



NSF Policy 601 - Scientific Integrity Policy

Approved by:		Date: 9/1/2026
Simon Malcomber Chief Science Officer		
Policy maintained by:	NSF Office of the Director	
Related policies:		
Related procedures:	Procedures for Handling Allegations of a Failure to Adhere to the NSF Scientific Integrity Policy	
Supersedes:		

Executive Summary:

This policy affirms the ongoing commitment of the U.S. National Science Foundation (NSF) to uphold a positive culture of scientific integrity. The policy aims to ensure the integrity of all aspects of the agency's scientific activities, including conducting, managing, using the results of and communicating about science.

1. **Scope:** This policy applies to NSF federal employees, contractors, "Intergovernmental Personnel Act" (IPA) assignees, political appointees, fellows, trainees, interns, ad hoc reviewers, detailees, volunteers, and special government employees (including but not limited to advisory committee members, merit review panelists, and site visitors) when they propose, review, or conduct science or communicate about science and scientific activities. These are considered covered individuals for the purposes of this policy.

The policy applies to all covered individuals as they perform NSF scientific activities, including but not limited to merit review and award decision-making processes, post-award oversight, studies performed to support U.S. and NSF core activities, and research performed as part of approved Independent Research and Development (IR/D) plans.

Scientific integrity requirements for contractors and partners who engage or assist in NSF's scientific activities may be set forth in statements of work, memoranda of understanding, award, contract or other similar agreements, or via issuance of a separate rule or other policy.

Requirements for proposers and grant award recipients are outside of the scope of this policy. The [NSF Proposal & Award Policies & Procedures Guide](#) (PAPPG) contains information on scientific integrity expectations and requirements for proposers and grant award recipients, including but not

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limited to prohibitions against research misconduct. Research misconduct refers to fabrication, falsification, or plagiarism in proposing or performing research funded by NSF, in reviewing research proposals submitted to NSF, or in reporting research results funded by NSF (45 CFR § 689).

2. **Authority/Source:** This policy is established in accordance with:
 - a. 42 USC § 1861 *et seq.* -- "[National Science Foundation Act of 1950](#)," as amended.
 - b. Executive Order 14303 -- [Restoring Gold Standard Science](#).
 - c. 5 CFR § 2635 -- [Standards of Ethical Conduct for Employees of the Executive Branch](#), as amended.
 - d. 5 CFR § 735 -- [Employee Responsibilities and Conduct](#).
 - e. 45 CFR § 680 -- [National Science Foundation Rules of Practice](#).
 - f. 45 CFR § 689 -- [Research Misconduct](#).
 - g. Pub. L. 101-12 -- The "[Whistleblower Protection Act of 1989](#)," as amended.
 - h. PPD 19 -- [Protecting Whistleblowers with Access to Classified Information](#), Oct. 10, 2012.
 - i. 41 USC § 4712 -- [The National Defense Authorization Act: Enhancement of contractor protection from reprisal for disclosure of certain information](#).
 - j. Pub. L. No. 92-463, §1, Oct. 6, 1972, 86 Stat. 770 -- "[Federal Advisory Committee Act](#)."
 - k. 45 CFR § 690 -- [Protection of Human Subjects](#).
 - l. 45 CFR § 46 -- [The Common Rule](#), as amended.
 - m. 7 USC Ch. 54 -- "[Animal Welfare Act](#)," as amended.
 - n. OMB Memorandum M-20-12 -- [Phase 4 Implementation of the "Foundations for Evidence-Based Policymaking Act of 2018": Program Evaluation Standards and Practices](#).
 - o. 48 CFR § 3 -- [Federal Acquisitions Regulations System](#), as amended.
 - p. Pub. L. 115-435 -- [Foundations for Evidenced-based Policymaking Act of 2018](#).
 - q. Pub. L. No. 106-554 § 515 -- "[Information Quality Act](#)."
 - r. Pub. L. 117-167 -- "[CHIPS and Science Act](#)."
 - s. Pub. L. No 111-358 -- [The "America COMPETES Reauthorization Act of 2010](#)," as amended.
 - t. 67 FR 8451 -- [OMB Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies](#).
 - u. 70 FR 2664 -- [OMB Final Information Quality Bulletin for Peer Review](#).
3. **Purpose:** The purpose of this policy is to affirm NSF's ongoing commitment to uphold a positive culture of scientific integrity. NSF's mission is to promote the progress of science, advance the national health, prosperity, and welfare, and secure the national defense. This policy aims to ensure the integrity of all aspects of the agency's scientific activities, including conducting, managing, using the results of, and communicating about science.

In accordance with other federal regulations and policies, the Scientific Integrity Policy aligns with [Executive Order 14303](#), "Restoring Gold Standard Science." The executive order states that "Gold Standard Science means science conducted in a manner that is: (i) reproducible; (ii) transparent; (iii) communicative of error and uncertainty; (iv) collaborative and interdisciplinary; (v) skeptical of its findings and assumptions; (vi) structured for falsifiability of hypotheses; (vii) subject to unbiased peer review; (viii) accepting of negative results as positive outcomes; and (ix) without conflicts of interest." NSF adheres to the nine tenets of Gold Standard Science as appropriate given the breadth of scientific fields and research methodologies that the agency supports and in how it selects, funds, and oversees research.

4. **Policy:** NSF employees and other covered individuals (as defined in this policy) must be aware of and adhere to the Scientific Integrity Policy and should not engage in conduct that contributes to a loss of scientific integrity.

- a. **The definition of scientific integrity:** Scientific integrity is defined as follows:
Scientific integrity is the adherence to professional practices, ethical behavior, and the principles of honesty and objectivity when conducting, managing, using the results of, or communicating about science and scientific activities.

Transparency and protection from inappropriate influence are hallmarks of scientific integrity. Scientific integrity protects the scientific process, scientific information, scientists, the integrity of agency decisions, and the public.

- b. **Scientific integrity at NSF:** Scientific integrity is the responsibility of the entire NSF workforce, including all levels of employees who use scientific information in decision-making. Key elements of scientific integrity at NSF include the following:
- i. **Science-based decision-making:** Covered individuals must ensure that scientific information used to inform an award recommendation or other scientific decision has the appropriate quality, accuracy, and rigor consistent with the type of the decision being made and is free from bias or inappropriate influence.
 - ii. **Maintaining public trust:** Covered individuals must ensure that the scientific activities, processes, and practices they support are worthy of public trust and that information shared with the public is accurate.
 - iii. **Openness and transparency:** Covered individuals must promote openness and transparency in connection with their scientific activities and communication of scientific information to the extent allowable by agency policy and federal law.
 - iv. **Safe and respectful work environment:** Covered individuals must foster a safe and professional workplace environment. Respect for each person is an integral component of the scientific process and is essential for scientific integrity.
 - v. **Respect for scientific discourse:** NSF enables employees and other covered individuals to exchange ideas and sincerely consider differing viewpoints based on honest differences of scientific opinion. Covered individuals must not engage in activities that prevent or deter consideration of an alternative scientific opinion based on an honest difference of scientific opinion.
 - vi. **Scientific integrity and Gold Standard Science initiatives:** NSF promotes a culture of scientific integrity and Gold Standard Science through education, training, and other initiatives.
 - vii. **Engagement with the scientific community:** NSF encourages staff involvement in scientific engagement activities with the broader scientific community as resources allow.

Updates to the Scientific Integrity Policy will be communicated to agency employees and the external scientific community.

- c. **Loss of scientific integrity:** All NSF employees and other covered individuals (as defined in this policy) should not engage in conduct that contributes to a loss of scientific integrity. A loss of scientific integrity refers to a failure to adhere to professional practices, ethical behavior, or scientific integrity principles when conducting, managing, using the results of, or communicating about science or scientific activities.

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A loss of scientific integrity can result from inappropriate influence. Inappropriate influence refers to the attempt to alter, delay, suppress, or interfere with scientific activities, communications, findings, or products without a reasonable scientific justification or by misusing one's authority in the workplace.

Decision-making related to scientific activities is often informed by agency or other federal policies. Basing a decision on an interpretation of applicable policies, instead of deriving it from the available scientific information, does not necessarily constitute a loss of scientific integrity. In addition, a loss of scientific integrity does not include an honest error or honest differences of scientific opinion, as discussed further below.

- d. **Differences of scientific opinion:** An honest difference of scientific opinion does not constitute a loss of scientific integrity. A scientific opinion is a conclusion, evaluation, or judgment derived from a rigorous review of the available scientific evidence. A difference of scientific opinion occurs when those with expertise in a relevant scientific subject area substantively and sincerely disagree about a scientific matter. Differences of scientific opinion are a normal part of the scientific process.

NSF aims to create an environment that:

- i. Encourages the open exchange of ideas.
- ii. Provides for consideration of different or dissenting viewpoints.
- iii. Protects employees from efforts to prevent or deter consideration of alternative scientific opinions.

When an honest difference of scientific opinion occurs, it is important to maintain respect for the other person's point of view and to keep records that document the reasons for the disagreement.

- e. **Responsibilities of NSF employees and other covered individuals:** NSF staff and other covered individuals as defined in this policy must be aware of and adhere to the Scientific Integrity Policy and should not engage in conduct that contributes to a loss of scientific integrity. Covered individuals must also comply with all applicable laws, statutes, regulations, executive orders, and federal and agency policies governing their conduct and responsibilities, including requirements relating to federal ethics, conflicts of interest, employee conduct, scientific and professional standards, research and scientific practices, and protection for individuals who report concerns or violations. Nothing in this policy limits or supersedes any other applicable legal or policy requirement governing the conduct of covered individuals or their responsibilities with respect to scientific integrity.

Covered individuals should report to the NSF Office of Scientific Integrity any information relevant to an allegation of a failure to adhere to the Scientific Integrity Policy.

NSF will require employees to complete scientific integrity and Gold Standard Science training, including during the onboarding process for new employees.

- f. **Roles and responsibilities of NSF leadership and management:** The NSF Director and Deputy Director provide leadership for the agency on matters related to scientific integrity. They lead by example and ensure all agency scientific activities are conducted in accordance with the Scientific Integrity Policy. The Director and Deputy Director

provide resources and support for implementing this policy. The Director and Deputy Director uphold the autonomy of the Scientific Integrity Official (SIO) to recommend courses of action for scientific integrity matters and handle allegations of a failure to adhere to the Scientific Integrity Policy. The Director and Deputy Director ensure agency compliance with corrective actions when a loss of scientific integrity is substantiated.

The Chief Science Officer (CSO) oversees the implementation and iterative improvement of policies and processes pertaining to scientific integrity, as well as policies affecting federal and non-federal staff who support the scientific activities of the agency. The CSO, supported by the SIO, shall engage with agency leadership in decision-making about scientific integrity matters. The CSO upholds agency compliance with the Scientific Integrity Policy. The CSO, in consultation with the SIO, ensures corrective actions are enacted when a loss of scientific integrity is substantiated. The CSO, in consultation with the SIO and OGC, will determine how to review types of scientific integrity allegations not covered by the "[Procedures for Handling Allegations of a Failure to Adhere to the NSF Scientific Integrity Policy](#)."

NSF leadership designates a senior career employee to serve as the agency's SIO. The SIO oversees implementation and iterative improvement of the Scientific Integrity Policy and its associated procedures. The SIO is charged with supporting the agency's commitment to scientific integrity and overseeing day-to-day activities related to scientific integrity. The SIO is empowered with the independence necessary to gather and protect information to support the review and assessment of alleged failures to adhere to the Scientific Integrity Policy, address the implementation of corrective actions, and coordinate with appropriate agency authorities to enforce corrective and administrative actions.

The Gold Standard Science and Scientific Integrity Working Group (G3SIWG) comprises senior agency career employees and is chaired by the SIO. Its charge includes providing oversight for the implementation of the Scientific Integrity Policy; acting as liaisons for their respective agency units; assisting with training, education and policy assessment, updates, and amendments; and being available to address questions or concerns regarding the Scientific Integrity Policy. The G3SIWG will review the Scientific Integrity Policy and other related policies on an ongoing basis.

The CSO appoints the SIO along with a subset of G3SIWG members to serve as the Scientific Integrity Review Committee (SIRC). The charge of the SIRC is to review allegations of a loss of scientific integrity and to make recommendations on whether to refer such allegations to relevant agency units or as otherwise appropriate.

Leadership and management of agency directorates and offices are expected to promote awareness of and compliance with the Scientific Integrity Policy in their respective units. They should encourage employees as needed to contact the SIO with scientific integrity questions and to report allegations of a failure to adhere to the Scientific Integrity Policy to the NSF Office of Scientific Integrity.

- g. **Reporting allegations and protections:** Allegations of a failure to adhere to the Scientific Integrity Policy should be submitted to the NSF Office of Scientific Integrity:
 - i. By email: SIComplaint@nsf.gov.
 - ii. By mail: U.S. National Science Foundation, Office of Scientific Integrity,

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Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

The [Scientific Integrity at NSF webpage](#) lists "what to include in the allegation submission."

An allegation must be made in good faith, meaning it is made with a reasonable belief that a loss of scientific integrity may have occurred. An allegation is not in good faith if it is made with reckless disregard for, or willful ignorance of, facts that would disprove the allegation. If there are indications that an allegation was not made in good faith, the matter will be referred to relevant agency units such as the Workforce Relations Branch (WRB). Allegations deemed to be outside of the scope of the Scientific Integrity Policy will be referred to relevant agency units or as otherwise appropriate.

The SIO is available for confidential consultations related to concerns about a failure to adhere to the Scientific Integrity Policy. In addition, an allegation may be reported to other entities, such as the WRB, the Office of Civil Rights (OCR), and/or the Office of Inspector General (OIG) when it falls within their jurisdiction.

NSF shall seek to protect NSF staff and, as appropriate, other covered individuals who report good faith allegations from retribution, retaliation, or reprisal. Supervisors, managers, and other agency leaders shall not intimidate or coerce employees to alter scientific or scientific activity-related data, findings, or professional opinions. NSF will comply with federal whistleblower protections, including by protecting from prohibited personnel practices (as defined in 5 U.S.C. 2302(b)). NSF will seek to protect those who uncover and report in good faith an allegation of a loss of scientific integrity. NSF also will seek to protect NSF employees who allegedly failed to adhere to the Scientific Integrity Policy in the absence of a finding that a violation has occurred.

An allegation of whistleblower retaliation can be reported through the OIG's [Whistleblower Retaliation webpage](#) or sent to the [U.S. Office of Special Counsel](#).

- h. **Scientific integrity processes and procedures:** The SIO, in consultation with the G3SIWG and SIRC, oversees the "Procedures for Handling Allegations of a Failure to Adhere to the NSF Scientific Integrity Policy." Depending on the type of allegation, it may be referred to other entities such as OCR, OIG, and/or WRB.

OIG will oversee scientific integrity allegations involving NSF leadership, including but not limited to the NSF Director, Deputy Director, Chief of Staff, Chief Science Officer, and Chief Management Officer.

When the allegations involve research misconduct, OIG has the primary responsibility for coordinating the review process in accordance with 45 CFR § 689. SIO will assist OIG as needed.

Allegations that involve measures to correct scientific information in an NSF-generated or NSF-commissioned public document will be handled according to the requirements and procedures of the ["Information Quality Act."](#)

- i. **Related and supporting policies:**
 - i. [Federal Advisory Committee Management](#).

- ii. [Information Quality at NSF.](#)
- iii. National Center for Science and Engineering Statistics (NCSES): [Information Quality and Transparency.](#)
- iv. ["National Policy on the Transfer of Scientific, Technical, and Engineering Information": National Security Decision Directive-189](#) (NSDD-189).
- v. "Notification and Federal Employee Antidiscrimination and Retaliation Act of 2002," the ["No FEAR Act."](#)
- vi. NSF policies on [Conflicts of Interest.](#)
- vii. [NSF "Conflicts of Interest and Standards of Ethical Conduct"](#) (NSF Manual 15).
- viii. [NSF Evaluation and Assessment.](#)
- ix. [NSF Office of Inspector General.](#)
- x. [NSF Public Access Initiative.](#)
- xi. [NSF Research Misconduct Regulation \(45 CFR § 689\).](#)
- xii. [NSF Social Media Policies.](#)
- xiii. [NSF Research Involving Human Subjects.](#)
- xiv. [NSF Research Involving Vertebrate Animals.](#)
- xv. [NSF Social Media Policies.](#)
- xvi. Presidential Memorandum on United States Government-Supported Research and Development National Security Policy National Security Presidential Memorandum – 33 ([NSPM-33](#)).
- xvii. [Research Security at the National Science Foundation.](#)
- xviii. [U.S. Office of Special Counsel: Federal Employee Hatch Act Information.](#)

j. **Exceptions:**

None

k. **Definitions:** For the purpose of this policy, the following definitions are adopted:

- i. **Allegation** refers to a report of a suspected loss of scientific integrity. An allegation must be made in good faith, meaning that it is made with a reasonable belief that a loss of scientific integrity may have occurred. An allegation is not in good faith if it is made with reckless disregard for or willful ignorance of facts that would disprove the allegation.
- ii. **Corrective action** refers to the measures taken to restore the accuracy of the scientific record, such as a retraction of published materials, after a loss of scientific integrity has been substantiated, consistent with this policy.
- iii. **Covered individuals** refers to persons who must adhere to the requirements of this policy, including NSF federal employees, temporary federal employees, contractors, IPA assignees, political appointees, fellows, trainees, interns, ad hoc reviewers, detailees, volunteers, and special government employees (including but not limited to advisory committee members, merit review panelists, and site visitors) when they propose, review, or conduct science or communicate about science and scientific activities.
- iv. **Decision-making/policymaking** refers to (1) the development of policies or making determinations about policy or management; (2) making determinations about expenditures of federal agency funds; or (3) implementing or managing activities that involve or rely on scientific activities.
- v. **Difference of scientific opinion** refers to a situation when those with expertise in a relevant scientific subject area substantively and sincerely disagree about a scientific matter.
- vi. **Ethical behavior** refers to actions that adhere to norms for appropriate conduct, such as being honest, lawful, and professional, and to statutes, regulations,

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- policies, and guidelines governing employee conduct.
- vii. **Federal agency** refers to an executive department, a government corporation, or an independent establishment.
 - viii. **Federal records** refers to information, regardless of format, that is (1) created or received by the federal government in the course of business, and (2) is preserved, or should be preserved, due to its evidential value in documenting the U.S. government, or its informational value in accordance with the appropriate National Archives and Records Administration (NARA) records schedules.
 - ix. **Federal science** refers to science conducted by federal scientific staff.
 - x. **Gold Standard Science** refers to science conducted in a manner that is: (i) reproducible; (ii) transparent; (iii) communicative of error and uncertainty; (iv) collaborative and interdisciplinary; (v) skeptical of its findings and assumptions; (vi) structured for falsifiability of hypotheses; (vii) subject to unbiased peer review; (viii) accepting of negative results as positive outcomes; and (ix) without conflicts of interest.
 - xi. **Honest error** refers to an error in the record or a deviation from professional norms that was not knowing, intentional, nor reckless.
 - xii. **Inappropriate influence** refers to the attempt to alter, delay, suppress, or interfere with scientific activities, communications, findings, or products without a reasonable scientific justification or by misusing one's authority in the workplace.
 - xiii. **Loss of scientific integrity** refers to a failure to adhere to professional practices, ethical behavior, or scientific integrity principles when conducting, managing, using the results of, or communicating about science or scientific activities.
 - xiv. **Policy** refers to laws, regulations, procedures, administrative requirements or actions, incentives, or voluntary practices of governments and other institutions.
 - xv. **Professional practices** refers to the collection of policies, laws, guidelines, and norms that govern appropriate professional conduct and behavior.
 - xvi. **Research misconduct** refers to fabrication, falsification, or plagiarism in proposing or performing research funded by NSF, in reviewing research proposals submitted to NSF, or in reporting research results funded by NSF (45 CFR § 689). Research misconduct does not include honest errors or differences of opinion.
 - xvii. **Retaliation** refers to, per 5 USC § 2302(b)(8), taking or failing to take, or threatening to take, personnel action with respect to any employee or applicant for employment because of any disclosure of information that the employee or applicant reasonably believes evidences violation of any law, rule, or regulation or gross mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or a disclosure of information that the employee reasonably believes is evidence of censorship related to research, analysis, or technical information and such censorship will cause a violation of any law, rule, or regulation or gross mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, providing that such disclosure is not specifically prohibited by law and if such information is not specifically required by Executive Order to be kept classified in the interest of national defense or the conduct of foreign affairs (per Pub. L. 112-199, § 110).
 - xviii. **Science** refers to the full range of scientific activities and fields, including basic science, applied, and use-inspired science, evaluation, engineering, technology, economics, social sciences, mathematics, and statistics as well as the scientific

and technical information derived from these endeavors.

- xix. **Scientific activities** refers to the application of well-accepted scientific methods and theories in a systematic manner, and includes, but is not limited to, data collection, inventorying, monitoring, statistical analysis, surveying, observations, experimentation, interpretation, study, research, integration, economic analysis, forecasting, predictive analytics, modeling, simulation, technology development, scientific assessment, and science-based or science-informed decision-making and communication. Scientific activities at NSF include but are not limited to merit review processes, award decision-making processes, post-award oversight, studies based on established scientific methodologies and conclusions executed by NSF staff or through contracts, and research as part of NSF-approved Independent Research and Development (IR/D) activities.
- xx. **Scientific integrity** is the adherence to professional practices, ethical behavior, and the principles of honesty and objectivity when conducting, managing, using the results of, or communicating about science and scientific activities.
- xxi. **Scientific Integrity Official (SIO)** refers to a senior career employee designated as an agency's lead to oversee implementation and iterative improvement of scientific integrity policies and procedures.
- xxii. **Scientific opinion** refers to a conclusion, evaluation, or judgment derived from a rigorous review of the available scientific evidence.
- xxiii. **Scientific staff** refers to agency staff who propose, conduct, or review science or communicate about science and scientific activities, and who manage or supervise scientific activities and use scientific information in decision-making.
- xxiv. **Scientist** refers to an individual whose responsibilities include collection, generation, use, or evaluation of scientific and technical data, analyses, or products. This includes but is not limited to federal employees, contractors, and trainees. It does not refer to individuals with scientific and technical training whose primary job functions are in nonscientific roles such as policymakers.
- xxv. **Special government employee** refers to an officer or employee who is retained, designated, appointed, or employed by the government to perform temporary duties, with or without compensation, for not more than 130 days during any period of 365 consecutive days (as defined in 18 USC § 202). NSF panelists and federal advisory committee members are examples of special government employees.
- xxvi. **Transparency** refers to ensuring all relevant data and information used to inform a decision or action is visible, accessible, and can be understood by the affected or interested parties, to the extent allowable by law.

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1. **Public Releasability:** This policy will be publicly available on the [NSF Scientific Integrity webpage](#).
2. **Federal Records:** Records are retained and disposed of in accordance with the appropriate NARA records schedules.
3. **Review:** As needed.
4. **Revision History:**

Version	Date	Section	Description	Changes by
1.0	Sept. 1, 2026		Initial Version	