



**U.S. Department
of Transportation**

Scientific Integrity Policy of the United States Department of Transportation

Office of the Secretary

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Purpose

The purpose of this policy is to provide instruction and guidance to enhance and promote a continuing culture of scientific integrity. This 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. This policy establishes the expectations and procedures required to maintain scientific integrity at the United States Department of Transportation (DOT).

Background

“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.” (PM 2021) The 2022 National Science and Technology Council Report of the Scientific Integrity Fast Track Action Committee (SI-FTAC), *Protecting the Integrity of Government Science*¹, found that strong scientific integrity policies and practices bolster the ability of Federal agencies to protect government science.

The SI-FTAC Report summarizes recent foundational Executive branch actions on Scientific Integrity, including the 2009 Presidential Memorandum², the 2010 OSTP Memorandum³, and the 2021 Presidential Memorandum⁴. The requirements of this policy are derived from these foundational actions, the collective experience of Federal agencies, and the informed engagement of stakeholders both inside and outside of government that were the basis of the SI-FTAC Report.

¹ A report by the Scientific Integrity Fast-Track Action Committee of the National Science and Technology Council. “Protecting the Integrity of Government Science.” January 11, 2022. Available at: https://www.whitehouse.gov/wp-content/uploads/2022/01/01-22-Protecting_the_Integrity_of_Government_Science.pdf

² Presidential Memorandum for the Heads of Executive Departments and Agencies on Scientific Integrity. March 9, 2009. The White House. Available at: <https://obamawhitehouse.archives.gov/the-press-office/memorandum-heads-executive-departments-and-agencies-3-9-09>

³ Presidential Memorandum for the Heads of Executive Departments and Agencies on Scientific Integrity. December 17, 2010. Office of Science and Technology Policy. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>.

⁴ Presidential Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policy Making, January 27, 2021. Available at: <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/memorandum-on-restoring-trust-in-government-through-scientific-integrity-and-evidence-based-policymaking/>.

Definition of Scientific Integrity and Scientific Integrity Official

DOT adopts the following Official Definition of Scientific Integrity created by the National Science and Technology Council's 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.

While the responsibility for upholding scientific integrity lies with all of DOT and its contractors and grantees, DOT has designated the Assistant Secretary for Research and Technology, as the DOT Chief Science Officer and the DOT Director, Office of Research, Development and Technology, as the DOT Chief Scientific Integrity Officer. This policy further designates the Director, Office of Research, Development and Technology as the DOT Deputy Chief Science Officer. This satisfies the requirement that DOT designate "a senior career employee as the agency's lead Scientific Integrity Official to oversee implementation and iterative improvement of scientific integrity policies and processes" (PM 2021).

The DOT Chief Scientific Integrity Officer and modal Scientific Integrity Officials, shall be empowered 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, and to coordinate with appropriate agency authorities to enforce corrective and administrative actions as well as action to prevent Scientific Integrity concerns. The DOT Chief Scientific Integrity Officer in conjunction with the DOT Chief Science Officer, shall also advocate for appropriate engagement of scientific leadership in decision-making. (TF 2021)

Effective Date and Policy Amendments

This policy is effective when adopted. This policy shall be reviewed by DOT every 2 years and may be amended by the Scientific Integrity Officer and other designated points of contact for Scientific Integrity if needed. Changes to the policy should be communicated to the Director of the White House Office of Science and Technology Policy no later than 30 days after adoption.

Applicability & Scope

Scientific Integrity is the responsibility of the entire DOT workforce. Covered persons who must adhere to the requirements of this policy include all DOT employees, contractors, political appointees, trainees, interns, volunteers, and advisory committee members, when they propose, conduct, or review science or communicate about science and scientific activities, and to all levels of employees who manage or supervise scientific activities and use scientific information in decision making.

All contractors, cooperators, partners, co-regulators, permittees, lessees, grantees, and volunteers, who engage or assist in scientific activities are expected to uphold the principles of

Scientific Integrity established by this policy. Express requirements will be set forth in individual agreements, contracts, statements of work, memoranda of understanding, etc., and/or established via issuance of a separate rule or other policy.

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
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
13. 49 USC 6302(d) Bureau of Transportation Statistics: Independence of Bureau

Definitions

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.

- a. Advisory Committee. Any committee, board, commission, council, conference, panel, task force, or other similar groups established by statute, or established or utilized by the President or by an agency official, to obtain advice or recommendations for the President or on issues or policies within the scope of an agency official's responsibilities.

- b. Scientific Integrity Official. The individual appointed by DOT to be responsible for overseeing departmental responsibilities and activities related to Scientific Integrity, including receiving and managing agency and staff office responses to Allegations of compromised Scientific Integrity.
- c. Allegation. A claim of a suspected compromise of Scientific Integrity through any means of communication. The claim may be by a written or oral statement or by other means of communication to a responsible DOT official.
- d. Appeal. The stage in response to an Allegation of compromised Scientific Integrity in which a respondent (i.e., the individual found to have compromised Scientific Integrity) may Appeal the finding and Corrective Actions.
- e. Conflict of Interest. Any financial or non-financial interest that conflicts with the actions or judgments of an individual when conducting Scientific Activities because it could: (1) impair the individual's objectivity; (2) create an unfair competitive advantage for any person or organization; or (3) create the appearance of either of the above.
- f. Corrective Action. A Corrective Action is an administrative action recommended by the Scientific Integrity Official and implemented to ensure and restore Scientific Integrity based on a finding(s) of compromised Scientific Integrity. ***For this policy, Corrective Actions do not include adverse personnel actions or disciplinary actions.***
- g. Inappropriate Influence. Inappropriate influence refers to the attempt to shape or interfere in scientific activities or the communication about or use of scientific activities or findings against well-accepted scientific methods and theories or without scientific justification.
 - 1) The suppression of an agency's responsibility to offer its best judgment on how to most accurately and reliably study, measure or report on a given phenomenon. A refusal to appropriate funds for specific research is NOT a violation of Scientific Integrity;
 - 2) The decision to prevent an agency from using state-of-the-art science;
 - 3) The insistence on the pre-clearance of a Scientific Product for purposes other than providing advance notification to Decision-makers or an opportunity to review for technical merit. This does not include appropriate coordination with a Researcher's immediate supervisor and public affairs officials prior to release;
 - 4) The suppression of, alteration or insistence on the alteration of, or delay in releasing a Scientific Product for any reason other than technical merit or providing advance notification, as determined through standard agency/staff office procedures; and
 - 5) The removal of an already-released Scientific Product from public access, including from a designated repository or archive for such products.

- h. Preponderance of the Evidence. Proof by information that, compared to that opposing it, concludes that a particular matter or asserted fact is probably more true than not. NOTE: A "Preponderance of the Evidence" is a lower burden of proof than "by clear and convincing evidence" or "beyond a reasonable doubt."
- i. Scientific Research. Scientific Research is a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to general knowledge. Scientific Research includes all basic, applied, and demonstration research in science, technology, engineering, and mathematics. This includes, but is not limited to, research in economics, education, linguistics, medicine, nutrition, psychology, natural sciences, social sciences, statistics, material sciences, mechanics, structures, communications, and research involving human subjects.
- j. Research Misconduct refers to fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

Policy Requirements

Promoting a Culture of Scientific Integrity

DOT leadership at all levels shall recognize, support, and promote this policy and its underlying principles, as well as model behavior exemplary of a strong culture of Scientific Integrity.

DOT shall promote a 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" (OSTP Memo 2010). Scientific findings and products must not be suppressed or altered for political purposes and must not be subjected to Inappropriate Influence

A strong culture of Scientific Integrity begins 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. (TF 2021)

To instill and enhance a culture of Scientific Integrity, DOT will post this policy prominently on its website and take other measures such as agency townhalls, written and oral communications, as possible and appropriate to keep Scientific Integrity visible at DOT, educate all Agency employees, as well as contractors who perform scientific activities for DOT, on their rights and responsibilities related to Scientific Integrity. (TF 2021) All employees will receive Scientific Integrity information or training as new employees to make them aware of their responsibilities under this Scientific Integrity policy within 6 months of their date of hire. DOT will also provide

training for those who propose, review, conduct, manage, and use the results of and communicate about science and scientific activities every two years. Training will be tracked to ensure compliance.

To promote Scientific Integrity at DOT, this policy 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” (OSTP 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.

It is the policy of DOT to:

1. Prohibit political interference or Inappropriate Influence into the design, conduct, management, evaluation, and reporting of scientific data, research and activities,
2. Prohibit restricting resources and capacity and using other ways to limit program effectiveness and to reduce the availability of science without scientific justification.
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.
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 unwarranted credit for another's accomplishments. To be named as an author, contributors shall 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. Ensure independent review of facilities, methodologies, and other scientific activities as appropriate to ensure Scientific Integrity.
7. Require that employees and other covered entities comply with agency policies and procedures 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. Employees shall protect and conserve Federal property and shall not use it for other than authorized activities.

8. Prohibit Research Misconduct and lack of adherence to practices that ensure the quality of research and other scientific activities such as quality assurance system.
9. 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 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.
10. 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.
11. Ensure that Scientific Integrity policy violations that have been shown to have a disproportional 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

Open communication of DOT science plays a valuable role in building public trust and understanding of DOT's work. DOT shall 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 classification standards and responsible communication of scientific information. It is the policy of the DOT to:

1. Ensure that scientific findings and products are not suppressed or altered for political purposes and are not subjected to Inappropriate Influence.
2. Encourage, but not require, agency scientists to participate in communications with the media regarding their scientific work (data and results) and areas of expertise.
3. Ensure that mechanisms are in place to 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 agency scientists and the work and conclusions of work funded/supported by the federal government 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 scientific opinion, the scientist(s) shall be given the option to review the scientific content of proposed documents.
5. Ensure that agency scientists may communicate their scientific findings (data and results) objectively without political interference or 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.
6. Allow DOT employees to report their scientific findings and communicate (within the bounds of their scientific or technological findings) with the media or the public in their official capacities as employees.
7. Allow scientists to communicate with the media or the public in their personal capacities subject to limitations of government ethics rules. DOT 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.

8. Require that agency officials, including public affairs officers, shall not direct agency scientists and technology experts to alter scientific and technological research findings.
9. Require that agency officials, including public affairs officers, shall neither ask nor direct nor suggest that agency scientists and technology experts alter the presentation of their scientific findings in a manner that may compromise the objectivity or accurate representation of those findings.
10. In response to media requests about the scientific or technological aspects of their work, agencies will offer knowledgeable spokespersons who can, in an objective and nonpartisan fashion, describe these dimensions (Holdren 2010). This does not include describing the policy implications of their work. That requires a separate permission.
11. 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.
12. Ensure that Congressional inquiries, testimony, and other requests that include scientific information accurately represent the science.
13. Accurately represent the work and conclusions of agency scientists in agency social media communications and 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, DOT 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 DOT affiliation on their personal social media, a disclaimer clarifying that the account or communication represents personal views is appropriate.
 - c. Social media managers are responsible for correction of any errors pointed out by scientists whose work is represented in social media.
14. Assure 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. This 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.

III. Supporting Decision Making Processes

It is the policy of the DOT to:

1. 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.

- 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 Review⁵ When independent peer reviews of scientific products are conducted by contractors, a conflict-of-interest review shall be conducted for all reviewers.
 - 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.
2. The Scientific Integrity Official shall, with input from the other scientific officials develop a transparent mechanism for Agency employees to express differing scientific opinions. When an agency employee, who is substantively engaged in the science informing an agency policy decision, disagrees with the scientific data, interpretations or conclusions that are to be relied upon for that decision, the employee is encouraged to express that opinion.

IV. Ensuring Accountability

Ensure correction of the scientific record and administrative actions when Allegations of a loss of Scientific Integrity are substantiated. It is the policy of the DOT to:

1. Encourage and facilitate early informal or formal consultation with the Scientific Integrity Officer or other Scientific Integrity Officials 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 report concerns and Allegations of Scientific Integrity Policy violations. Those who report concerns and Allegations may be directly involved or witness a violation.

V. Protections

To assure the protection of government scientists and as appropriate other covered entities from retribution, retaliation or reprisal it is the policy of DOT to:

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 to create safe workspaces that are free from harassment. Support scientists and researchers and advance the equitable delivery of Federal programs.

⁵ 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>

3. Protect those individuals who 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 compromised Scientific Integrity from prohibited personnel practices (as defined in 5 U.S.C. 2302(b)).
4. Prevent supervisors and managers or other agency leadership from intimidating or coercing scientists to alter scientific data, findings, or professional opinions or inappropriately influencing scientific advisory boards.
5. Comply with the Whistleblower Protection Act, as amended⁶.
 - a. Protecting 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 DOT 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 WPA of 1989, and its expanded protections enacted by PL 103-424 and the WPEA 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. PPD 19, which 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

It is the policy of the DOT to:

1. Encourage DOT scientists and other DOT employees involved in DOT 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 that is practicable given the availability of funding to support such interactions and any budgetary restraints. This includes:
 - a. Encouraging timely publication of research such as in peer-reviewed, professional, scholarly journals, DOT 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 on editorial boards, as peer reviewers, 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 removing barriers to 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, discoveries, accrue the professional recognition of such honors or awards; and

⁶ For more information see SI intersection policy section below - "Whistleblower protections"

- g. Allow scientists to perform outreach and engagement activities, such as speaking to community and student groups, as part of their official duties.

VII. Federal Advisory Committees (FACs)

Federal Advisory Committees are an important tool within DOT for ensuring the credibility, quality, and transparency of DOT science. DOT shall adhere to the Federal Advisory Committee Act and develop policies, in coordination with the General Services Administration and consistent with the guidance on lobbyists serving on Federal Advisory Committees (FACs) for convening FACs tasked with giving scientific advice, consistent with the following:

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’ (Holdren 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” (Holdren 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” (Holdren 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” (Holdren 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” (Holdren 2010).

Scientific Integrity Committee and Other Scientific Integrity Officials

DOT shall establish a Scientific Integrity Committee comprised of modal Scientific Integrity Officials and chaired by the DOT Scientific Integrity Officer to provide oversight for the implementation of the Scientific Integrity Policy at DOT. These duties may include to 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 this policy.

Procedures

Within 60 days of the issuance of this Policy, modal administrators shall designate a senior career employee as “Scientific Integrity Official” who holds a permanent appointment and has agency appropriate scientific credentials. For example, as an ST (scientific or professional), Senior Leader (SL), or Senior Executive Service (SES).

The DOT Scientific Integrity Officer in conjunction with DOT’s Scientific Integrity Committee shall draft and prominently post on DOT’s website detailed procedures for addressing Scientific Integrity concerns.

The DOT Scientific Integrity Officer together with the other Agency Scientific Integrity Officials shall draft a comprehensive implementation guide within 180 days to respond to Allegations of compromised Scientific Integrity in a timely, objective, and thorough manner.

Each DOT Modal Scientific Integrity Official will serve on DOT’s Scientific Integrity Committee and establish Modal procedures which shall include:

- A process to assess concerns to determine whether, if true, the concern would be a loss of Scientific Integrity for the DOT mode;
- 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;
- Modal decision including a determination as to whether Scientific Integrity was compromised, and if so, who compromised Scientific Integrity,
- The appropriate Corrective Actions to implement to restore Scientific Integrity and as applicable to prevent such losses of Scientific Integrity in the future;
- DOT will establish a process where Appeals are decided according to these general steps:
 - The Modal Scientific Integrity Official will provide their determination to the involved parties and either of those parties may Appeal by notifying the Modal Scientific Integrity Official who will provide the written determination and the associated supporting evidence to the DOT Scientific Integrity Officer.
- The DOT Scientific Integrity Officer will appoint an independent reviewer from the DOT Scientific Integrity Committee to provide an independent written assessment to the DOT Scientific Integrity Official.
- The DOT Scientific Integrity Officer will make the final determination and Corrective Actions, if needed.

Roles and Responsibilities

Scientific Integrity is everyone’s responsibility. The following have specific scientific integrity roles and responsibilities:

I. ***The Secretary of Transportation***

1. Provides leadership for the Department on Scientific Integrity such as leading through example, upholding Scientific Integrity principles and regularly communicating the importance of Scientific Integrity.

2. Ensures that all 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 career employee with appropriate qualifications and scientific credentials for the role of DOT chief science officer, science advisor, or chief scientist “Chief Science Officer” as applicable and support their role as advisor on scientific issues.
5. Designates a senior career employee as “Chief Scientific Integrity Officer” who holds a permanent appointment and has agency appropriate scientific credentials. For example as an ST (scientific or professional), Senior Leader (SL), or Senior Executive Service (SES). The Chief Scientific Integrity Officer will serve as the Deputy Chief Science Officer for day-to-day scientific activities, in the absence of the Chief Science Officer, or when the Chief Science Officer position is vacant.
6. Ensures that the scientific-integrity policy considers, supplements, and supports DOT 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).
7. Provides adequate resources and funding to fully implement this policy including staffing, annual evaluation and reporting, and training.
8. Supports and respects the Scientific Integrity Official’s independence, recommendations, and designation of and agency compliance with corrective scientific actions when violations of this policy are substantiated.

II. *Modal Administrators*

1. Provides leadership for each modal 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. Within 60 days of the issuance of this Policy, designates a senior career employee as “Scientific Integrity Official” who holds a permanent appointment and has agency appropriate scientific credentials. For example, as an ST (scientific or professional), Senior Leader (SL), or Senior Executive Service (SES).
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 this policy including staffing, annual evaluation and reporting, and training.
7. Supports and respects the Scientific Integrity Official’s independence, recommendations, and designation of and agency compliance with corrective scientific actions when violations of this policy are substantiated.

III. Chief Science Officer and Chief Scientific Integrity Officer

1. Serves as the principal advisor to the Secretary on scientific issues and ensures that DOT's research programs are scientifically and technologically well-founded and conducted with integrity.
2. In cooperation with the DOT Scientific Integrity Officer, oversees the implementation and iterative improvement of policies and processes affecting the integrity of research funded, conducted, or overseen by DOT, 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 DOT Scientific Integrity officer and modal Scientific Integrity Official's designation of, and agency compliance with corrective scientific actions when violations of this policy are substantiated.
4. Ensures agencies establish as necessary clear administrative actions for substantiated violations of Scientific Integrity policies, designating responsibility for each aspect of accountability (TF 2022).
5. The Chief Scientific Integrity Officer serves as the Deputy Chief Science Officer fulfilling the duties of the Chief Science Officer on a day-to-day basis, when the Chief Science Officer is not available, or if the Chief Science Officer position is vacant.

IV. DOT Scientific Integrity Officer

1. Keeps the Chief Science Officer and Chief Scientific Integrity Officer informed on the status of the implementation of this policy and any compliance concerns, as warranted.
2. Maintains an online annual Scientific Integrity report.
3. Develop implementation procedures within 240 days of the date of this policy to respond to Allegations of compromised Scientific Integrity in a timely, objective, and thorough manner.
4. Leads efforts for the iterative improvement of this 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.
5. Serves as a neutral point of contact for receiving Scientific Integrity questions and concerns and Allegations of compromised Scientific Integrity for the Office of the Secretary of Transportation (OST).
6. Serves as the final Appeal authority for the Department and is responsible for the Appeal process.
7. Coordinates with the Office of the General Counsel (OGC), OIG, the Office of Ethics, the Office of Human Resources Management, Office of Communications, the Office of the Chief Information Officer, and other offices, as necessary.
8. Reports any potentially criminal behavior to OIG that is uncovered during the course of responding to an Allegation of compromised Scientific Integrity and coordinate as appropriate related to the referral provided to OIG.
9. Serves as the Chair of the DOT Scientific Integrity Committee.

V. Modal Scientific Integrity Official

1. Designated career employee who holds a permanent appointment and has agency appropriate scientific credentials appointed at a senior level, for example as an ST (scientific or professional), Senior Leader (SL), or Senior Executive Service (SES).

2. Serves on the DOT Scientific Integrity Committee and acts as the primary modal contact for questions regarding Scientific Integrity and ensuring Scientific Integrity activities and outcomes are appropriately monitored and evaluated.
3. Reports to the DOT Scientific Integrity Officer on all matters involving Scientific Integrity. The Scientific Integrity Official is not compelled to provide confidential information about specific cases except as the DOT Scientific Integrity Officer deems appropriate and as consistent with applicable statute and regulation.
4. Responsible for implementation and iterative improvement of Scientific Integrity policies and processes.
5. Serves as a neutral point of contact for receiving Scientific Integrity questions and concerns and Allegations of compromised Scientific Integrity within the modal agency.
6. Conducts an initial assessment of Allegations and submitted materials to determine compromised Scientific Integrity and the appropriate handling of said allegations. Provide report of agency responses to Allegations of compromised Scientific Integrity referred for an inquiry or investigation, including:
 - a. Reviewing agency-submitted reports of Allegations and their disposition; and
 - b. Maintaining a status report of responses to Allegations as a means of monitoring the progress toward resolution;
 - c. Provides modal data as requested to the DOT Scientific Integrity Officer for annual report.
 - d. Coordinates with the appropriate modal offices for support as needed.
 - e. Reports any potentially criminal behavior to OIG that is uncovered during the course of responding to an Allegation of compromised Scientific Integrity and coordinate as appropriate related to the referral provided to OIG.
 - f. Keeps the Modal Agency Head informed on the status of the implementation of this policy and any compliance concerns, as warranted.
 - g. Coordinate with the DOT Scientific Integrity Officer in implementing DOT's scientific-integrity policies and processes.
 - h. Provide oversight for the implementation of the Scientific Integrity at DOT modal unit,
 - i. Act as liaisons for their respective modal units.
 - j. Assist with training and policy assessment, updates and amendments.
 - k. Be available to address any questions or concerns regarding this policy.

VI. Managers and supervisors

1. Comply with and ensure agency and employee compliance with the Scientific Integrity policy.
2. Respond to and refer to Allegations of compromised Scientific Integrity as appropriate.
3. Be aware of and uphold the principles contained in this policy and the Scientific Code of Conduct. Lead through example by upholding Scientific Integrity principles and communicating the importance of doing so.
4. Report any knowledge of potential losses of scientific integrity to the Scientific Integrity Official or designee.
5. 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 compromised Scientific Integrity.

6. Consult, as appropriate depending upon the nature of the Allegation, with the Scientific Integrity Official, human resources officer, contracting and grant personnel, and ethics officer.

VII. Employees

1. Should be aware of the principles contained in this policy and how the policy applies to their duties.
2. Comply with this policy.
3. Adhere to accepted professional values and practices of the relevant research and scientific communities so as to ensure Scientific Integrity;
4. Are encouraged to report to the Scientific Integrity Official or any Deputy Scientific Integrity Official any knowledge of compromised Scientific Integrity

Monitoring and Evaluating Scientific Integrity Activities and Outcomes

DOT will use OSTP's road map for scientific integrity policy evaluation to regularly monitor and evaluate ongoing Scientific Integrity activities and outcomes. The 2021 Presidential Memorandum charges OSTP to develop a framework to "inform and support the regular assessment and iterative improvement of agency scientific-integrity policies and practices, to support the Director and OSTP in ensuring that agencies adhere to the principles of scientific integrity." It specifies that the framework shall include assessment criteria that OSTP and agencies can use to inform, review, and improve the design and implementation of agency scientific-integrity policies.

Reporting

The DOT Scientific Integrity Officer 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 the DOT leadership on the status of Scientific Integrity within DOT, per the January 27, 2021, Presidential Memorandum. The report shall highlight scientific integrity successes and accomplishments across DOT, identify areas for improvement and develop a plan for addressing critical weaknesses, if any. It will also include the number of formal administrative investigations, inquiries and Appeals involving alleged or actual deviations from the Scientific Integrity policy and the number of investigations and pending Appeals.

Scientific Integrity Policy Intersections with Related and Supporting Policies

Scientific Integrity Officials shall have an awareness of policies and programs that intersect with the development of the culture of Scientific Integrity within the Department. 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 Department or 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, policy, 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.

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 the December 17, 2010, Office of Science and Technology Policy (OSTP) memorandum on Scientific Integrity. In no circumstance shall 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.

Professional Development and Advancement of Scientists. The December 17, 2010, OSTP memorandum on Scientific Integrity 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; 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. Because of existing power structures, racism, sexism, discrimination and other forms of bias in the workplace, scientific integrity and DEIA policies can intersect in many places. 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.

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. The December 17, 2010, OSTP memorandum on scientific integrity 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 shall be held to the highest standard of professional and scientific ethics, including those describes in the Code of Scientific Ethics/Conduct if one exists.

Credibility of the Science to Support Policy Decisions. The December 17, 2010, OSTP memorandum on scientific integrity 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. The January 27, 2021, Presidential Memorandum reinforces this stating that scientific or technological information considered in policy decisions should be subjected to well-established scientific processes.

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. Waivers of COI shall 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.

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.

References

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