the Framework. OSTP and the Subcommittee will assess agency scientific integrity policies, practices, and culture using the Framework's critical metrics for assessment (Framework Chapter 3). To minimize administrative burden, agency SIOs will be asked to fill out and certify the accuracy of a form or template that OSTP will develop. OSTP will regularly survey SIOs to assess agency progress and challenges.
- **For the calendar year 2023 and annually thereafter:** All agencies should publish, consistent with any requirements related to national security and privacy, as well as any other applicable law, an annual report on the agency's website. The annual report should include reporting on agency progress in fostering a vibrant culture of scientific integrity, as well as the number of administrative investigations and appeals involving alleged deviations from the agency's scientific integrity policies, as described in the Presidential Memorandum, for the year covered by the report, and the number of investigations and appeals pending from years prior to the year covered by the report, if any.

Updates from the White House Office of Science and Technology Policy

In accordance with this Memorandum, OSTP commits to establishing its own first ever Scientific Integrity Policy and designating our first ever Scientific Integrity Official. The OSTP Scientific Integrity Policy will be derived from the Model Scientific Integrity Policy (Framework Chapter

5). The OSTP Scientific Integrity Official shall have appropriate science and policy qualifications and be a career Federal employee.

As we move forward together in the pursuit of promoting and protecting the integrity of government science, I thank agencies and their dedicated public servants for their valued contributions to these vital efforts. I am confident that together we will strengthen Federal scientific integrity, public trust in science, and the protection of Federal employees in support of advancing health, safety, security, and equity across the Nation and the world.