

# NASA Advisory Implementing Instructions

## NASA Guidelines for Promoting Scientific and Research Integrity

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## Commonly Used Abbreviations and Acronyms

AWA: Animal Welfare Assurance  
CFR: Code of Federal Regulations  
FAC: Federal Advisory Committee  
FACA: Federal Advisory Committee Act  
FAR: Federal Acquisition Regulation  
GSA: General Services Administration  
HRP: Human Research Program  
IPA: Intergovernmental Personnel Act  
IRB: Institutional Review Board  
MDAA: Mission Directorate Associate Administrator  
MSEO: Mission Support Enterprise Office  
NAII: NASA Advisory Implementing Instructions  
NASA: National Aeronautics and Space Administration  
NIH: National Institutes of Health  
NPD: NASA Policy Directive  
NPR: NASA Procedural Requirements  
OGC: Office of the General Counsel  
OCS: Office of the Chief Scientist  
OIG: Office of the Inspector General  
OLAW: Office of Laboratory Animal Welfare  
OSTP: (White House) Office of Science and Technology Policy  
P.L.: Public Law  
SBIR: Small Business Innovation Research  
SPD: Science Mission Directorate Policy Document  
STI: Scientific and Technical Information  
STTR: Small Business Technology Transfer  
U.S.C.: United States Code  
USG: United States Government

## 1. Introduction

The National Aeronautics and Space Administration (NASA) seeks to explore and expand human knowledge of Earth, our solar system, and the universe and to enable the development of aeronautical and space exploration systems. NASA's ability to achieve these purposes depends on the integrity of the research and technology activities the Agency conducts and supports. The entire NASA workforce—as well as all external entities who review proposals to NASA or receive NASA assistance awards—must maintain the highest standards of scientific integrity, per NPD 1920.1, *Scientific and Research Integrity*.

The 2021 Presidential Memorandum Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policy Making (PM 2021) stated “Scientific and technological information, data, and evidence are central to the development and iterative improvement of sound policies, and to the delivery of equitable services and programs, across every area of government.” The 2022 National Science and Technology Council Report of the Scientific Integrity Fast Track Action Committee (SI-FTAC), *Protecting the Integrity of Government Science* (FTAC 2022) found that strong scientific integrity policies and practices bolster the ability of Federal agencies to protect US Government (USG) science.

The SI-FTAC Report summarized recent foundational Executive branch actions on Scientific Integrity, including the 2009 Presidential Memorandum for the Heads of Executive Departments and Agencies on Scientific Integrity (PM 2009), the identically titled 2010 OSTP Memorandum for the Heads of Executive Departments and Agencies on Scientific Integrity (OM 2010), and PM 2021. The requirements of NASA's scientific integrity policy are derived from these foundational actions and from the collective experience of Federal agencies and the informed engagement of stakeholders both inside and outside the USG that were the basis of the SI-FTAC Report (see FTAC 2022 for further details).

NASA has a long history of scientific and research integrity across its technical disciplines and programs. Multiple NASA Policy Directives (NPDs) and NASA Procedural Requirements (NPRs) as well as Federal laws, regulations, and directives address these various aspects of research integrity [see Authorities appendix]. NASA is committed to continuously evaluating, assessing, upholding, and enhancing its policies and requirements to maintain the highest standard of scientific integrity.

NASA's scientific integrity policy is codified in two documents. The first is [NPD 1920.1, Scientific Integrity](#) (internal NASA link), which gives high-level policy requirements and statements. The present document is a NASA Advisory Implementing Instruction (NAII) as defined in [NPR 1400.1H, NASA Directives and Charters Procedural Requirements](#), §D.1.5.3 (internal NASA link). As defined there, this document is “...used to provide direction relating to the implementation of responsibilities under NPDs or NPRs,” and thus serves as implementation guidance for NPD 1920.1 to enhance and promote a continuing culture of scientific integrity. NASA's policy aims to ensure the integrity of all aspects of scientific activities including proposing, conducting, reviewing, managing, communicating about science and scientific activities, and using the results of science. Hereafter, this NAII will be referred to as the “Handbook” as a form of shorthand.

## 2. Purpose and Scope

This document establishes the expectations and procedures required to maintain scientific integrity at NASA. It provides an overarching summary of existing policies, activities, and guiding principles or scientific and research integrity with which NASA's workforce and affiliates (such as grantees and reviewers) must conform. This Implementation Instruction addresses NASA's scientific integrity obligations in its roles as a research institution, host laboratory in space, and funder of research, NASA's use of Federal advisory committees, NASA's public communication of research results, and professional development of NASA's workforce. It is intended to provide a single resource for NASA researchers, NASA research program administrators and project managers, external entities who use NASA research facilities, NASA's present and future award recipients under research or technical projects, evaluators of NASA research proposals, NASA advisory committee members, NASA communications specialists, and members of the general public so that they can understand NASA's commitment to and expectations for scientific and research integrity. Many of NASA's scientific and research integrity policies address more than one of the key areas identified above and thus appear in multiple sections of the guidebook.

All contractors, cooperators, partners, co-regulators, permittees, lessees, grantees, and volunteers (collectively termed "covered entities" in this document), who engage or assist in scientific activities are expected to uphold the principles of scientific integrity established by this policy and all applicable laws and statutes. Express requirements will be set forth in individual agreements, grants, contracts, statements of work, memoranda of understanding, etc., and/or established via issuance of a separate rule or other policy.

## 3. Policy Requirements

### A. Definition of Scientific Integrity and Scientific Integrity Official

NASA adopts the following official definition of Scientific Integrity (SI) created by the National Science and Technology Council 2022 Scientific Integrity Framework Interagency Working Group and the 2021 Scientific Integrity Fast Track Action Committee.

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

Although the responsibility for upholding scientific integrity lies with all of NASA and its contractors and grantees, NASA has "designated a senior career employee as the agency's lead Scientific Integrity Official to oversee implementation and iterative improvement of scientific integrity policies and processes" as called for by PM 2021. NASA has historically used the title

**Research Integrity Officer (RIO)** for this role, and that terminology is used in prior scientific integrity documents as well as other NASA policy and procedural documents. However, to align with usage across the USG, we adopt the distinction between research integrity and science/scientific integrity promulgated by OSTP's Subcommittee on Scientific Integrity (NSTC 2023), namely that research integrity refers to the actual conduct of research and its related activities, whereas scientific integrity includes research integrity but also communicating science, use of scientific information in Agency decisions, etc. In this view, scientific integrity is the umbrella term and research integrity a major component of scientific integrity. Accordingly, and like other USG Departments and Agencies, NASA adopts the term **Scientific Integrity Officer (SIO)** for this official.

NASA's Chief Scientist position has existed for decades, and the Chief Scientist has also served in the past as the Agency Scientific Integrity Official. However, NASA Chief Scientists are commonly (but not always) appointed from outside NASA via the Intergovernmental Personnel Act, such that a given Chief Scientist may not be an Agency career executive. Accordingly, effective with this NAII, the Deputy Chief Scientist, a career SES position, serves as NASA's Agency SIO.

The Agency SIO is expected to operate with the independence necessary to gather and protect information to support the review and assessment of scientific integrity concerns; to ensure implementation of corrective scientific actions; to coordinate with appropriate Agency authorities to enforce corrective and administrative actions; and to take action to prevent scientific integrity concerns. The Agency SIO (in conjunction with the Chief Scientist as appropriate) also advocates for appropriate incorporation of scientific information in Agency decision-making. (PM 2021)

NASA also appoints SIOs at each of the NASA field centers, termed here Center SIOs, who are the first points of contact for NASA employees who suspect a possible scientific integrity violation. Each Center's Chief Scientist or equivalent science lead serves as their Center SIO. See sections on [Other Scientific Integrity Officials](#) and [Roles and Responsibilities](#) below for further details.

## B. Promoting a Culture of Scientific Integrity

NASA leadership at all levels recognizes, supports, and promotes NASA's scientific integrity policy and its underlying principles, and strives to model behavior exemplary of a strong culture of scientific integrity. "Science, and public trust in science, thrives in an environment that shields scientific data and analyses and their use in policymaking from political interference or inappropriate influence" (OM 2010). Per 14 CFR § 1213, scientific findings and products must not be suppressed or altered for political purposes and must not be subjected to inappropriate influence.

Aspirations to a strong culture of scientific integrity begin with ensuring a professional environment that is safe, equitable, and inclusive of all scientists. Issues of diversity, equity, inclusion, and accessibility are an integral component of the entire scientific process and attention to these issues can improve the representativeness and eminence of the scientific workforce, foster innovation in the conduct and use of science, and provide for more equitable participation in science by diverse communities. The responsible and ethical conduct of research and other scientific activities requires an environment that is equitable, inclusive, safe, and free from harassment (PM 2021). NASA's

Equity Action Plan, available at [https://www.nasa.gov/wp-content/uploads/2022/04/nasa\\_-\\_equity\\_report\\_-\\_v8.pdf](https://www.nasa.gov/wp-content/uploads/2022/04/nasa_-_equity_report_-_v8.pdf), outlines the Agency's efforts in this area.

To instill and enhance a culture of scientific integrity, NASA will post this Scientific Integrity Handbook prominently on its website. NASA will take other measures as possible and appropriate, such as Agency townhalls and written and oral communications, to keep scientific integrity visible at NASA and to educate all Agency employees, as well as contractors who perform scientific activities for NASA, on their rights and responsibilities related to scientific integrity (PM 2021).

NASA employees in the science job classifications (e. g. including, but not limited to, OPM groups 0400 and 1300) have been required to take biennial training on The Responsible Conduct of Research since the late 2010s. This training course will be updated to incorporate elements in NASA's scientific integrity policy not already included. All employees will receive scientific integrity information and training as new employees to make them aware of their responsibilities under this scientific integrity policy within 6 months of their date of hire. NASA will also require training for those employees who propose, review, conduct, manage, and use the results of and communicate about science and scientific activities at appropriate levels and cadence. We anticipate that training will be required annually for science job classifications, every 2-3 years for non-science roles, and a single instance for political appointees, Intergovernmental Personnel Act appointees, and other temporary, non-career NASA employees (for whom individual circumstances may dictate a more tailored cadence). Training will be tracked via NASA's System for Administration, Training, and Educational Resources for NASA ([SATERN](#); internal NASA link) to ensure compliance.

To promote scientific integrity at NASA, this Handbook outlines seven specific areas:

- I. [Protecting Scientific Processes](#)
- II. [Ensuring the Free Flow of Scientific Information](#)
- III. [Supporting Decision Making Processes](#)
- IV. [Ensuring Accountability](#)
- V. [Protecting Scientists](#)
- VI. [Professional Development for Government Scientists](#), and
- VII. [Federal Advisory Committees](#)

I. Protecting Scientific Processes

Scientific Integrity fosters "honest scientific investigation, open discussion, refined understanding, and a firm commitment to evidence" (OM 2010). Science, and public trust in science, thrives in an environment that shields scientific data and analyses and their use in policymaking from political interference or inappropriate influence.

In order to implement NPD 1920.1, NASA will:

1. Prohibit political interference or inappropriate influence into the design, conduct, management, evaluation, and reporting of scientific data, research, and activities.

2. Prohibit inappropriate restrictions on resources and capacity and using other ways to limit program effectiveness and to reduce the availability of scientific results and data.
3. Require that leadership and management ensure that employees engaged in scientific activities are able to conduct their work free from reprisal or concern for reprisal for their scientific activities.
4. Require reasonable efforts by employees to ensure the accuracy of the scientific record and to correct identified inaccuracies that pertain to their contribution to any scientific records.
5. Require that employees and other covered entities represent their contributions to scientific work fairly and accurately and neither accept nor assume unauthorized and/or unwarranted credit for another's accomplishments. To be named as an author on a published, peer-reviewed paper or unreviewed preprint, contributors will have made a substantial intellectual contribution, written, or provided editorial revisions that include critical intellectual content, and approved the final version and agreed to be accountable for all aspects of the work .
6. Require that employees and other covered entities comply with Agency policies and procedures (e. g., [NPR 1080.1B, Requirements for the Conduct of NASA Research and Technology](#) – NASA internal link) for planning and conducting scientific activities and show appropriate diligence toward protecting and conserving Federal research resources, such as equipment and other property, and records of data and results that are entrusted to them.
7. Prohibit research misconduct and the use of improper or inappropriate methods or processes (for example, those unlikely to pass peer review) in conducting research, and mandate adherence to practices that ensure the quality of research and other scientific activities. [See section on Research Misconduct below for additional details.](#)
8. Require that employees and other covered entities design, conduct, manage, evaluate, and report scientific research and other scientific activities honestly and thoroughly, and disclose any actual or potential conflicts of interest, or actual or potential appearances of conflicts-of-interest, to their supervisor or other appropriate Agency official(s) for their determination as to whether a recusal, disclaimer, or other appropriate notification would be appropriate.
9. Require that research involving the participation of human subjects and the use of non-human animals is conducted in accordance with applicable, established laws and regulations and ethical standards. See section under NASA As A Research Institution below on Ethical Conduct of Research for more details.
10. Ensure that scientific integrity policy violations, to include those that have been shown to have a disproportionate impact on underrepresented groups or weaken the equitable delivery of Federal Government programs, are promptly addressed with an emphasis on how to prevent them in the future.



## II. Ensuring the Free Flow of Scientific Information

For additional information see the *Scientific Integrity Policy Intersections with Related and Supporting Policies*: [Integrity in Public Science Communications](#).

Open communication of NASA science plays a valuable role in building public trust and understanding of NASA work. NASA will facilitate the free flow of scientific and technological information and support scientific integrity in the communication of scientific activities, findings and products. Scientific and technological information will be disseminated to the extent allowed by and consistent with privacy and privacy, export control, and national security standards and responsible communication of scientific information.

NASA facilitates the free flow of scientific and technological information among scientists and engineers, between NASA staff and the scientific and technical community, and between NASA employees and the public. These activities are consistent with the [National Aeronautics and Space Act as amended](#), which stipulates that NASA will “provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof.”

NASA makes publicly available the scientific and technical information, peer-reviewed publications, and unclassified, digital, scientific and technical, and development data sets arising from NASA-funded research, development, and technology programs, as outlined in [NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#), and [NPD 2230.1, Research Data and Publication Access](#) (links are NASA internal). NASA makes publications and technical information publicly available through the [STI homepage](#).

NASA employees and NASA-funded researchers publish the results of their research and development activities using mechanisms that include the [NASA Scientific and Technical Information \(STI\) Report Series](#) (internal NASA Link), NASA websites, and non-NASA scientific and technical channels such as professional and society journals, conference proceedings, and to the greatest extent practical, peer-reviewed literature, as outlined in [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#).

Scientific documents, such as publications (e. g. papers, addenda etc.), translations, internal reports, guidelines, and recommendations, from civil servant conducted research and (where permitted) for extramural researchers, undergo review by NASA subject matter experts. They progress through a clearance process that captures comments and considerations, as well as iterations and approvals, prior to releasing information to the public. NASA collects, manages, disseminates, safeguards, and archives the results (publications and technical reports) of NASA-conducted research and development activities for use by the scientific community and the public. Unless a determination is made that public dissemination of such information must be prohibited or restricted due to privacy or classification standards, as outlined in [NPD 2200.1, Management of NASA Scientific and Technical Information](#), the results of all NASA research and development activities (publications and technical reports) will be made available to the public by request.

NASA civil servants are encouraged to share their results with their peers and colleagues at professional meetings, science conferences, and other venues to the extent permitted by available funding and law. Peer reviewed publications are to be made available at no cost to the public on

NASA's Pubspace website immediately upon publication. Information on publication access can be found at <https://sti.nasa.gov/research-access/>

A key Agency goal is to convey to the public scientific and technological information derived from NASA research and development activities. In the context of conveying this information, NASA encourages a clear explanation of underlying assumptions, accurate contextualization of uncertainties, and the probabilities associated with both optimistic and pessimistic projections, including best-case and worst-case scenarios when appropriate.

These NASA objectives are supported by the [National Aeronautics and Space Act, as amended](#); [NPD 2200.1, Management of NASA Scientific and Technical Information](#); [NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#); [NPD 1001.0, NASA Strategic Plan](#); and the [2022 Science Plan for NASA's Science Mission Directorate](#).

In order to implement NPD 1920.1 (and in compliance with 14 CFR 1213), NASA will:

1. Ensure that scientific findings and products are not suppressed or altered for political purposes and are not subjected to inappropriate influence, while at the same time complying with Agency policies and procedures for planning and conducting scientific activities, reporting scientific findings, and reviewing and releasing scientific products. Scientific products (e.g., manuscripts for scientific journals, presentations for workshops, conferences, and symposia) should adhere to Agency technical review procedures.
2. Encourage, but not require, Agency scientists to train for and participate in communications with the media regarding their scientific work (data and results) and areas of expertise.
3. Resolve disputes that arise from decisions to proceed or not to proceed with proposed interviews or other releases of public information or related activities.
4. Ensure that the work and conclusions of NASA scientists and the work and conclusions of work funded/supported by the USG are accurately represented in Agency communications. If documents not subject to peer review significantly rely on a scientist's research, , identify them as an author, or represent their (otherwise unpublished) scientific opinion, the NASA scientist(s) will be given the opportunity to review the scientific content of proposed documents.
5. Allow NASA employees to report their scientific findings and communicate with the media or the public in their official capacities as NASA employees. When acting in their official capacities, NASA scientists will refrain from making or publishing statements that could be construed as being judgments of, or recommendations on, NASA or any other USG policy, unless they have secured appropriate prior approval to do so. Such communications should remain within the bounds of their scientific or technological findings, unless specifically otherwise authorized.
6. Allow scientists to communicate with the media or the public in their personal capacities subject to limitations of government ethics rules. NASA scientists may express their personal views and opinions; however, they should not claim to officially represent the Agency or its policies or use the Agency or other U.S. Government seals or logos. Employees and other covered entities should use appropriate written or oral disclaimers for personal activities.

7. Require that Agency officials, including (but not limited to) public affairs officers, will neither ask nor direct nor suggest that Agency scientists and technology experts alter the presentation of their scientific findings in a manner that may intentionally compromise the objectivity or accurate representation of those findings.
8. In response to media requests about the scientific or technological aspects of their work, NASA will offer knowledgeable spokespersons who can, in an objective and nonpartisan fashion, describe these aspects . This availability does not include describing the policy implications of their work; the Agency provides representatives who are duly qualified and authorized by leadership to discuss policy.
9. Require that technical review and clearance processes include provisions for timely clearance and expressly forbid censorship, unreasonable delay, and suppression of objective communication of data and results without scientific justification. (Agreeing to a journal's request to embargo a publication's appearance to a specific date is not an example of this type of activity.)
10. Ensure that responses to Congressional inquiries, Congressional testimony, and other requests that include scientific information accurately represent the science.
11. Ensure that emerging modes of science, such as citizen science, community-engaged research, and crowdsourcing, continue 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 emerging modes of science. Doing so may require expanded scientific integrity practices and expectations, such as granting communities more autonomy over research questions, recognition of data sovereignty issues, and inclusion of other forms of evidence, such as Indigenous Knowledge (see 2022 OSTP memorandum "[Guidance for Federal Departments and Agencies on Indigenous Knowledge](#)").
12. Accurately represent the work and conclusions of NASA scientists in Agency social media communications and ensure that Agency scientists are appropriately guided on use of social media, which includes but is not limited to blogs, social networks, forums, and micro blogs. .
  - a. When communicating on social media in their personal capacities, and subject to limitations of government ethics rules, NASA scientists may express their personal views and opinions and may name their agency, in the context of biographical information, as long as it is clear in context that they are not speaking on behalf of, or as a representative of, the agency.
  - b. If employees choose to disclose their NASA affiliation on their personal social media, a disclaimer clarifying that the account or communication represents personal views is appropriate, but not required.
  - c. Social media managers are responsible for correction of any errors pointed out by Agency scientists whose work is represented in social media.

### *Resolution of Disputes in the Publication Dissemination Process*

For NASA employees or others who fall under NASA's Science and Technical Information requirements, if an author does not agree with the decision regarding dissemination of a document, as established by the original document availability authorization process at the Center through which approval is sought, they may appeal the decision by requesting a re-review of the

document by Center management within 30 days of notification and notify the STI Program Office. If the author does not agree with this appeal process decision, they may raise the issue to the Center SIO, who will involve the pertinent Center Program Manager, Center Director or designee, and Mission Directorate Associate Administrator or designee within 30 days of notification. The Center SIO then responds to the person appealing the decision within 30 days. The relevant NASA policy and guidance are found in [NPR 2200.2D, Requirements for Documentation, Approval and Dissemination of NASA Scientific and Technical Information](#), and the [NASA Publications Guide for Authors \(NASA/SP-2015-7602/Rev 2\)](#).

### *Resolution of Disputes Related to Media Release*

It is vital for the NASA mission to maximize openness with the media and the American people, as supported by the [National Aeronautics and Space Act as amended](#). Policies governing NASA media relations can primarily be found in [14 CFR 1213, Release of Information to News and Information Media](#). NASA is dedicated to cultivating articulate and knowledgeable spokespersons, as specified in [14 CFR 1213.105\(b\)](#). NASA encourages employees to speak to the media and the public about their work, provided that they coordinate with their immediate supervisor and public affairs office ([14 CFR 1213.105\(c\)](#)). NASA also encourages its supported extramural researchers to share their research with the media and public. NASA believes that the scientific and technical information that employees (and extramural researchers) share about NASA programs and projects should be timely, accurate, and unfiltered ([14 CFR 1213.102\(a\)](#)), and that in no circumstance may public affairs officers knowingly ask or direct Federal scientists to alter scientific findings ([14 CFR 1213.103\(c\)](#)).

Any disputes arising from a decision to proceed or not proceed with the issuance of a news release or other type of public information are to be addressed and resolved by the Center or Agency SIO as appropriate in consultation with the Assistant Administrator for Communications. Other input may be sought from the appropriate Mission Directorate Associate Administrator, Mission Support Office head, Center Director, and others, such as Center Communications Directors, or their designees, as necessary. However, the Agency SIO and relevant Mission Directorate Associate Administrator, if needed, will be the arbiters of disputes about the accuracy or characterization of programmatic, technical, or scientific information. Additional appeals may be made to Agency leadership, including the Office of the Administrator. When requested by a Center Communications Director, an explanation of the resolution will be provided in writing to all interested Agency parties. This policy is articulated in [14 CFR 1213.104\(e\)](#).

### III. Supporting Decision Making Processes

To implement NPD 1920.1, NASA will:

- Ensure the quality, accuracy, and transparency of scientific information used to support policy and decision making including:
- a. Use scientific information that is derived from well-established scientific processes (e.g. subject to peer review).
  - b. Ensure that scientific data and research used to support policy decisions undergo review by qualified experts, where feasible and appropriate, and consistent with law.

- c. Adhere to the Office of Management and Budget Final Information Quality Bulletin for Peer Review (OMB 2005).
- d. Reflect scientific information appropriately and accurately; and make scientific findings or conclusions considered or relied on in policy decisions publicly available online and in open formats, to the extent practicable, consistent with the Open Government Initiative, the Freedom of Information Act, the Administrative Procedure Act, and other applicable statutes, regulations, or document-handling procedures and policies. Where feasible and appropriate, the following will also be provided: information on the specific approach, data, and models used to develop such scientific conclusions, including a clear explanation of inferential procedures and, where appropriate, probabilities associated with a range of projections or scenarios.

#### IV. Ensuring Accountability

It is NASA policy to ensure correction of the scientific record and administrative actions when allegations of a loss of scientific integrity are substantiated via the following actions:

1. Encourage and facilitate early informal or formal consultation with the Center or Agency SIO as appropriate to seek advice on preventing a situation of concern, to determine if it is a potential violation of the Scientific Integrity Policy, and to ascertain if it should be referred elsewhere in the Agency for resolution.
2. Provide clear guidance on how to formally and confidentially report concerns and allegations of Scientific Integrity Policy violations. Those who report concerns and allegations need not be directly involved or witness a violation. Guidance for this process is provided in the section [Procedures for Monitoring and Evaluating Scientific Integrity Activities and Outcomes](#) below.
3. This NAI sets forth procedures to respond to allegations of compromised scientific integrity in a timely, objective, and thorough manner. These procedures include the following steps: an initial review and assessment, fact-finding, an Agency adjudication or determination including description of remedies and preventative measures to safeguard the science, follow-up to track implementation of remedies, appeals, and reporting. These procedures document the necessary aspects for each step of the process including burden of proof, any necessary determination of intentionality, and reporting as well as the roles of the SIO and Agency staff in the process. The features of this process are outlined below under [NASA As A Funder of Research: Research Misconduct](#).

#### V. Protections

For additional information see *Scientific Integrity Policy Intersections with Related and Supporting Policies: [Diversity, Equity, Inclusion, and Accessibility and Whistleblower Protections](#)*.

To assure the protection of government scientists and as appropriate other covered entities from retribution, retaliation, or reprisal, NASA will:

1. Select and retain candidates for scientific and technical positions based on the candidate's scientific and technical knowledge, credentials, experience, and integrity, and hold them and their supervisors to the highest standard of professional and scientific ethics.

2. Promote diversity, equity, inclusion, and accessibility in the scientific workforce and create safe workspaces that are free from harassment. To advance the equitable delivery of Federal programs, support scientists and researchers including women, Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders, and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.
3. Prevent supervisors or other Agency leadership from intimidating or coercing scientists to alter scientific data, findings, or professional opinions or inappropriately influencing scientific advisory boards.
4. Comply with the Whistleblower Protection Act, as amended..
  - a. Protect employees from prohibited personnel practices (as defined in [5 U.S.C. 2302\(b\)](#)), especially those who uncover and report allegations of loss of scientific integrity in good faith, as well as those NASA employees alleged to have compromised scientific integrity in the absence of a finding that the individual compromised scientific integrity; and
  - b. Comply with the requirements of the Whistleblower Protection Act of 1989, and its expanded protections enacted by [Public Law 103-424](#) and the [Whistleblower Protection Enhancement Act of 2012](#).
  - c. The National Defense Authorization Act's expansion of certain whistleblower protections to employees of Federal government contractors, subcontractors, and grant recipients. [41 USC 4712](#).
  - d. [Presidential Personnel Directive 19](#), Protecting Whistleblowers with Access to Classified Information, prohibits supervisors from taking, failing to take, or threatening to take or fail to take any action affecting an employee's eligibility for access to classified information in reprisal for making a protected disclosure.

## VI. Professional Development for Government Scientists

For additional information see *Scientific Integrity Policy Intersections with Related and Supporting Policies*: [Professional Development and Advancement of Scientists](#).

NASA supports the professional development of its workforce. NASA encourages the publication of research findings in peer-reviewed, professional, or scholarly journals, as stated in [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#), and [NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#). NASA also promotes the presentation of research findings at professional meetings, as embodied in [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#). These activities are a key part of the professional development of scientists.

NASA employees may serve as editors or editorial board members of professional or scholarly journals when such participation is part of professional development. . This service is regarded as being a part of the employee's official duties once the activity has been approved by a supervisor. NASA recognizes not only that such service is important for the professional development of NASA scientists and engineers, but also that such development serves the interests

of the USG and the US taxpayer by improving the quality and professional standing of employees.

Scientists, engineers, and other employees at NASA may serve as officers in professional societies, when such participation is part of professional development. NASA has ethics officials who work with interested employees to ensure that outside activities are performed in compliance with all legal and ethics requirements. An [Agency-wide memorandum](#) dated July 26, 2011, confirms the Agency's support for NASA employees to serve as society officers or board members, where appropriate, and summarizes the Agency's processes for them to obtain approval for such service.

Civil servants and NASA contractors may receive honors and awards from outside entities for their research and discoveries, as outlined in [5 CFR 2635.204\(d\)](#).

To promote development of Agency scientists, NASA will:

1. Encourage Agency scientists and other Agency employees involved in Agency scientific activities to interact with the broader scientific community in a manner that is consistent with Federal rules of ethics, job responsibilities, and to the extent practicable given the availability of funding to support such interactions and any budgetary restraints. This type of activity is part of NASA scientists' official duties, and includes:
  - a. Encouraging timely publication of research in peer-reviewed, professional, scholarly journals, NASA technical reports, and publications or other appropriate outlets;
  - b. Encouraging the sharing of scientific activities, findings, and materials through appropriate avenues including digital repositories;
  - c. Encouraging attendance and presentation of research at professional meetings including workshops, conferences, and symposia;
  - d. Allowing service as peer reviewers for journals, and on editorial boards, or as editors of professional or scholarly journals;
  - e. Allowing participation in professional societies, committees, task forces, and other specialized bodies of professional societies, including serving as officers or on governing boards of such societies, to the extent allowed by law;
  - f. Nominate scientists for and allow them to receive honors and awards for contributions to scientific activities and discoveries, and to accrue the professional recognition of such honors or awards; and
  - g. Allow scientists to perform outreach and engagement activities, such as speaking to community and student groups.

#### VII. Federal Advisory Committees (FACs)

*For additional information see Scientific Integrity Policy Intersections with Related and Supporting Policies: [Integrity in Advice from Scientific and Technical Federal Advisory Committee](#).*

NASA fosters transparency and ethical standards in its recruitment and selection of members for and use of Federal Advisory Committees (FACs) tasked with giving scientific advice, as outlined in [NPD 1150.11, Federal Advisory Committee Act Committees](#), and [NPR 1900.3C, Ethics Program Management](#), and in compliance with the [Federal Advisory Committee Act \(5 U.S.C. App., as amended\)](#) and the [General Services Administration \(GSA\) Final Rule on Federal Advisory Committee Management \(41 CFR Parts 101-6 and 102-3\)](#).

When practicable and appropriate, NASA announces FAC member vacancies widely, including notification in the Federal Register, with an invitation for the public to recommend individuals for consideration and for self-nominations to be submitted.

Professional biographical information (including current and past professional affiliations) for appointed committee members is made widely available to the public (e.g., via a website) subject to Privacy Act and other statutory/regulatory considerations. NASA ensures that the publicly available biographical information highlights the individuals' qualifications for serving on the committee. This process is implemented in NASA through [NPD 1150.11, Federal Advisory Committee Act Committees](#), and [NPR 1900.3C, Ethics Program Management](#).

All FAC members who are Special Government Employees and the designated Federal officers of each committee must complete a financial disclosure form and receive guidance from NASA's Office of General Counsel where conflicts of interest may exist between their financial interests and their advisory roles. The designated federal officers of each committee shall ensure that any individual with an identified conflict is recused from committee activities that involve a conflicted entity or issue.

NASA will adhere to the Federal Advisory Committee Act and develop policies, in coordination with the General Services Administration, and consistent with the [General Services Administration's Final Guidance on Appointment of Lobbyists to Federal Advisory Committees, Boards, and Commissions](#), for convening FACs tasked with giving scientific advice, consistent with the following elements of OM 2010:

1. "The recruitment process for new FAC members should be as transparent as practicable. Departments and agencies should, when practicable and appropriate, announce FAC member vacancies widely, including notification in the Federal Register with an invitation for the public to recommend individuals for consideration and for self-nominations to be submitted" (OM 2010).
2. "Professional biographical information (including current and past professional affiliations) for appointed committee members should be made widely available to the public (e.g., via a website) subject to Privacy Act and other statutory/regulatory considerations. Such information should clearly illustrate the individuals' qualifications for serving on the committee" (OM 2010).
3. "The selection of members to serve on a scientific or technical FAC should be based on expertise, knowledge, and contribution to the relevant subject area. Additional factors that may be considered are availability of the member to serve, diversity among members of the FAC, and the ability to work effectively on advisory committees. Committee membership should be fairly balanced in terms of points of view represented with respect to the functions to be performed by the FAC" (OM 2010).
4. "Except when prohibited by law, agencies shall appoint members of scientific and technical FACs as Special Government Employees (SGEs) and make all Conflict-of-Interest waivers granted to these committee members publicly available" (OM 2010).
5. "Except when explicitly stated in a prior agreement between an agency and a FAC, all reports, recommendations, and products produced by FACs should be treated as solely the findings of such committees rather than of the U.S. Government, and thus are not subject to intra- or inter-agency revision" (OM 2010).



### C. Other Scientific Integrity Officials

NASA will establish a Scientific Integrity Committee composed of Center SIOs and other officials whom the Agency SIO designates (such as a representative from the Office of the General Counsel), chaired by the Agency SIO, to provide oversight for the implementation of this Scientific Integrity Policy, act as liaisons for their respective Agency units, assist with training and policy assessment, updates, and amendments, and to be available to address any questions or concerns regarding NASA's scientific integrity policy. The Agency SIO together with the Chief Scientist will draft a Scientific Integrity Committee Charter outlining the goals and objectives of the Committee, criteria for selection as a member, other duties of members, and the frequency of meetings.

Roles and Definitions:

**The Agency SIO and Deputy SIO** are responsible to lead and oversee the Agency Scientific Integrity policy and program. The Deputy SIO is selected by the Agency SIO and is typically a senior scientist from a NASA field center. The Agency SIO and Deputy SIO will achieve these goals, in part, through the following activities:

- Development and maintenance of this NAI;
- Releasing an annual public report on the Agency Scientific Integrity policy and summary of complaints received;
- Leading quarterly Scientific Integrity Committee meetings;
- Taking over investigations (enlisting assistance from the OIG as appropriate) that involve multiple Centers and/or involve entities external to NASA Centers (e. g. academia) and/or where a Center SIO has a conflict of interest or the appearance of a conflict of interest;
- Adjudicating appeals of determinations from Center SIO investigations;
- Maintaining the Agency Scientific Integrity policy, procedures, and handbook;
- Collecting, analyzing, and implementing lessons learned; and.
- Work with and/or referring cases to other NASA Offices (e.g., OIG) when required or warranted.

The Agency SIO and Deputy SIO are responsible for assuring that NASA's workforce and covered external entities affiliated with NASA research and development are informed of NASA's scientific and technical integrity policies and protocols and for communicating the Agency policy to external stakeholders (e.g., OSTP, the Congress, external science community).

**The Agency SIO and Deputy SIO** are also responsible for ensuring the continued education and training of the Center SIOs. This is achieved, in part, through an annual meeting that will include Federal and Agency Scientific Integrity policy and procedures training, presentations and discussions with appropriate offices (e.g., OGC), invited talks by external subject matter experts from other Agencies and Academia, case studies, and discussion on policy development and incorporation of lessons learned and best practices. The Agency SIO and Deputy SIO are also responsible to ensure that all NASA staff have basic training on Scientific Integrity by requiring, developing, and maintaining appropriate SATERN courses.

**The Center SIOs** are responsible for leading and overseeing the Center Scientific Integrity and Responsible Conduct of Research policies. This is achieved, in part, through the following activities:

- Educating Center management and staff on Scientific Integrity policies and resources;
- Being the Center POC for Scientific Integrity questions or allegations/concerns;
- Properly routing research misconduct allegations at their Center (typically to OIG);
- Evaluating and adjudicating scientific and research integrity allegations at their Center;
- Working with and/or referring cases to other NASA Offices (e.g., OCHCO, OGC, OIG) when required or warranted for further investigation or implementation of investigation findings;
- Collecting and securing any and all information/data related to an investigation;
- Using Agency provided tools and procedures when conducting an investigation;
- Taking measures to prevent further violations (working with, for example, Center management and/or human resources);
- Providing Center input for Agency annual reviews; and
- Updating Center-specific policies related to Scientific Integrity and/or collaborating with appropriate POCs to update such policies as needed.

#### 4. NASA As a Research Institution

NASA is committed to transparency, integrity, and thorough consideration of all outcomes of the research performed by the Agency. NASA adheres to rigorous standards regarding professionalism and complies strictly with policies and systems for preserving the quality of information as well as objectively evaluating data and research findings and maintaining the publications of peer-reviewed results. Additionally, NASA requires the proper care of animals when used in the course of research ([NPD 8910.1D](#), Care and Use of Animals) and implements policies that protect human subjects in the course of research conducted for, and by, NASA ([NPD 7100.8F](#), Protection of Human Research Subjects). Issues such as protecting privacy, engaging in the responsible conduct of research, and professional integrity are carefully controlled through NASA policies, Federal statutes, rules, and regulations, and various procedures.

NASA's commitment to scientific and research integrity is reflected in many NASA and Government-wide policies, beginning with [NPD 1000.0A, NASA Governance and Strategic Management Handbook](#), which stipulates that integrity is a NASA core value and that the Agency "is committed to maintaining an environment of trust, built upon honesty, ethical behavior, respect, and candor." Requirements and policy for maintaining scientific integrity in the conduct of research and technology activities can be found in [NPD 1080.1, Policy for the Conduct of NASA Research and Technology](#), and [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#).

## A. Hiring Practices

Scientific positions at NASA are filled based on merit. Candidates for positions are evaluated on the basis of their scientific and technological knowledge, credentials, experience, and integrity, as outlined in [NPR 3335.11, Internal Placement of NASA Employees, Merit Promotion and Placement](#) and in [5 CFR 300.102, Employment Practices](#). These criteria ensure that preeminent talent is recruited and retained to staff and lead the research programs of the Agency. At the same time, NASA is mindful of considerations of diversity, equity, inclusion, and accessibility in its hiring practices (see NASA's [Equity Action Plan](#)).

## B. Ethical Conduct of Research

### 1. Human Test Subject Protection

All human research conducted, or supported, by NASA, whether on the ground, in aircraft, or in space, follow the provisions of all regulations contained in [14 CFR Part 1230](#) and [45 CFR Part 46, Protection of Human Subjects](#) and [NPD 7100.8F, Protection of Human Research Subjects](#). All human research that is funded, sponsored, conducted, or supported by NASA shall be reviewed by an Institutional Review Board (IRB), and adheres to the principles of appropriate informed consent, as described in [14 CFR Part 1230](#) and [45 CFR Part 46](#).

Several NASA Centers have their own IRBs that review all ground-based research involving human test subjects that either occurs at that Center or involves the Center's equipment or personnel. All human subject research performed on NASA spacecraft, or involving United States/NASA crewmembers, is subject to review by the NASA Flight IRB at the Johnson Space Center. All human subject research performed for aeronautics is subject to review by the NASA Flight IRB or by the Langley Research Center IRB. NASA policy for the protection of human research subjects is codified in [NPD 7100.8E](#), and [NPR 7100.1](#), both entitled Protection of Human Research Subjects.

### 2. Animal Welfare

NASA is dedicated to the ethical treatment of animals, as well as maintaining animal welfare during the course of performing research. NASA uses live animals in Agency-supported research, testing, and hardware development activities only when it is determined that there is no other way to obtain the information and that the use of animal subjects is ethical and humane. When animals are required, the Agency complies with all applicable laws, regulations, and guidelines and ensures that the NASA principles for the ethical care and use of animals are incorporated in its programs. All NASA Centers and Facilities that conduct activities involving animals are covered at all times by a current Animal Welfare Assurance (AWA) approved by the National Institutes of Health (NIH), Office of Laboratory Animal Welfare (OLAW). These centers and facilities must also receive and maintain accreditation by the Association for Assessment and Accreditation of Laboratory Animal Care, International. NASA policy regarding animal welfare is encapsulated in [NPD 8910.1D](#), Care and Use of Animals.

## C. Research Misconduct

The Federal government defines research misconduct in [65 Federal Register 76260](#), Federal Policy on Research Misconduct; Preamble for Research Misconduct Policy: "Research misconduct is

defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.” It is incumbent on all NASA employees to report observed, apparent, or suspected scientific or research misconduct to the NASA Office of Investigations within the Office of the Inspector General for any intramural research. Note that, in keeping with the US Government definition of scientific integrity (see [Policy Requirements](#) section above), research misconduct would refer to the actual conduct of scientific research, whereas the broader scientific misconduct could include misuse of scientific information in communicating scientific results or in policy decisions. Allegations of scientific misconduct associated with research funded by NASA are thoroughly investigated. NASA handles allegations as outlined in the [Federal Research Misconduct Policy published by the Office of Science and Technology Policy \(65 Federal Register 76260, Dec. 6, 2000\)](#); [14 CFR 1275, Research Misconduct](#); and [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#).

The Agency SIO and Chief Scientist will refer to OIG any scientific integrity allegations received that meet the definition of research misconduct according to the above policies. Note that a given matter may rise to the level of a scientific integrity, but not a misconduct, violation; and that not every misconduct violation is a criminal one. See the sections below on the [Complaint Life Cycle](#) and on [Research Misconduct](#) for additional details.

The National Academies of Science, Engineering, and Medicine, in a recent [NASA Decadal Survey on Astrophysics](#), have recommended that NASA treat sexual harassment, bullying, and related behaviors in the research environment as a form of research/scientific misconduct (and hence a violation of scientific integrity, given that any violation rising to the standard of misconduct by definition does so for integrity). NASA does in fact adopt this recommendation, and in cases where alleged scientific or research misconduct includes such aspects, existing NASA anti-harassment procedures will be used in response. To be clear, NASA’s scientific integrity policy as documented here does include sexual harassment, bullying, and related behaviors as forms of integrity violations, but does not establish a new, separate process for responding to such allegations, instead relying on the anti-harassment policies already in place. These procedures are codified in [NPR 3713.3A, Anti-Harassment Procedures](#).

#### D. Whistleblower Protection

NASA is committed to protecting employees and other individuals and/or group entities who report research misconduct allegations from retaliation, as outlined in various statutes such as the [Whistleblower Protection Act of 1989, Public Law \(P.L.\) 101-12](#), and its expanded protections enacted by [the Whistleblower Protection Enhancement Act, P.L. 112-199](#); the [No FEAR Act, P.L. 107-174; 10 USC 2409](#) (renumbered §4701; for employees of contractors, subcontractors, grantees, and sub-grantees); the [Intelligence Authorization Act for Fiscal Year 2014](#) (which codified elements of Presidential Policy Directive 19 to protect individuals with access to classified information); and [NASA’s Whistleblower Protection Plan](#). All NASA staff is required to undergo mandatory training regarding the No Fear Act, and supervisors are required to undergo training in whistleblower protection; this training is accessed online through the SATERN system.

#### E. Conflicts of Interest

In addition to information in [Policy Requirement Section I](#), NASA civil servants in Center positions and all personnel performing services for NASA under the Designated Representative Agreement

in covered positions must file financial disclosure reports annually. NASA employees and Intergovernmental Personnel Act (IPA) appointees subject to these filing requirements receive annual training on conflict-of-interest rules and other Federal ethics requirements as outlined in [NPR 1900.3C](#) (internal NASA link), Ethics Program Management. This training can be accessed online through the NASA SATERN system.

Scientists participating in NASA peer reviews of research proposals and conducting NASA research, whether NASA civil servants or members of the external scientific community, must follow documented standards for conflicts of interest and bias to eliminate or mitigate conflict and perception of conflict in peer review processes, as outlined in Science Mission Directorate Policy Document (SPD)-01, [Handling Conflicts-of-Interest for Peer Reviews](#); [HRP-47053, Science Management Plan](#); and the [Guidebook for Proposers Responding to a NASA Research Announcement or Cooperative Agreement Notice](#). Note that reviews of products other than grant and cooperative agreement proposals, solicited by non-science Mission Directorates (Space Technology, Exploration Systems Development, Space Operations, Aeronautics Research), are not governed by these documents.

NASA appointees from academia and other government agencies who serve in a civil servant capacity act to mitigate potential conflicts of interest between their home institutions and NASA using measures outlined in [SPD-05, Preventing Financial Conflicts for IPA Employees](#).

#### F. Publication Policies and Public Accessibility

See the section entitled [Ensuring the Free Flow of Scientific Information](#).

## 5. NASA As a Funder of Research

NASA seeks to ensure the quality and credibility of the research it funds. Policies related to the [Responsible Conduct of Research](#), as well as [Publication Policies and Public Accessibility](#), mirror those covered in the previous section, and are applicable to NASA funded research.

#### A. Funding and Proposal Policies

NASA ensures the integrity of the award process for grants, contracts, and acquisitions by adhering to the [NASA Federal Acquisition Regulation \(FAR\) Supplement, Part 1872, Acquisitions of Investigations, 2 CFR 200](#), and the [Guidebook for Proposers Responding to a NASA Research Announcement or Cooperative Agreement Notice](#)... Entities considered associated with an award include the awardee, the awardee's institution, NASA and the funding Mission Directorate, and any contractors, subcontractors, or other sub-awardees engaged by either of these parties in the administration or execution of the award. All participating institutions must prevent their employees, consultants, governing body members, and any other persons engaged by the entity in supporting the award from using their positions for inappropriate private gain (for example, the salary received by an investigator employed by a for-profit awardee entity is appropriate). A person may be considered to be using their position for gain if they are, or give the appearance of being, motivated by a desire for private or financial gain. Similarly, these entities

must prevent their employees, consultants, governing body members, and any other persons engaged by the entity in supporting the award from injecting bias into the research being performed.

#### B. Peer Review

NASA employs an open competition process when practicable and, for both NASA investigators and NASA-sponsored extramural investigators, uses peer review by non-conflicted experts to inform selection for funding of meritorious research and technology proposals. It is also NASA policy that publications (excluding preprints, posters, and unreviewed conference abstracts) resulting from all scientific investigations by NASA investigators and NASA-sponsored investigators are peer-reviewed, and that there be regular quality and performance assessments of NASA research and technology programs. These policies are outlined in [the Guidebook for Proposers Responding to a NASA Research Announcement or Cooperative Agreement Notice](#); [NPD 1000.0A, NASA Governance and Strategic Management Handbook](#); [NPD 1080.1, Policy for the Conduct of NASA Research and Technology](#); [NASA NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#); [NPR 2200.2, \Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#); [NPR 7120.8, NASA Research and Technology Program and Project Management Requirements](#); [Science Mission Directorate \(SMD\) 2014 Science Plan](#); and [Human Research Program \(HRP\)-47053, Science Management Plan](#). Directed Research

Additionally, directed research is used as an acquisition method for obtaining selected research data and technology development when:

- a. There is insufficient time for solicitation. In certain cases, NASA must define scientific activities in a short time (e.g., because of the emergence of new opportunities to carry out activities in space). When this is the case, use of a directed investigation may be the only practical way to respond.
- b. The research is highly constrained. In this case, the project requires constrained data gathering and analysis that is more appropriately obtained through a well-defined solicitation or by a non-competitively developed proposal (e.g., the research task may involve extensive operational practices and associated operational personnel who must be heavily involved in the development of the study design).
- c. The research has been designated for support via a Mission Directorate internal process, such as the Science Mission Directorate's [Internal Scientist Funding Model](#).

Participating NASA Centers also utilize competitive contracts for procurement of support to intramural project tasks. The centers have multiple options for procurements and select the optimal procurement method based on the Agency policy of the widest possible use of competitive processes. Regardless of the acquisition method, the review and selection of science is in accordance with NASA policies. Furthermore, the selection of science is peer reviewed .

#### C. Conflicts of Interest

All civil servants, including NASA civil servants, must certify the absence of financial conflicts of interest before participating in peer reviews of projects proposed for Agency support by completing the "[NASA Conflicts of Interest and Confidentiality Self Certification for NASA Peer](#)

[Reviewers who are Federal Government Employees Form](#),” (internal NASA link) which is incorporated into the online [NASA Solicitation and Proposal Integrated Review and Evaluation System](#) (NSPIRES). See also the conflict of information in [Policy Requirement Section I](#).

To ensure the scientific integrity and objectivity of all research, all personnel (including NASA civil servants, contractors, and grant awardees) involved in the funding, conduct and dissemination of research should avoid situations in which financial or other interests may compromise, or give the appearance of compromising, the work. NASA requires institutions that apply for or receive funding under grants or cooperative agreements, except Phase I Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) applicants, to address financial conflicts of interest by complying with the requirements of [42 CFR, Part 50, Subpart F, Promoting Objectivity in Research](#). Conformance to the regulations provides a reasonable expectation that the design, conduct and reporting of research funded under NASA will be free from bias due to financial conflicts of interest. These policies are outlined in [NPD 1080.1, Policy for the Conduct of NASA Research and Technology](#); [NASA Policy Requirements \(NPR\) 1080.1, Requirements for the Conduct of NASA Research and Technology](#); and [NPR 7120.8, NASA Research and Technology Program and Project Management Requirements](#).

#### D. Research Misconduct

The Office of the Inspector General (OIG) is tasked with handling allegations related to research misconduct. If the OIG receives an allegation of research misconduct that meets the criteria laid out in [14 CFR 1275.101\(a\)](#), the OIG then addresses the matter in accordance with [14 CFR 1275](#).

When an allegation is made to the NASA Office of the Inspector General, rather than to the awardee institution, the OIG determines whether the allegation concerns NASA research and whether the allegation, if true, falls within the definition of research misconduct in [14 CFR 14 CFR 1275.101\(a\)](#). If the research in question is being conducted at an awardee institution, another Federal Agency, or is a collaboration between NASA researchers and co-investigators at either academia or industry, the OIG must refer these allegations to the entities involved the allegation and determine what role, if any, OIG will play in the investigation.

The OIG informs the Center or Agency SIO of all received allegations that meet the definition of non-criminal research misconduct and of the determinations of the OIG inquiry. If the research is in either an engineering or technology area, the SIO then notifies the NASA Offices of the Chief Engineer and/or the Chief Technologist. The SIO should also notify the appropriate NASA Office or Program that has oversight of the research being questioned.

#### E. Fraud, Waste, and Abuse

The NASA Office of Inspector General examines all reports of fraud, waste, and abuse. Any NASA employee who observes fraud, waste, or abuse, or who receives an allegation of fraud, waste, or abuse from a Federal employee, contractor, grantee, or any other source must report such observation or allegation to the OIG. NASA contractor employees and other individuals are also encouraged to report fraud, waste, and abuse in NASA's programs to the OIG. NASA policy that addresses this issue can be found in [NPD 2086.1, Coordination of Remedies for Fraud and Corruption Related to NASA Acquisition Activities](#); [NPD 9800.1B, NASA Office of Inspector General Programs](#); and [NPR 9010.3, Financial Management Internal Control Program](#).

## 6. Roles and Responsibilities

Formal definitions of roles and responsibilities are contained in [NPD 1920.1, Scientific Integrity](#) (internal NASA link). Here the major expectations for stakeholders are reviewed:

### **A. NASA Administrator**

1. Provides leadership for the Agency on scientific integrity such as leading through example, upholding scientific integrity principles, and regularly communicating the importance of scientific integrity.
2. Ensures that all Agency activities associated with scientific and technological processes are conducted in accordance with the policy.
3. Ensures all supervisors and managers comply with the scientific integrity policy and ensure accountability for those who do not.
4. Designates a senior NASA career employee with NASA-appropriate qualifications and scientific credentials for the role of Chief Scientist and supports their role as advisor on scientific issues.
5. Ensures that the scientific integrity policy considers, supplements, and supports Agency plans for forming evidence-based policies, including the evidence-building plans required by 5 U.S.C. 312(a) and the annual evaluation plans required by 5 U.S.C. 312(b).
6. Provides adequate resources and funding to fully implement NASA's scientific integrity policy including staffing, annual evaluation and reporting, and training.
7. Supports and respects the Scientific Integrity Officer's independence, recommendations, and designation of and Agency compliance with corrective scientific actions when violations of the scientific integrity policy are substantiated.

### **B. Chief Scientist**

The NASA Chief Scientist holds the broad responsibility for ensuring the culture of scientific and research integrity at NASA. To support this responsibility, the OCS compiles, coordinates, and codifies (via [NASA Policy Directive 1920.1, Scientific Integrity](#)) relevant NASA policy and guidance in regards to scientific integrity for research conducted and used by NASA or research at NASA facilities. The Chief Scientist performs all scientific and research integrity related duties not specifically delegated to other NASA Agency officials. Non-OCS NASA officials are delegated with scientific and research integrity functions through NASA Policy Directive 1920.1, or other Federal or NASA laws, regulations, and directives.

The NASA Chief Scientist is responsible for ensuring that a biennial internal review of NASA's scientific integrity policy takes place (typically by delegation to Agency SIO, see below). The OCS also develops, maintains, and makes publicly available this NAII/reference handbook that explains: (1) NASA's scientific and research integrity policies, (2) protocols and processes used by NASA to ensure scientific and research integrity, and (3) relevant scientific and research integrity resources to draw upon.



The OCS also works with NASA’s Mission Directorate Associate Administrators, NASA Center Directors, the Jet Propulsion Laboratory Director, and the heads of other NASA offices to ensure that the entire NASA workforce—including civil servant employees, contractors, and those affiliated with grantee institutions who conduct research for and with NASA and in/on NASA facilities—are informed of NASA’s scientific and research integrity policies and protocols.

The Chief Scientist has these additional specific responsibilities.

1. Serves as the principal advisor to the Administrator on scientific issues and ensures that the Agency’s research programs are scientifically and technologically well-founded and conducted with integrity.
2. In cooperation with the SIO when that person is not the Chief Scientist, oversees the implementation and iterative improvement of policies and processes affecting the integrity of research funded, conducted, or overseen by the Agency, as well as policies affecting the Federal and non-Federal scientists who support the research activities of the Agency, including scientific-integrity policies.
3. Supports the SIO’s designation of and Agency compliance with corrective scientific actions when violations of the scientific integrity policy are substantiated.
4. Ensures NASA establishes as necessary clear administrative actions for substantiated violations of scientific integrity policies, designating responsibility for each aspect of accountability (FTAC 2022).

### **C. Scientific Integrity Officer**

The SIO is a designated career employee who holds a permanent tenured appointment and has NASA-appropriate scientific credentials appointed at a senior level, for example as an ST (scientific or professional), Senior Leader (SL), or Senior Executive Service (SES). The Deputy Chief Scientist, an SES position, serves as the default SIO; however, it is conceivable that under some circumstances, the SIO could be the same person as the Chief Scientist. The SIO has these responsibilities:

1. Oversees implementation and iterative improvement of scientific-integrity policies and processes providing leadership, acting to champion scientific integrity, and serving as the primary Agency-level contact for questions regarding Scientific Integrity and ensuring scientific integrity activities and outcomes are appropriately monitored and evaluated.
2. Leads training and outreach initiatives to facilitate employee awareness and understanding of NASA’s scientific integrity policy.
3. Using the processes established above in [NASA As a Funder of Research: Research Misconduct](#), conducts an initial assessment of allegations and submitted materials, following procedures established below, to determine whether the allegations pertain to compromised scientific integrity and the appropriate handling of said allegations. Provides oversight of Agency responses to allegations of compromised scientific integrity referred for an inquiry or investigation, including:
  - i. Reviewing Agency-submitted reports of allegations and their disposition; and
  - ii. Maintaining a status report of responses to allegations as a means of monitoring the progress toward resolution.

4. Leads efforts to update the scientific integrity policy and any accompanying guidance, as appropriate.
5. Reports to the Chief Scientist on all matters involving scientific integrity. The SIO is not compelled to provide confidential information about specific cases except as they deem appropriate.
6. Coordinates with the OGC, OIG, the Office of the Chief Human Capital Officer, Office of Communications, the Office of the Chief Information Officer, and other offices, as necessary.
7. Reports any potentially criminal behavior to OIG that is uncovered while responding to an allegation of compromised scientific integrity and coordinate as appropriate related to the referral provided to OIG.
8. Keeps the Chief Scientist and the Administrator informed on the status of the implementation of NASA's scientific integrity policy and any compliance concerns, as warranted.
9. Delegates responsibilities to other scientific integrity officials or points of contact, such as deputy research integrity officials or scientific integrity officials exercising a purview applicable to organizational submits (e.g., offices, directorates, Centers) of the Agency.
10. Publishes an annual scientific integrity report as described below.
11. Leads efforts for the iterative improvement of the scientific integrity policy and scientific integrity initiatives overall including development and implementation of an evaluation plan to regularly monitor and evaluate ongoing scientific integrity activities and outcomes.
12. To the extent possible, be involved in high level discussions and strategic planning on the recruitment, retention, development, and advancement of scientists—especially scientists from underrepresented communities—in order to help ensure that scientific integrity is appropriately and carefully considered.

#### **D. Scientific Integrity Committee: Field Center SIOs**

Each NASA Field Center will have a Center SIO who serves as the primary point of contact for all scientific integrity concerns at the Center. These Center SIOs as a group constitute an ad hoc Scientific Integrity Committee chaired by the Agency SIO. The scientific integrity Committee will meet approximately quarterly to stay in touch on relevant topics and developments. Please see the section below on [Procedures for Monitoring and Evaluating Scientific Integrity Activities and Outcomes](#). Specific responsibilities of Center SIOs include:

1. As delegated by the Agency SIO, oversee implementation and iterative improvement of scientific integrity policies and processes at their Center.
2. Serve as a neutral point of contact for receiving scientific integrity questions and concerns and allegations of compromised scientific integrity at the Center.
3. Coordinate with the Agency SIO in implementing the Agency's scientific-integrity policies and processes.
4. Provide oversight for the implementation of the Scientific Integrity Policy at the Center.
5. Assist with training and policy assessment, updates, and amendments.

#### **E. Mission Directorate Associate Administrators and Center Directors**

NASA's Mission Directorate Associate Administrators (MDAAs) and Center Directors have responsibility for the technical, scientific, and programmatic accuracy of all information that is related to their respective programs and released by NASA.

The MDAAs and Center Directors are responsible for developing and maintaining the processes that assure that the NASA workforce is informed of and complies with NASA's scientific integrity policies and protocols. This responsibility extends to ensuring that external entities—such as parties who review proposals or receive NASA research funding through these Mission Directorates or Centers—agree to comply with these policies and protocols. If a potential conflict is discovered between the external entities' home institution scientific and research integrity policy and Federal and NASA laws, regulations, and directives, the MDAA and/or Center Director is responsible for informing the Agency SIO.

Finally, the heads of all NASA organizations (e. g., MDs, Centers, etc.) must support the OCS in the biennial internal review, required by NSTC2023, to ensure that NASA has appropriate scientific and research integrity standards in place. Such support may include responding to requests for information on numbers of scientific integrity matters, status of training processes, and related topics. The heads of all NASA organizations must foster scientific and research integrity by practice and culture and completely fulfill their responsibilities under all applicable Federal laws and NASA regulations and directives.

**F. Managers and supervisors have these responsibilities:**

1. Comply with and ensure employee compliance with the scientific integrity policy.
2. Respond to and refer to the Center SIO allegations of compromised scientific integrity as appropriate.
3. Be aware of and uphold the principles contained in the scientific integrity policy. Lead through example by upholding scientific integrity principles and communicating the importance of doing so.
4. Protect from prohibited personnel practices (as defined in 5 U.S.C. 2302(b)) those Agency employees who uncover and report allegations of compromised scientific integrity in good faith, as well as those Agency employees alleged to have compromised scientific integrity in the absence of a finding that the individual in fact compromised scientific integrity.
5. Consult, as appropriate depending upon the nature of the allegation, with the Agency SIO, human resources officer, contracting and grant personnel, ethics officer, OIG, OGC, and the Office of Diversity and Equal Opportunity (ODEO).

**G. Employees shall:**

1. Be aware of the principles contained in the scientific integrity policy and how the policy applies to their duties.
2. Comply with the scientific integrity policy.
3. Complete scientific integrity training at the cadence designated for their position.
4. Adhere to accepted professional values and practices of the relevant research/scientific communities provided these values and practices do not clash with NASA's scientific integrity policy.

5. Report to the Center SIO (or designee) any knowledge of compromised scientific integrity.

## 7. Procedures for Monitoring and Evaluating Scientific Integrity Activities and Outcomes

This section presents the procedures for addressing scientific integrity concerns, termed the Complaint Life Cycle. The NASA Agency SIO in conjunction with NASA's Scientific Integrity Committee will maintain this set of procedures and prominently post a summary on the OCS website. The main components of the Complaint Life Cycle are:

- An assessment of concerns to determine whether, if true, the concern would be a loss of scientific integrity for NASA;
- A formal process of a preliminary review of readily available evidence to determine whether a concern has sufficient substance to warrant fact-finding;
- Fact-finding to formally develop the factual record and examine that record;
- Agency decision including a determination of whether scientific integrity was compromised, and if so, by whom;
- Appropriate corrective actions to implement to restore scientific integrity and as applicable to prevent such losses of scientific integrity in the future; and
- Description of the process for appealing decisions and or corrective actions.

NASA is mindful that Agency and Center SIOs are not trained investigators. Judgments made by SIOs and other leadership as described below must be made in good faith, but judgments are by definition subjective. The procedures detailed here include an appeals process as a form of accountability for SIOs and other leadership.

NASA's OIG's standing policies (e. g. [NPD 9800.1B, NASA Office of Inspector General Programs](#); internal NASA link) cover how NASA organizations and OIG work together on potential matters brought to their attention. As outlined below, SIOs will first consult with Center (or Agency, if necessary) OIG representatives to determine whether each matter rises to the level of outright misconduct, in which case it is handled by OIG. Conversely, it is OIG's established policy that they will refer matters involving scientific integrity that do not rise to the level of misconduct back to this Scientific Integrity complaint process.

### A. Complaint Life Cycle

The process for evaluating the merit of reported potential scientific integrity violations is divided into four main phases. In this description, whomever is reporting the potential violation is termed the *Complainant*, and the allegation is levied against the *Respondent*. Each of these could consist of one or more persons.

In Phase I, information is obtained until it is sufficient to judge whether the complaint has merit. If so, in Phase II that information will be evaluated to determine whether an investigation is warranted, and which organizations should be involved. In Phase III any necessary immediate steps will be ascertained and carried out; any additional evidence will be collected; and an

investigation plan formulated and implemented. The merit of the complaint will be determined and appropriate steps in response will be initiated. Respondents will be advised on methods for hearing or appeal of investigation findings. Every substantive complaint will go through Phases I through II; Phase IV will apply only when it is determined that a case warrants Agency-level review and/or actions.

These actions will vary depending on the details of each case. At all steps of each Phase, all actions and evidence will be documented, with records retained following guidance provided below. The four Phases are described in more detail in the following sections, followed by guidance for establishing evidence throughout the process.

### 1. Phase I: Gather Initial Information

In Phase I, a Complainant brings forward an allegation of a scientific integrity violation. The initial complaint may go to a supervisor, an Ombudsperson, a representative of OCS, OCHCO, OGC, or ODEO, or directly to the Center SIO, who ultimately receives all complaints from these other potential sources. The SIO's first step is to determine whether the allegation involves potential research misconduct, consulting with relevant OIG representatives to make the determination. If it is found that the allegations rise to the level of bona fide misconduct, the SIO refers the case to the NASA OIG.

The SIO then makes a judgment, informed by their experience and SIO training, to determine whether the allegation rises to the level of SIO involvement. If not, the SIO engages appropriate Center organizations for any needed steps, or to dismiss the allegation. Otherwise, the SIO continues the process into Phase II.

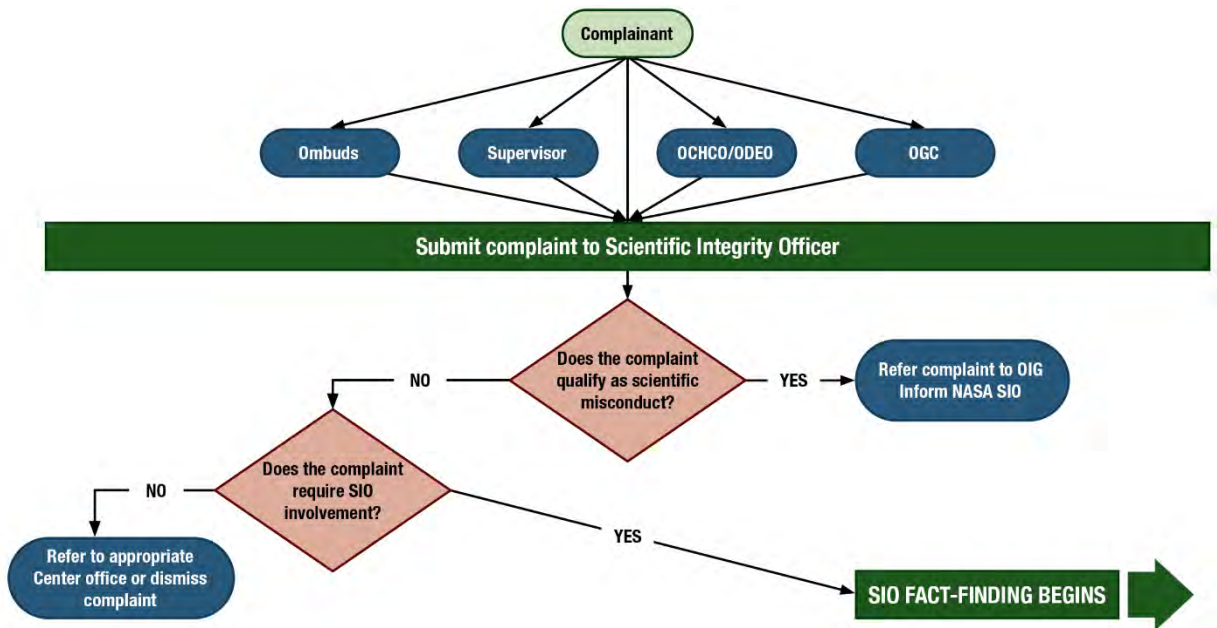


Fig. 1. Complaint life cycle Phase I.

## 2. Phase II: Assess Merits

The SIO begins initial fact-finding by interviewing the Complainant and collecting any additional information or documentation they may have. The SIO then determines what other information is

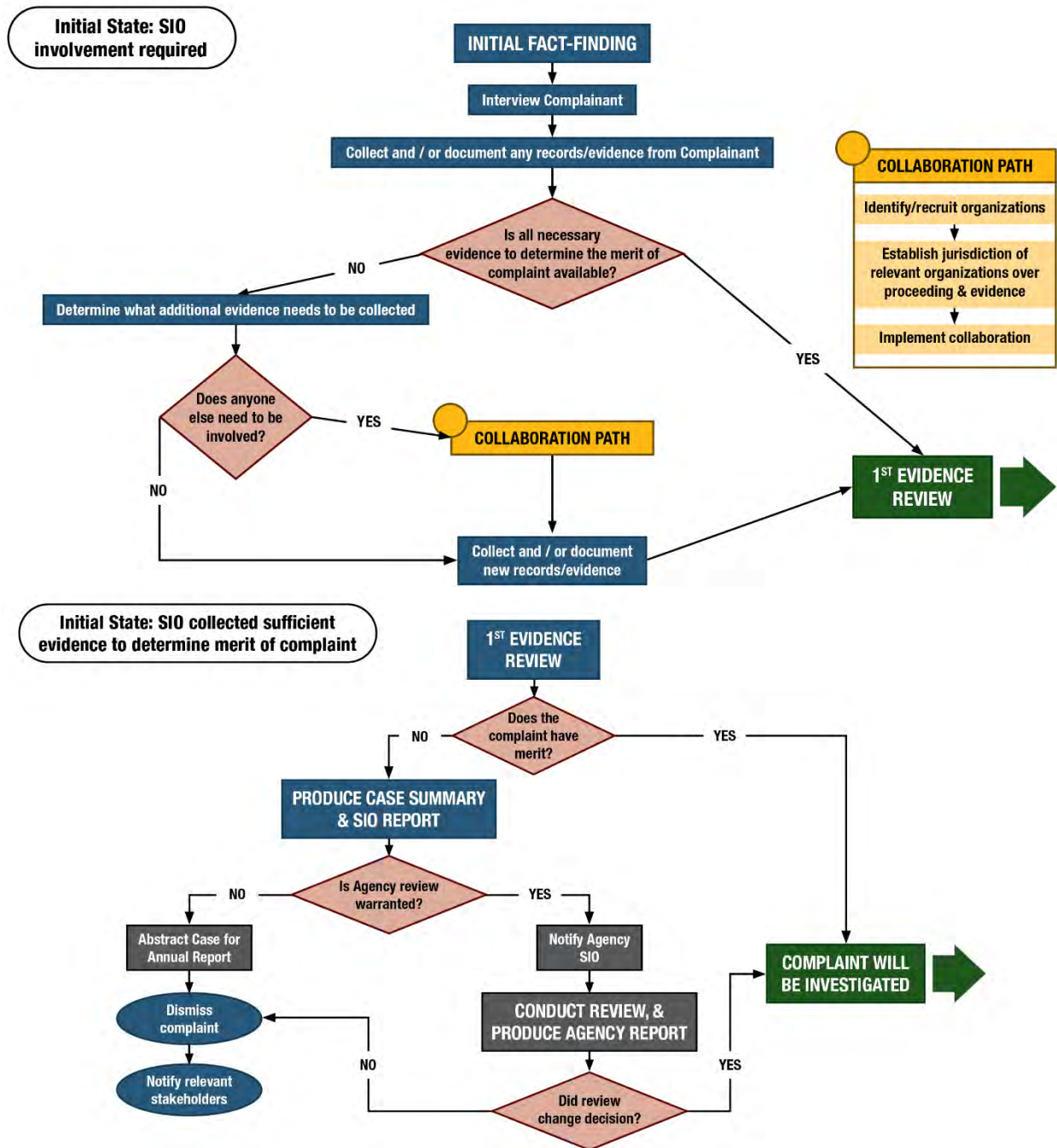


Fig. 2. Complaint life cycle Phase II.

required to ascertain the merit of the allegation. For example, the SIO might request additional records or conversations with additional individuals. The SIO may also involve any other

organizations that they deem needed to gather this additional information. If other organizations are needed, a written collaboration plan is established at this point.

Next, the SIO evaluates the information and makes a judgment on whether an investigation of the allegation is merited. If so, the process moves to Phase III. If not, the case is abstracted to be included in that year's summary report, and the SIO dismisses the allegation and notifies relevant parties. If the circumstances warrant, an Agency-level review may be conducted before dismissal of the allegation. Such circumstances could include an apparent conflict of interest or subject matter that might be controversial. It is anticipated that this circumstance would be rare. Nevertheless, should the Agency-level review determine that the complaint should in fact be investigated and not dismissed, the complaint will move into Phase III.

### 3. Phase III: Conduct Investigation

To begin this Phase, the SIO determines whether any other organizations are required to take part in the investigation. Note that different organizations may emerge here than were needed in the Phase II fact-finding process. If so, the SIO develops a similar collaboration plan as in Phase II. Next, the SIO ascertains whether the matter requires immediate action, as might be the case for a serious or egregious allegation, and in particular if the timescale over which potential harm could result from the potential violation is short. If so, the SIO determines what actions are required and whether others need to be involved (using the same collaboration process as above if so), and then implements those immediate actions. If these steps uncover additional evidence not already acquired, it is included along with the other available evidence.

Note that the use of the word "evidence" is not meant to connote the strict legal definition, pertaining to cases tried in a court of law, but instead that used in the vernacular. For example, the Oxford Languages dictionary defines evidence as "the available body of facts or information indicating whether a belief or proposition is true or valid."

After any immediately needed steps are taken, or if no immediate steps are needed, the SIO then collects any relevant NASA policy documents, contracts, literature etc. that bear on the matter, and creates an investigation plan. The SIO assembles a panel of subject matter experts if needed, documents the roles of all involved parties, and prepares questions that need answers.

Next, the SIO interviews the Respondent, and collects any records, documents, or other evidence arising therefrom. The SIO then re-examines whether any other organizations or individuals need to be involved (new evidence may have changed that determination from previously in the process).

The SIO should now be equipped to evaluate the complaint details and make a judgment about whether the Respondent did commit a scientific integrity violation. If so, the SIO then decides on needed actions or remedies and works with relevant management or other stakeholders to implement them. The SIO produces a summary report, notifies all relevant stakeholders, and informs the Respondent about how to request an appeal if warranted. If the SIO determines that the preponderance of evidence does not indicate wrongdoing, the case is adjudicated without actions, the summary report is produced, the allegation dismissed, and relevant stakeholders notified.

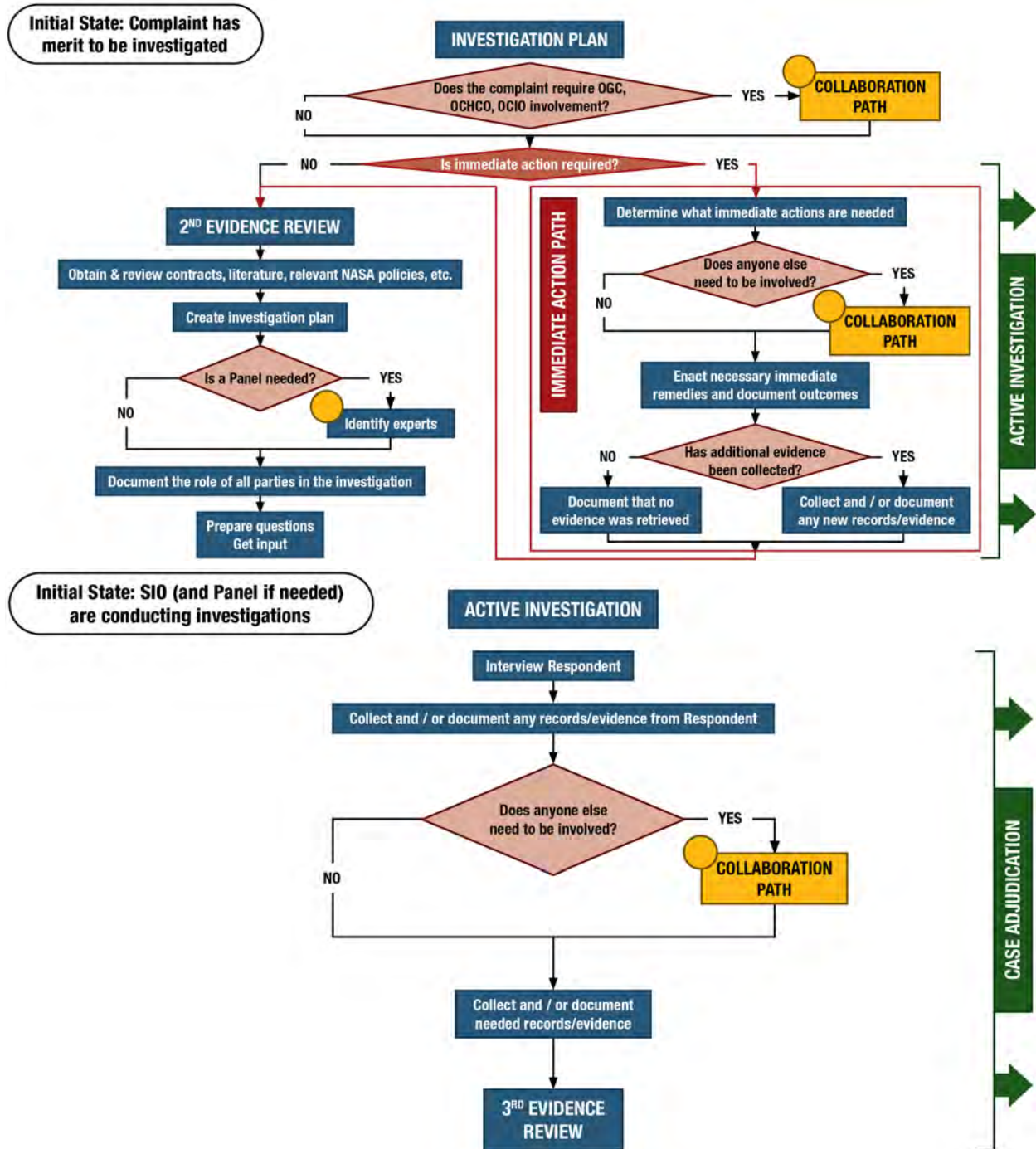


Figure 3a. Complaint life cycle, Phase III (continued in Fig. 3b)

Note that the SIO Committee will establish consistency in determining and applying standards for what constitutes scientific integrity violations and for their consequences across all NASA Centers and other facilities. Although the circumstances that might lead to a scientific integrity violation will necessarily differ from one Center or facility to another, there must be uniform, Agency-wide standards, and these will be promulgated along with other scientific integrity documentation (e. g. on the OCS website).



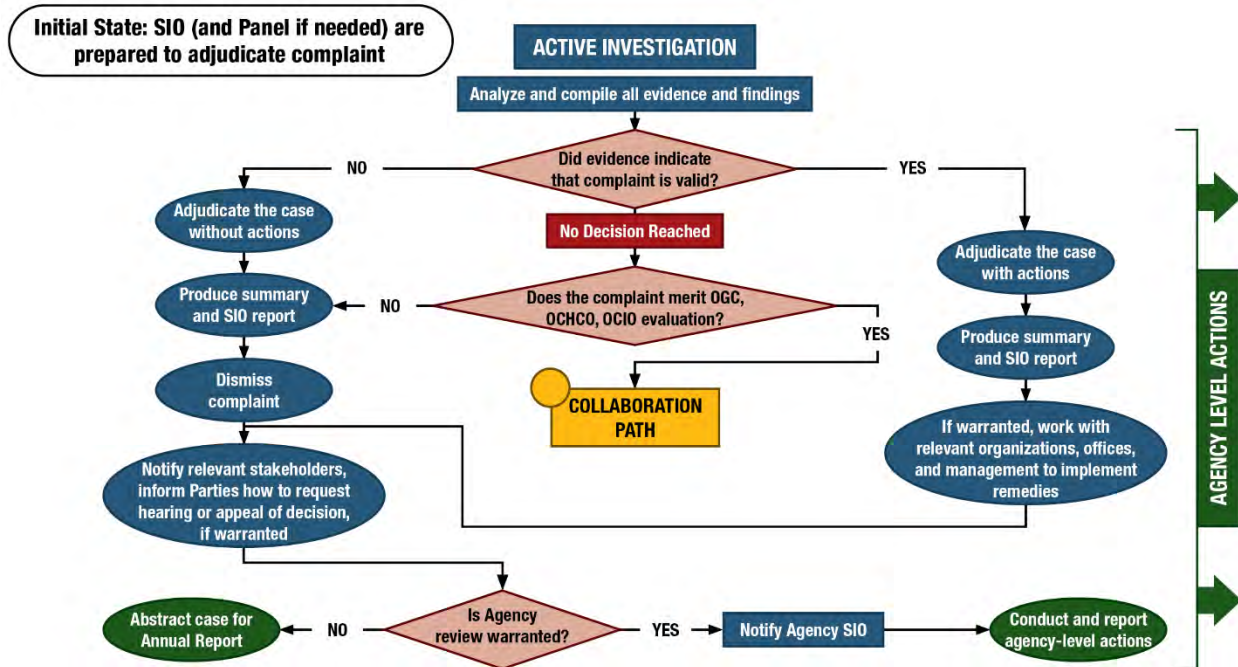


Fig. 3b. Complaint life cycle, Phase III (continued)

It is conceivable that the SIO will be unable to reach a decision on whether a violation was committed. In this instance, the SIO must then re-assess whether the involvement of other organizations or individuals might break the impasse, and if so, conduct another iteration of the collaboration process to do so. If not, the SIO documents the situation, notifies relevant stakeholders, and elevates the case to the Agency SIO for review, taking the process into Phase IV.

Finally, it is also conceivable that regardless of the outcome of the investigation, the SIO and/or other stakeholders may judge that Agency review is warranted. Such circumstances might include, but not be limited to, the matter at issue being highly publicized or controversial; the violation being particularly egregious; the existence or perception of a significant conflict of interest; or the involvement of a high-ranking Agency official such as a political appointee. Agency review takes place in Phase IV.

#### 4. Phase IV: Agency Review

Agency review might take a range of forms depending on the details of the matter at issue. The Agency SIO leads this review unless it is the Agency SIO who is the Respondent in the matter, in which case the NASA Chief Scientist steps in to lead the review.

A wide range of circumstances and actions is possible in Phase IV. These include, but are not limited to, an appeal having been filed and/or a hearing having been requested; the need for additional evidence unavailable to the Center SIO handling the case; or the outcome highlighting

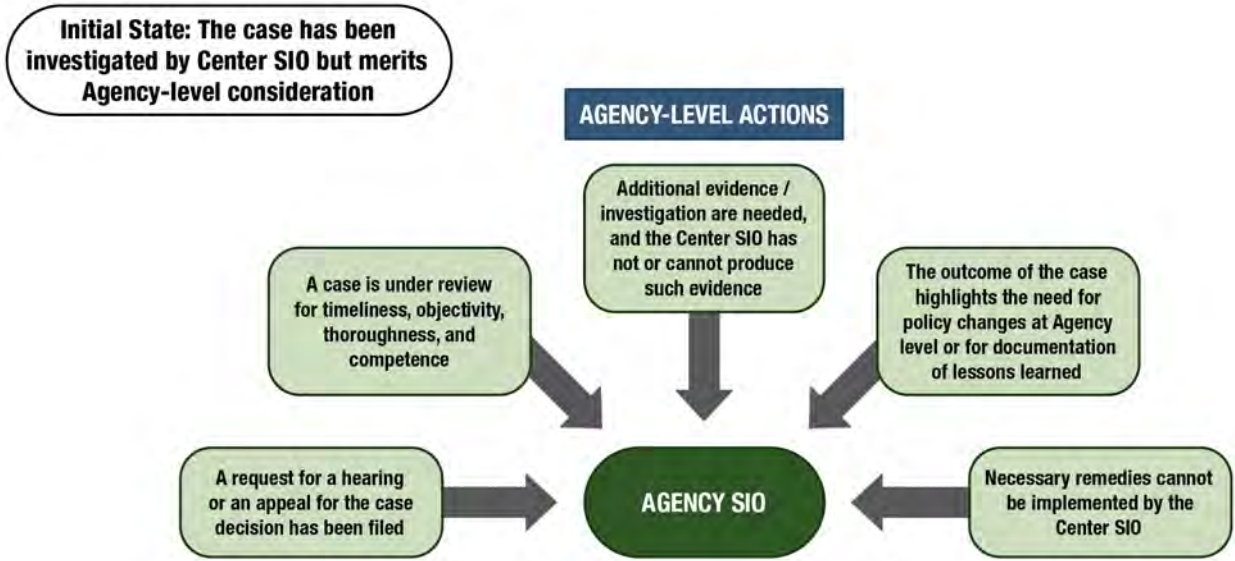


Fig. 4. Complaint life cycle, Phase IV

the need for a change to Agency policy. Clearly each Agency-level review will differ depending on the details of the case.

#### 5. Use of Information

All investigations of potential scientific integrity violations must adhere to the following guidance for use of evidence. SIOs will provide templates of the forms and documents needed to adjudicate each complaint.

## Types of Evidence

Table 1 lists the three main types of evidence and examples of each.

Table 1. Types and examples of evidence

Type of Evidence	Examples
Evidence collected from Complainant, Respondent, Supporting Witnesses	Physical, digital, biological, or biometric evidence; peer-reviewed literature; legal documents.
SIO and SIO Panel Supporting Research	Including observation, measurements, and analysis of collected physical, digital, biological, or biometric evidence; peer reviewed literature; legal documents
Testimonial	Interviews of parties and witnesses, oral and written statements from parties and witnesses, opinions from expert panels.

Evidence must be credible and relevant to proving or disproving a fact under investigation. Not all evidence may be equally relevant to the fact under investigation. If evidence is directly linked to a question and aligns with other evidence streams, such evidence can be used to *prove* a fact. If evidence is directly linked to the fact in question but does not align with other evidence streams, such evidence ought to undergo additional assessment of its credibility. If evidence is indirectly linked to a question and aligns with other evidence streams, such evidence can be used to *corroborate* a fact. After establishing relevance and credibility, evidence might be used by the SIO or experts to *infer* facts.

Tests of credibility of evidence include, but are not limited to, establishing that there are no conflicts of interest; evaluating scientific evidence (e. g. data, samples, and other artifacts) using the scientific method; and/or determining the expertise of an expert witness or panel member by assessing standing in their disciplinary community.

## Data, Records, and Reports Stewardship and Responsibilities

All documents, evidence, reports, communications, and findings generated during the lifecycle of the complaint are confidential. The SIO will take all reasonable steps to ensure the privacy of the involved parties and maintain confidentiality regarding the complaint details aside from those required to be disclosed as described in the [Reporting](#) section below. **Unless otherwise required by law or Federal- or Agency-policy, the SIO will not unduly disclose the name(s), organization(s), title(s), or other identifying details of any party; nor will the SIO unduly disclose fact, evidence, or details related to the case.** Note: some details of SIO complaints may be subject to Freedom of Information Act requests.

SIOs are required by Agency policy to produce data, including complaint summaries, for public reports. SIOs will redact identifiable information in such reports unless otherwise required by Agency policy, federal policy, or law. Administrative sanctions against an individual or institution will be made publicly available.

When necessary to involve other Center, Agency, or external parties during the lifecycle of the complaint, the SIO will properly mark documents and communications as Controlled Unclassified Information (CUI); (see Table 3) instruct all parties to not disseminate information or documents related to the complaint; and maintain the security of all records.

The SIO will be responsible for maintaining all records related to misconduct or integrity cases. Records will be maintained in accordance with Federal and NASA policy. SIO records will be retained based on the guidance in Table 2.

Table 2. Retaining documentation from SI cases

Type	Description	Retention Schedule
Cases referred to OIG, including research misconduct	<p>“Referrals and notifications of violations of criminal” research misconduct statutes or other potential violations.</p> <p>“Referrals to Inspectors General or the Department of Justice concerning research misconduct violations or suspected violations. This item also covers related background materials, including copies of disciplinary and corrective actions”</p>	<p>“Temporary. Destroy 7 years after final disposition of the referral to either the IG of DOJ.”</p>
research integrity, scientific integrity cases	<p>Records of complaints regarding research integrity or scientific integrity issues. Includes:</p> <ul style="list-style-type: none"> <li>- complaint, correspondence, notes, forms, and supporting material</li> <li>- statements of witnesses, records of interviews, hearings, panels</li> <li>- SIO or panel findings, recommendations, decisions</li> <li>- Records of disciplinary and performance-based actions against employees. Includes:</li> </ul>	<p>Destroy 7 years after case is closed. Or 6 years after the agreed upon determination or action is undertaken, or no longer in effect, or no longer needed for active investigation. Whichever is later</p>

	<ul style="list-style-type: none"> <li>○ performance appraisal, performance improvement plan, and supporting documents</li> <li>○ recommended action, employee's reply</li> <li>○ records of hearings and decisions</li> <li>○ records of appeals</li> <li>- Records of adverse actions (suspension, removal, reduction in grade, reduction in pay, or furlough) against employees. Includes: <ul style="list-style-type: none"> <li>○ proposed adverse action, employee's reply</li> <li>○ statements of witnesses</li> <li>○ records of hearings and decisions</li> <li>○ letters of reprimand records of appeals</li> </ul> </li> </ul>	
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The SIO will consult the relevant organizations on the proper retrieval methods, replication methods, management, storage, preservation, and timeline for return of scientific and technical assets during the lifecycle of the case. Seized scientific and technical assets will be kept for the minimal amount of time needed to enable the investigations of relevant facts at issue. Copies and descriptions of assets should be made when relevant to the case and will be retained in accordance with the above table or appropriate policy.

In the event that the SIO resigns or otherwise leaves the position, all records will be transferred to the replacement or acting SIO prior to leaving office. If no person is identified prior to the SIO leaving office, the SIO will inform the Agency SIO or Deputy SIO so that a person may be designated, and records transferred.

All documents will be properly marked as "Confidential" and with the appropriate Controlled Unclassified Information (CUI) banner and cover sheet, when necessary, as provided by the National Archives and Records Administration (NARA). See Table 3 for relevant CUI categories with links to the corresponding National Archives policies. Note this list is not exhaustive.

Table 3. Handling confidential but unclassified information from SI cases

Type	Description	CUI Category	Banner Marking
Research Misconduct	Related to information obtained during the course of a law enforcement investigation or action, civil or criminal	<a href="#">Investigation</a>	CUI//SP-INV
Personnel actions	Related to the employees of Federal agencies.	<a href="#">Personnel Records</a>	CUI//SP-PERS
research integrity, scientific integrity case	Adjudication of Agency-related matters including, but not limited to, dispute resolution, settlements, and issuances of orders.	<a href="#">Administrative Proceedings</a>	CUI//SP-ADPO
PII	Refers to personal information, or, in some cases, "personally identifiable information," as defined in OMB M-17-12, or "means of identification" as defined in 18 USC 1028(d)(7).	<a href="#">General Privacy</a>	CUI//SP-PRVCY
Export Controlled Research	Related to the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.	<a href="#">Export Controlled Research</a>	CUI//EXPTR

All documents and records relating to SIO cases will be kept secure and confidential. Electronic records must be kept in accordance with NASA policy. Physical records should be stored in a locked office, locked drawer, or locked file cabinet when unattended.

CUI and confidential SIO records may be destroyed when no longer needed per the relevant record retention schedule. See [NID 2810.135](#) for information on how to store and dispose of CUI.

SIO cases that involve classified material will be handled in accordance with Federal laws and NASA regulations, if applicable.

### B. Reporting

**Annual Reporting.** The NASA SIO, with input from the Scientific Integrity Committee, is responsible for generating and making prominently available on the Agency's public facing

website an annual report to NASA leadership on the status of scientific integrity within NASA, per PM 2021. The report will highlight scientific integrity successes and accomplishments across NASA such as any new scientific integrity hires, training, enhancements to scientific integrity policies, etc., identify areas for improvement, and develop a plan for addressing critical weaknesses, if any. It will also include the number of scientific integrity complaints, investigations and their outcomes, and pending appeals.

**Public facing reporting.** In addition to the report to leadership, the Office of the Chief Scientist will post an annual summary of the number of potential scientific integrity violations and the outcomes of their adjudication (omitting any confidential but unclassified and possibly personally identifiable information). This summary will appear on the OCS website.

## 8. Scientific Integrity Policy Intersections with Related and Supporting Policies

Scientific integrity officials will maintain awareness of policies and programs that intersect with the development of the culture of scientific integrity within the Agency. Engagement of scientific integrity officials, where possible, in the development or revision of the broader set of policies and practices that affect the culture and applicability of scientific integrity with the Agency will help provide needed perspectives before such policies are issued and better ensure they support the needs of scientific integrity. Having scientific integrity officials engaged on high-level coordination and strategic planning committees, together with senior personnel from, for example, human resources, diversity and inclusion, scientific workforce, public affairs, and other important Agency organizations, allows scientific integrity perspectives to be heard and incorporated. Officials should consider the scientific integrity-related components of other policies (e. g. professional development of scientists, science-related communications, etc.) and determine where those other policies should be simply referenced, or perhaps reinforced, within the Agency scientific integrity policy to help ensure their longevity. Violations of related and supporting policies may result in a loss of scientific integrity and it is appropriate for scientific integrity officials to coordinate with their Agency counterparts in these matters.

### A. Policies Related to Past Scientific Integrity Presidential and OSTP Memos

**Integrity in Public Science Communications.** Scientists are encouraged to speak with the public and the media about scientific and technical matters based on their scientific work and in their areas of expertise. Policies on media and communications must be consistent with OM 2010. In no circumstance will Agency officials, including public affairs officers, ask or direct scientists to alter scientific and technological research findings. Suppression or the altering of scientific results in science communications constitutes a violation of this scientific integrity policy except as excluded by relevant laws. Communications are also governed by policy set forth in [14 CFR 1213, Release of Information to News and Information Media](#).

**Professional Development and Advancement of Scientists.** OM 2010 asked agencies to establish policies for the professional development of government scientists and engineers. The professional development and advancement of scientists are key components to help achieve the Agency mission. Managers are encouraged to provide scientists with opportunities to engage with peers through professional societies and professional meetings; present research findings at professional meetings and through publication in peer-reviewed journals; become editors or editorial board members of professional or scholarly journals; serve as officers and on governing boards of professional societies; nominate scientists for, and allowing them to receive, where possible, honors and awards for contributions to scientific activities, discoveries, and products; and perform outreach and engagement to diverse communities.

**Diversity, Equity, Inclusion, and Accessibility in Addressing and Strengthening Scientific Integrity and the Disproportional Impact of Scientific Integrity Policy Violations on Underrepresented Groups.** Equally important as a scientific integrity policy are policies, practices, and Agency culture to promote diversity, equity, inclusion, and accessibility in the scientific workforce and Federal workforce at large and to create safe workspaces that are free from harassment. Similarly, scientific integrity entails greater transparency into research processes and policy-making outcomes. Open science policies and practices help to ensure that publications, data, and other outputs of government-funded research are readily available to other researchers, innovators, students, and the broader public, including underserved communities. ). NASA's Equity Action Plan, available at <https://www.nasa.gov/wp-content/uploads/2022/04/nasa - equity report - v8.pdf>, outlines the Agency's efforts in this area. The Agency will review and address potential scientific integrity policy violations that have a disproportionate impact on underrepresented groups or weaken the equitable delivery of Agency programs.

**Credibility of the Science Workforce.** OM 2010 informed agencies of the need to ensure that the selection of candidates for scientific positions in the executive branch is based primarily on their scientific and technological knowledge, credentials, experience and integrity. Candidates selected for executive branch scientific positions and their supervisors will be held to the highest standard of professional and scientific ethics.

**Credibility of the Science to Support Policy Decisions.** OM 2010 also informed agencies of the need to ensure that scientific data and research used to support policy decisions undergo independent peer review by qualified experts, where feasible and appropriate, and consistent with the law. PM 2021 reinforces this concept, stating that scientific or technological information considered in policy decisions should be subjected to well-established scientific processes.

## B. Related Policies that Can Intersect with Scientific Integrity

**Integrity in Advice from Scientific and Technical Federal Advisory Committees.** Products, reports, and recommendations to the Agency from Federal Advisory Committees are the findings of the Committee, not the Agency, and are not subject to Agency revision. Committee membership recruitment should be as transparent as practicable and selection to serve on a scientific or technical Federal Advisory Committee should be based upon expertise, knowledge, and contribution to the relevant subject area taking into account other factors, such as availability,



diversity, the ability to work effectively on advisory committees, and balanced viewpoints. The selection process should be overseen by career Agency officials based upon best practices, unless otherwise specified in applicable statutes and regulations. Conflict of interest waivers will be prominently displayed on Agency websites and reviewed at the start of every meeting.

**Whistleblower protections.** The Whistleblower Protection Act, as amended, provides whistleblower protection for government scientists who challenge censorship of scientific information or make whistleblower disclosures related to the integrity of scientific processes and ensures coverage of employees of government contractors, subcontractors, grant recipients, subgrantees and personal services contractors. Contact the Whistleblower Protection Coordinator or equivalent, or the Office of the Special Counsel for additional information. Contact information for these offices can be found at <https://oig.nasa.gov/whistleblower.html>.

**Human and Animal Subject Protections.** For the protection of human subjects of research and clinical investigations, requirements for Federal departments or agencies (conducting or supporting) as applicable, are provided in the Federal Policy for Protection of Human Research Subjects outlined in 45 C.F.R. §§ 46.101-46.505 and the FDA Policy for the Protection of Human Subjects outlined in 21 C.F.R. §§ 50, 56, 312 and 812.

To protect the welfare of animals used in research or other activities conducted or supported by Federal departments or agencies, compliance with the Federal regulations and policies governing animal care and use is required, including regulated species under the United States Department of Agriculture [Animal Welfare Act \(AWA\) and regulations](#) (AWAR), the [Public Health Service Policy on Humane Care and Use of Laboratory Animals](#) (PHS Policy) administered by the National Institutes of Health, Office of Laboratory Animal Welfare and the *Guide for the Care and Use of Laboratory Animals*.

**Scientific Integrity with Research Security.** Scientists are encouraged to interact with the broader scientific community as well as to engage with collaborators with a commitment to a shared research environment of openness, transparency, honesty, equity, fair competition, objectivity, and democratic values. Unfortunately, some foreign governments are working vigorously in contradiction with these values to acquire, through both licit and illicit means, U.S. research and technology. Policies for protecting research security must harmonize with scientific integrity policies by maintaining the core values that drive American leadership in science, technology and innovation: openness, transparency, honesty, equity, fair competition, objectivity, and democratic values.

## 9. Authorities

Pursuant to the 2021 Presidential Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking, all Federal agencies must establish a scientific integrity policy. This policy is authorized by:

1. America COMPETES as an authority. (SEC. 1009).
2. 2018 Foundations for Evidence Based Policy Making Act - H.R.4174 - 115th Congress (2017-2018): Foundations for Evidence-Based Policymaking Act of 2018
3. PL 106-554, Section 515, The Information Quality Act
4. Office of Management and Budget (OMB) Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, 2002
5. OMB Final Information Quality Bulletin for Peer Review, 2004
6. 65 FR 76260-76264, Federal Policy on Research Misconduct
7. PL 101-12, Whistleblower Protection Act (WPA) of 1989
8. PL 112-199, Whistleblower Protection Enhancement Act (WPEA) of 2012
9. The National Defense Authorization Act's expansion of certain whistleblower protections to employees of Federal government contractors, subcontractors, and grant recipients. 41 USC 4712; and
10. Amended 2017: Standards of Ethical Conduct for Employees of the Executive Branch ([5 CFR 2635](#)).
11. 5 U.S.C. Appendix 2, Federal Advisory Committee Act of 1972
12. 5 CFR 735, Employee Responsibilities and Conduct

## 10. References

FTAC 2022: Protecting the Integrity of Government Science, A Report by the Scientific Integrity Fast-Track Action Committee of the National Science and Technology Council, January 2022. [01-22-Protecting the Integrity of Government Science.pdf \(whitehouse.gov\)](#)

PM 2021: Presidential Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policy Making, January 27, 2021. [Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking | The White House](#)

PM 2009: Presidential Memorandum for the Heads of Executive Departments and Agencies on Scientific Integrity. March 9, 2009. The White House. [Memorandum for the Heads of Executive Departments and Agencies 3-9-09 | whitehouse.gov \(archives.gov\)](#)

OM 2010: Memorandum for the Heads of Executive Departments and Agencies on Scientific Integrity. December 17, 2010. Office of Science and Technology Policy. <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>

OMB 2005: Office of Management and Budget. "Final Information Quality Bulletin for Peer Review." *Federal Register*. Doc. 05-769. Available at: <https://www.federalregister.gov/documents/2005/01/14/05-769/final-information-quality-bulletin-for-peer-review>

NPD 1400.1H Sec. D.1.5.3, NASA Directives and Charters Procedural Requirements at:  
[https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal\\_ID=N\\_PR\\_1400\\_001H\\_&page\\_name=AppendixD](https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PR_1400_001H_&page_name=AppendixD)

NPD 1920.1, Scientific and Research Integrity at:  
<https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=1920&s=1>

NSTC 2023: National Science and Technology Council. A Framework for Federal Scientific Integrity Policy and Practice, January 2023 at <https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf>

Federal Policy on Research Misconduct. December 6, 2000. Office of Science and Technology Policy. [00-30852.pdf \(govinfo.gov\)](#)