Scientific Integrity Policy

United States
Environmental
Protection Agency

2025

USEPA 2025 Scientific Integrity Policy

I. Purpose

The U.S. Environmental Protection Agency (EPA) has established, and continues to promote, a culture of scientific integrity for all employees, contractors, grantees, and other covered entities. The purpose of this policy is to enhance and promote the integrity of all aspects of activities that include proposing, conducting, reviewing, managing, communicating about science and scientific activities, and providing robust science to inform decision makers. This policy supersedes the EPA's 2012 Scientific Integrity Policy[1] and reaffirms and reestablishes the expectations and procedures needed to maintain scientific integrity at the EPA. It also reaffirms the scope and role of the Scientific Integrity Official (SIO), a standing committee of agencywide Deputy SIOs (DSIOs), and establishes the role of Chief Scientist.

II. Background and Core Values

The agency has a longstanding commitment to scientific integrity. The EPA's ability to pursue its mission to protect human health and the environment depends upon the integrity of the science upon which it relies. The EPA's Scientific Integrity Policy does not bind decision-makers to particular policy outcomes but rather lays out processes and practices to ensure that the best available science is presented to agency decision-makers and informs the agency's work. The environmental policies, decisions, guidance, and regulations that impact the lives of people living in the United States every day must be grounded in

[1] EPA 2012 Scientific Integrity Policy as previously updated. Available at: https://www.epa.gov/scientific-integrity/epas-scientific-integrity-policy.

robust, independent, high-quality science. A strong culture of scientific integrity begins with ensuring a professional environment that is safe, equitable, and inclusive of all scientists.

In 1999, the EPA developed its Principles of Scientific Integrity[2] in conjunction with EPA's National Partnership Council, a partnership of agency labor unions and management. These principles set forth the agency's early commitment to conducting science objectively, presenting results fairly and accurately, and avoiding conflicts of interest.

In 2003, the EPA released Order 3120.5, Policy and Procedures for Addressing Research Misconduct,[3] addressing fabrication, falsification, and plagiarism. The Office of the Inspector General (OIG) has responsibility for reviewing and investigating allegations of fabrication and falsification of research, fraud, waste, and abuse. The OIG has delegated responsibility for addressing plagiarism to the SIO.[4]

In 2012, the EPA issued its first Scientific Integrity Policy, and in 2013 appointed its first full-time SIO based on provisions in both the 2009 Presidential Memorandum on Scientific Integrity,[5] and the 2010 Office of Science and Technology Policy Memorandum on Scientific Integrity.[6] Those documents, together with the 2021 Presidential Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-based Policymaking,[7] informed this updated Policy. This Policy was also informed by the EPA's decade of experience implementing the 2012 Scientific Integrity Policy, including analysis of each allegation of a loss of scientific integrity brought to the SIO, external[8] and internal comment periods, Tribal consultation,[9] and the results of agencywide scientific integrity surveys.[10] Also critical to the development of this Policy was the National Science and Technology Council's 2023 Framework for Federal Scientific Integrity Policy and Practice.[11]

III. Scientific Integrity Definition and the Scientific Integrity Official

The EPA has adopted the official federal definition of scientific integrity as defined in the National Science and Technology Council's 2023 Framework for Federal Scientific Integrity Policy and Practice.[12]

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[2] EPA's Principles of Scientific Integrity Fact Sheet. 1999. EPA. Available at: https://www.epa.gov/scientific-integrity/epas-principles-scientific-integrity-fact-sheet

[3] Order 3120.5 Policy and Procedures for Research Misconduct. 2003. Available at: https://www.epa.gov/sites/default/files/2014-04/documents/epapolicy.pdf

[4] Coordination Procedures between the Scientific Integrity Official and the Office of the Inspector General. March 30, 2015. Available at: https://www.epa.gov/scientific-integrity/coordination-procedures-between-scientific-integrity-official-and-office

[5] 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

[6] 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

[7] 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/

[8] External Scientific Integrity Comment Period notice and comments. Available at: https://www.federalregister.gov/documents/2024/01/24/2024-01313/scientific-integrity-policy-draft-for-public-comment

[9] EPA Tribal Consultation Web Page. Available at: https://www.epa.gov/tribal/consultation-tribes

[10] EPA Scientific Integrity Surveys. Available at: https://www.epa.gov/scientific-integrity/scientific-integrity-surveys

[11] A Framework for Federal Scientific Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

[12] Ibid.

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

While the responsibility for upholding scientific integrity lies with all EPA employees and other covered entities, the EPA has designated a senior career employee as the agency's SIO to champion and promote scientific integrity throughout the agency and to oversee implementation and iterative improvement of scientific integrity policies and processes. The SIO chairs the Scientific Integrity Committee, a standing committee of senior career employees designated as DSIOs representing each EPA office and region.

This Policy reaffirms the independent role of the SIO to further a culture of scientific integrity and to collect and protect information to support the review and evaluation of scientific integrity concerns. The Scientific Integrity Committee confirms implementation of recommendations to restore or strengthen scientific integrity and coordinates with appropriate agency authorities to enforce corrective and administrative actions, including those that may prevent scientific integrity concerns.

IV. Effective Date and Policy Amendments

This Policy is effective when issued. This Policy will be reviewed at least every three years[13] by the Scientific Integrity Committee to evaluate its effectiveness and adherence to applicable laws, regulations, and policies. Any resulting updates to this Policy will be led by the SIO and approved by the Scientific Integrity Committee. Future revisions will be communicated to the Director of the Office of Science and Technology Policy and posted to the EPA's public website no less than 30 days prior to their implementation.

V. Applicability and Scope

Scientific integrity is the responsibility of the entire EPA workforce. Covered entities who must adhere to all provisions of this Policy include: all EPA employees, political appointees, special government employees, and members of scientific or technical federal advisory committees.[14] The Policy applies when these covered entities propose, conduct, or review EPA science, communicate about EPA science or scientific activities, apply science to EPA decision making, or manage or supervise EPA scientific activities.

This Policy may also apply to EPA contractors[15] or grantees,[16] based on the terms of the contract or assistance agreement with the agency, and non-scientific or technical federal advisory committee members when they propose, conduct, or review EPA science, communicate about EPA science and

[13] The Scientific Integrity Policy may be reviewed annually for administrative updates, such as corrections and updates to references, citations, and links as needed.
[14] Throughout the rest of this document, we use the term "employees," which is inclusive of political employees, special government employees, and other government employee appointment mechanisms.
[15] Environmental Protection Agency Acquisition Regulation (EPAAR); Scientific Integrity. October 19, 2020. EPA. Available at: https://www.federalregister.gov/documents/2020/10/19/2020-20665/environmental-protection-agency-acquisition-regulation-epaar-scientific-integrity
[16] EPA General Terms and Conditions Effective October 1, 2024. Available at: https://www.epa.gov/grants/grant-terms-and-conditions

scientific activities, advise the EPA on the application of science to decision making, and use scientific information. All other individuals or entities such as, but not limited to, trainees, interns, fellows, partners, co-regulators (e.g., other federal agencies, states, territories, local municipalities and Tribes), permittees, lessees, and volunteers who engage or assist in EPA scientific activities are expected to uphold scientific integrity as established by this Policy and may be required to do so as part of their individual agreements, contracts, statements of work, memoranda of understanding, etc., and/or established via issuance of a rule or policy.[17]

VI. Authorities

This Scientific Integrity Policy is issued under Reorganization Plan No. 3 of 1970, 84 Stat. 2086 (July 9, 1970), which is the source of the agency's housekeeping authority, and builds upon federal law and existing agency and government-wide policies and guidance documents, enhancing the EPA's overall commitment to scientific integrity. This Policy will be implemented consistent with applicable law.[18]

Pursuant to the 2021 Presidential Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking,[19] and consistent with the 2009 Presidential Memorandum on Scientific Integrity[20] and the 2010 Office of Science and Technology Policy Memorandum on Scientific Integrity,[21] all federal agencies must establish a scientific integrity policy. This Policy is informed by the following legal authorities:

1. The America COMPETES Act, as amended US Pub. L. 110-69, section 1009[22]
2. The Foundations for Evidenced-based Policymaking Act of 2018, US Pub. L. 115-435[23]
3. The Whistleblower Protection Act (WPA) of 1989, as amended US Pub. L. 101-12[24]
4. Standards of Ethical Conduct for Employees of the Executive Branch, 5 CFR Part 2635[25]
5. The Federal Advisory Committee Act of 1972, US Pub. L. 92–463, §1, Oct. 1972, 86 Stat. 770[26]

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[17] Contractors and grantees do not supervise or manage agency science or make agency decisions. Therefore, they are treated differently as covered entities.

[18] Reorganization Plan No. 3 of 1970, 84 Stat. 2086. Available at: https://www.govinfo.gov/content/pkg/USCODE-2010-title5/html/USCODE-2010-title5-app-reorganiz-other-dup92.htm#:~:text=Eff.,of%20the%20United%20States%20Code

[19] 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/

[20] 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

[21] 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

[22] The America COMPETES Act, as amended US Pub. L. 110-69, section 1009. Available at: https://www.govinfo.gov/content/pkg/PLAW-110publ69/html/PLAW-110publ69.htm

[23] The Foundations for Evidenced-based Policymaking Act of 2018, US Pub. L. 115-435. Available at: https://www.congress.gov/115/statute/STATUTE-132/STATUTE-132-Pg5529.pdf

[24] The Whistleblower Protection Act (WPA) of 1989, as amended US Pub. L. 101-12. Available at: https://www.congress.gov/101/statute/STATUTE-103/STATUTE-103-Pg16.pdf

[25] Standards of Ethical Conduct for Employees of the Executive Branch, 5 CFR Part 2635. Available at: https://www.ecfr.gov/current/title-5/chapter-XVI/subchapter-B/part-2635

[26] The Federal Advisory Committee Act of 1972, US Pub. L. 92–463, §1, Oct. 1972, 86 Stat. 770. Available at: https://www.gsa.gov/policy-regulations/policy/federal-advisory-committee-management/legislation-and-regulations/federal-advisory-committee-act

6. Employee Responsibilities and Conduct, 5 U.S.C. 75, 5 CFR Part 735[27]
7. Federal Conflict of Interest Laws, 18 U.S.C. 201-209[28]
8. The Federal Managers Financial Integrity Act, FMFIA, US Pub. L. 97-255[29]

VII. Definitions for the Purposes of this Policy

Advice: Information or assistance provided by the SIO or any DSIO, including general discussions of administrative processes and procedures, clarifications of potential scientific integrity issues, clarification of any aspect of the EPA's Scientific Integrity Policy, and discussion of whether a concern is a scientific integrity issue. Advice and other early consultations are not considered allegations of a loss of scientific integrity.

Allegation: An accusation of a suspected loss of scientific integrity or violation of the EPA's Scientific Integrity Policy that is specifically designated as an allegation by the submitter.

Appearance of Loss of Impartiality: In carrying out their official duties, employees must first consider whether there are any factors that would cause a reasonable person with knowledge of the relevant facts to question their impartiality. Before participating, employees must seek clearance from an ethics official. Such circumstances include, but are not limited to, participating in a specific party matter that will have a direct and predictable financial effect upon a member of their household or if any of the following are involved: a close relative; the employee's former employer in the past year; or the employer of their spouse, parent, or child (even if an adult).[30]

Clearance: The process for obtaining line management approvals prior to a work product's external release or publication.[31]

Conduct of Science: Formulation of hypotheses, study design, testing, data collection and analysis, modeling, systematic review, statistical analysis, interpretation, findings, conclusions, peer review,[32] and other scientific activities.

Conflict of interest: From a federal ethics perspective, the term "conflict of interest" refers to representational or financial conflicts as defined in the conflicts of interest laws codified in Title 18 of the United States Code, §§ 201 to 209. Whether an employee has any federal ethics conflict is determined by agency ethics officials only and subject to federal ethics laws for any disclosure.

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[27] Employee Responsibilities and Conduct, 5 U.S.C. 75, 5 CFR Part 735. Available at: https://www.ecfr.gov/current/title-5/chapter-I/subchapter-B/part-735

[28] Federal Conflict of Interest Laws, 18 U.S.C. 201-209. Available at: https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title18-section201&num=0&edition=prelim

[29] The Federal Managers Financial Integrity Act, FMFIA, US Pub. L. 97-255. Available at: https://www.congress.gov/97/statute/STATUTE-96/STATUTE-96-Pg814.pdf

[30] Standards of Ethical Conduct for Employees of the Executive Branch, 5 C.F.R. § 2635.502(d). Available at: https://www.ecfr.gov/current/title-5/chapter-XVI/subchapter-B/part-2635/subpart-E/section-2635.502

[31] U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015 and Best Practices for Clearance of Scientific Products at EPA. Available at: https://www.epa.gov/sites/default/files/2018-05/documents/best_practices_for_clearance_of_scientific_products_at_epa_final_21may2018.pdf

[32] A Framework for Federal Scientific Integrity Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

Covered Entities: All EPA employees, political appointees, special government employees, and members of scientific or technical federal advisory committees. The Policy applies when these covered entities propose, conduct, or review EPA science, communicate about EPA science or scientific activities, apply science to EPA decision making, or manage or supervise EPA scientific activities.

This Policy may also apply to all EPA contractors[33] or grantees,[34] based on the terms of the contract or grant with the agency, and non-scientific or technical federal advisory committee members when they propose, conduct, or review EPA science, communicate about EPA science and scientific activities, advise the EPA on the application of science to decision making, and use scientific information. All other individuals or entities such as, but not limited to, trainees, interns, fellows, partners, co-regulators (e.g., other federal agencies, states, territories, local municipalities, and Tribes), permittees, lessees, and volunteers who engage or assist in EPA scientific activities are expected to uphold scientific integrity as established by this Policy and may be required to do so as part of their individual agreements, contracts, statements of work, memoranda of understanding, etc., and/or established via issuance of a rule or policy.[35]

Delay: Cause something to take longer than reasonably expected or planned, postpone, or slow the completion or release of something. Delay in this Policy refers to unreasonable actions and not to normal time frames or the time needed for the completion of required processes.

Differing Scientific Opinion (DSO): A differing opinion of an EPA scientist who is or was substantively engaged in the scientific activity that may inform an EPA decision. It generally contrasts with a prevailing staff opinion included in a scientific product under development that concerns scientific data, environmental information, analysis, interpretations, or conclusions, rather than policy options or decisions. "Substantively engaged in the science" refers to having contributed scientific expertise in an official capacity as a co-author, team member, or subject matter expert in the development of a scientific product, beyond presence at meetings or on mailing lists. If a scientist serves as a technical or peer reviewer, their scientific opinions should be included as part of the review consistent with the EPA's Peer Review Handbook. Scientific differences of opinion do not constitute insubordination or research misconduct and are part of the scientific process. A DSO does not include personal opinions about scientific issues that are not accompanied by scientific arguments.[36]

Ethical Behavior: Activities that reflect the norms for conduct that distinguish between acceptable and unacceptable behavior such as honesty, lawfulness, equity, and professionalism.[37]

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[33] Environmental Protection Agency Acquisition Regulation (EPAAR); Scientific Integrity. October 19, 2020. EPA. Available at: https://www.federalregister.gov/documents/2020/10/19/2020-20665/environmental-protection-agency-acquisition-regulation-epaar-scientific-integrity

[34] EPA General Terms and Conditions Effective October 1, 2024. Available at: https://www.epa.gov/grants/grant-terms-and-conditions

[35] Contractors and grantees do not supervise or manage agency science or make agency decisions. Therefore, they are treated differently as covered entities.

[36] Adapted from the EPA's Approaches for Expressing and Resolving Differing Scientific Opinions. Available at: https://www.epa.gov/scientific-integrity/approaches-expressing-and-resolving-differing-scientific-opinions

[37] This definition is from the Office of Science and Technology Policy's 2023 Framework for Federal Scientific Integrity Policy and Practice. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf. In addition, the federal government defines ethical behavior regarding managing conflicting financial interests and maintaining impartiality in the performance of official duties in its Standards of Ethical Conduct for Employees of the Executive Branch. Available at: https://www2.oge.gov/web/oge.nsf/Resources/5+C.F.R.+Part+2635:+Standards+of+Ethical+Conduct+for+Employees+of+the+Executive+Branch

Fabrication: Making up data or results and recording or reporting them.[38]

Falsification: Manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.[39]

Inappropriate Influence: 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, processes, and theories without scientific justification.[40]

Interference: Inappropriate, scientifically unjustified intervention in the conduct, management, communication, or use of science. It includes, but is not limited to, censorship, suppression, or distortion of scientific or technological findings, data, information, or conclusions; inhibiting scientific independence during clearance and review; scientifically unjustified intervention in research and data collection; and/or inappropriate engagement or participation in the peer review process or on federal advisory committees.[41] Interference in this Policy does not refer to non-scientific parts of policy decisions or changes in agency priorities.

Loss of Scientific Integrity: Failure, intentional or not, to adhere to the Scientific Integrity Policy or to the principles of honesty, objectivity, and transparency; professional practices; and/or ethical behavior when conducting, managing, using the results of, and communicating about science and scientific activities.

Peer Review: A documented process for enhancing a scientific or technical work product so that the decision or position taken by the agency, based on that product, has a sound, credible basis. It is performed by credible individuals who are independent of those who performed the work and who are at least collectively equivalent in technical expertise to those who performed the original work.[42]

Plagiarism: The appropriation of another person's ideas, processes, results, or words without giving appropriate credit[43] and without appropriate permissions.

Policy: A high-level statement of principles that defines a course of action for a specific purpose and establishes broad elements that govern the EPA's decision making.[44]

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[38] EPA Order 3120.5 Policy and Procedures for Addressing Research Misconduct. Available at: https://www.epa.gov/sites/default/files/2020-11/documents/epa_order_3120.5_policy_and_procedures_for_addressing_research_misconduct.pdf

[39] Ibid.

[40] A Framework for Federal Scientific Integrity Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

[41] A Framework for Federal Scientific Integrity Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

[42] Derived from the definition in U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015

[43] EPA Order 3120.5 Policy and Procedures for Addressing Research Misconduct. Available at: https://www.epa.gov/sites/default/files/2020-11/documents/epa_order_3120.5_policy_and_procedures_for_addressing_research_misconduct.pdf

[44] EPA Terms & Acronyms. January 2023. Available at: https://sor.epa.gov/sor_internet/registry/termreg/searchandretrieve/termsandacronyms/search.do?search=&term=Policy&matchCriteria=Contains&checkedAcronym=true&checkedTerm=true&hasDefinitions=true#formTop

Political Interference: Interference in the conduct, use, or communication of science directed or conducted by political officials and/or motivated by political considerations.[45] It also includes interference by career employees and other covered entities acting under the direction of a political appointee or for their own political purposes.

Professional Practices: Conducting oneself with the qualities that are characterized by skill, competence, ethics, and courtesy.[46] Professional practices may vary by scientific discipline and sub-discipline.

Quality: The totality of processes, procedures, features, and characteristics of a product or service that bear on its ability to meet the stated or implied needs and expectations of the user.[47]

Quality Assurance: The management of an integrated system of activities involving planning, implementation, documentation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed and expected by the organization.[48]

Research Misconduct: Fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results; or ordering, advising, or suggesting that subordinates engage in research misconduct. Research misconduct does not include honest error or differences of opinion.[49]

Research Security: Safeguarding the research enterprise against the misappropriation of research and development to the detriment of national or economic security, related violations of research integrity, and foreign government interference.[50]

Science: The careful study of the structure and behavior of the physical world, especially by watching, doing experiments, and developing theories to describe the results.[51] "Science" and "scientific" are expansive terms that refer to the full spectrum of scientific endeavors, e.g., basic science, applied science, engineering, technology, economics, social sciences (including program evaluation), and statistics, as well as the scientific and technological information derived from these endeavors.[52]

Scientific Activities: Activities that involve the development and application of scientific methods and theories in a systematic manner, including, but not limited to, data collection, inventorying, monitoring, statistical analysis, surveying, observations, experimentation, study, research, integration, economic

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[45] Adapted from A Framework for Federal Scientific Integrity Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

[46] Ibid.

[47] EPA IT/IM Directive: Environmental Information Quality Policy, Directive # CIO 2105.4. Available at: https://www.epa.gov/system/files/documents/2024-03/enviornmental_information_quality_policy.pdf

[48] Ibid.

[49] Policy and Procedures for Addressing Research Misconduct EPA Order 3120.5 (March 18, 2003). Available at: https://www.epa.gov/sites/default/files/2014-04/documents/epapolicy.pdf

[50] Protecting the Integrity of Government Science. January 2022. NSTC. Available at: https://www.whitehouse.gov/wp-content/uploads/2022/01/01-22-Protecting_the_Integrity_of_Government_Science.pdf

[51] Science. February 2023. The Cambridge Dictionary. Available at: https://dictionary.cambridge.org/us/dictionary/english/science

[52] Protecting the Integrity of Government Science. January 2022. NSTC. Available at: https://www.whitehouse.gov/wp-content/uploads/2022/01/01-22-Protecting_the_Integrity_of_Government_Science.pdf

analysis, forecasting, predictive analytics, inference, modeling, technology development, scientific assessment,[53] and qualitative analysis.

Scientific Information: Including, but not limited to, inputs, data (including knowledge acquired via lived experience), models, outputs, analyses, technical information, or scientific assessments related to such disciplines as the behavioral and social sciences, public health and medical sciences, life and earth sciences, engineering, mathematics, statistics, or physical sciences. This includes any communication or representation of knowledge, such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. Environmental information, as defined by the EPA's Environmental Information Quality Policy,[54] is a subset of scientific information.

Scientific Integrity: The adherence to professional practices, ethical behavior, and the principles of honesty and objectivity when conducting, managing, using the results of, and communicating about science and scientific activities. Inclusivity, transparency, and protection from inappropriate influence are hallmarks of scientific integrity.[55]

Scientific Products: Work products that contain scientific information. These include, but are not limited to, journal publications, reports, abstracts, posters, presentations, audio recordings, videos, web content, risk assessments, technical studies and guidance, analytic methods, scientific database designs, technical tools and models, technical protocols, statistical surveys/studies, technical background materials, research plans, and research strategies. They can support a research agenda, regulatory program, policy position, or other EPA position or action.[56]

Scientist: An individual whose responsibilities include collection, generation, use, or evaluation of scientific and technical data, analyses, or products. This includes, but is not limited to, federal scientists, contractors, and trainees. It does not refer to individuals with scientific and technical training whose primary job functions are in non-scientific roles (e.g., policymakers, communicators).[57]

Suppression: The act of preventing something from being seen, expressed, documented, or known.[58]

Transparency: Ensuring all relevant data and information used to inform decision making or actions are visible and accessible by affected or interested parties to the extent practicable and permitted by law.[59]

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[53] Derived from the definition in A Framework for Federal Scientific Integrity Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

[54] EPA IT/IM Directive: Environmental Information Quality Policy, Directive # CIO 2105.4. Available at: https://www.epa.gov/system/files/documents/2024-03/enviornmental_information_quality_policy.pdf

[55] A Framework for Federal Scientific Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

[56] U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015

[57] A Framework for Federal Scientific Integrity Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

[58] Derived from the Cambridge Dictionary. Available at: https://dictionary.cambridge.org/us/dictionary/english/suppression?q=Suppression

[59] After the definition in A Framework for Federal Scientific Integrity Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf

VIII. Policy Provisions

Promoting a Culture of Scientific Integrity

The EPA reaffirms and will continue to promote a culture of scientific integrity across the agency by enhancing transparency and protecting agency science and employees who conduct, manage, use, and communicate science. This means (1) creating an empowering environment conducive to innovation and progress, (2) safeguarding agency science and scientists, and (3) preserving the integrity of the scientific process and the communication of science. Scientific findings and products must not be interfered with, suppressed, unreasonably delayed, or altered for political purposes and must not be subjected to inappropriate influence. EPA standard operating procedures, methodologies, and guidance that determine how scientific information is collected, produced, evaluated, or used should be peer reviewed.

Scientific integrity is everyone's responsibility. All EPA employees and other covered entities will recognize, support, and promote this Policy and its underlying principles, as well as model behavior exemplary of a strong culture of scientific integrity.

A strong culture of scientific integrity begins with ensuring a professional environment that is safe, equitable, inclusive, and free from harassment. The considerations of diversity, equity, inclusion, and accessibility are integral to the scientific process, including the responsible and ethical conduct of research and other scientific activities.

Successful application of science to inform agency decisions relies on the integrity of the scientific process both to ensure the validity of scientific information and to engender public trust in the agency. Thus, it is essential that EPA decision makers involve scientists with appropriate expertise on scientific issues and that the scientific information and processes relied upon for decision making manifest scientific integrity.

To enhance our culture of scientific integrity, the EPA will post this Policy prominently on its website[60] and take other measures, such as agencywide meetings, trainings, and mass mailers, to keep scientific integrity visible at the EPA. As part of its mandate, the Scientific Integrity Committee oversees the development and implementation of training related to scientific integrity for all agency employees and as permitted by law, for other covered entities.

All employees and other covered entities who are required to do so by the terms of a grant or contract with the agency will receive scientific integrity training within three months of when their work at the EPA commences to make them aware of their responsibilities under this Scientific Integrity Policy. The EPA will also provide biennial training for those at the EPA who propose, review, conduct, manage, use the results of, and communicate about science and scientific activities. Training will be tracked, and DSIOs will ensure completion.

To promote scientific integrity at the EPA, this Policy details seven specific areas:

1. Protecting Scientific Processes
2. Reviewing Science, Including the Use of Federal Advisory Committees
3. Ensuring the Free Flow of Scientific Information
4. Supporting Decision Making Processes

[60] EPA Scientific Integrity Policy. Available at: https://www.epa.gov/scientific-integrity/epas-scientific-integrity-policy

5. Ensuring Accountability
6. Protecting Employees
7. Encouraging Professional Development for Government Scientists

1. Protecting Scientific Processes

A work environment that shields the conduct and products of science, their use in decision making, and their communication from political interference and inappropriate influence is necessary for science and public trust in science to thrive. Scientific integrity is essential for and fosters honest scientific investigation, open discussion, refined understanding, and a firm commitment to evidence. It also requires consideration of DSOs and their transparent documentation and other well-established processes that ensure scientific integrity.

To protect the integrity of the scientific process, it is the policy of the EPA to:

a. Require the use of proper and appropriate methods and processes in conducting research and adherence to practices and scientific guidelines to ensure the quality of research and other scientific activities. Standard operating procedures and processes and quality assurance practices that determine the development or review of scientific products shall be adhered to and applied consistently.
b. Prohibit research misconduct, consistent with EPA Order 3120.5. Research misconduct does not include honest errors or differences of opinion.[61]
c. Require that research involving the participation of human subjects[62,63] and the use of non-human animals[64,65,66] and Dual Use Research of Concern[67] are conducted in accordance with applicable, established laws, regulations, policies, guidance, and ethical considerations.
d. Prohibit the interference, inappropriate influence, suppression, or unreasonable delay by any covered entity in the design, proposal, conduct, review, management, evaluation, or reporting of scientific activities and the use of scientific information. This includes directing or suggesting that another covered entity interfere, inappropriately influence, or unreasonably delay scientific activities. Violations of this Policy include attempts to interfere with scientific processes regardless of the outcome of those attempts.
e. Require that agency leadership not knowingly direct or suggest scientifically unjustified changes to scientific content.

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[61] Federal Policy on Research Misconduct 65 FR 76260-76264. Available at: https://www.federalregister.gov/documents/2000/12/06/00-30852/executive-office-of-the-president-federal-policy-on-research-misconduct-preamble-for-research

[62] Regulations, policies, and guidance regarding human subjects research. Available at: https://www.epa.gov/scientific-leadership/human-subjects-research

[63] 2017 Basic EPA Policy for Protection of Subjects in Human Research Conducted or Supported by EPA (Federal Register / Vol. 82, No. 12 / Thursday, January 19, 2017 / Rules and Regulations) 40 CFR 26, and FDA Policy for the Protection of Human Subjects outlined in 21 CFR 50, 56, 312 and 812. Available at: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-A/part-26/subpart-A

[64] U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training. Available at: https://olaw.nih.gov/policies-laws/gov-principles.htm

[65] United States Department of Agriculture Animal Welfare Act (AWA) and regulations (AWAR). Available at: https://www.nal.usda.gov/animal-health-and-welfare/animal-welfare-act

[66] Health Research Extension Act (HREA). Available at: https://olaw.nih.gov/policies-laws/hrea-1985.htm

[67] Policy and Procedures for Managing Dual Use Research of Concern, EPA Order 1000.19 (09/14/2016). Available at: https://www.epa.gov/sites/default/files/2017-03/documents/1000_19.pdf

f. Require reasonable efforts by all employees and other covered entities to ensure the accuracy of agency records including scientific records; show appropriate diligence toward protecting and conserving records of data, results, and information that are entrusted to them; correct identified inaccuracies that pertain to their contribution to any scientific records; and comply with agency policies and procedures for planning and conducting scientific activities and record keeping.[68]
g. Design and conduct scientific activities (including their products) independent of any pre-determined or desired outcome. The scope of scientific activities should be appropriate to the question at hand and applicable statutes. Outcomes of scientific work must be based on evidence and transparently documented methods and approaches and not on a pre-determined opinion, decision, or desired outcome.
h. Expect the independent validation of scientific and laboratory methods and models.
i. Ensure that all novel methods or models are appropriately peer reviewed prior to use in EPA decision making.
j. Require that all 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, individuals shall have made a substantial intellectual contribution, written or provided editorial revisions that include critical intellectual content, approved the final version, and agreed to be accountable for their contributions to the work.[69]
k. Provide opportunity for scientific review by EPA scientists prior to finalization, regarding scientific accuracy and the application of their science in agency products that significantly rely on that scientist's research, identify them as an author, or represent their scientific opinion. The scientist(s) shall be given the option and sufficient time to review the scientific content of the proposed product. In the case of differing scientific opinions, scientist(s) are encouraged to consult the Approaches for Expressing and Resolving Differing Scientific Opinion document[70] and, as needed, their management chain, DSIO, the SIO, or the Chief Scientist for resolution.
l. Identify and maintain timelines for scientific products and activities in a manner that ensures the accuracy, completeness, utility, and quality of scientific information while also planning for legal and regulatory requirements.
m. Require that all employees and other covered entities design, conduct, manage, evaluate, and report scientific research and other scientific activities honestly and thoroughly, and disclose any scientific conflicts of interest to their supervisor or other appropriate agency official(s).
n. Ensure that any concerns about financial or representational conflicts of interest or any appearance of loss of impartiality of federal employees are raised to the relevant ethics official(s) who will determine and document the appropriate ethics remedy, consistent with all applicable federal ethics rules.
o. Prohibit inappropriate restrictions on resources and capacity that selectively limit or reduce the conduct or availability of science and scientific products outside of normal budgetary or priority-setting processes or without scientific justification.
p. Ensure the independent assessment of agency scientific facilities and testing activities, such as occurs with accreditation by a nationally or internationally recognized sanctioning body and as called for by agency policy.

[68] Records management information. Available at: https://www.epa.gov/records
[69] For more information and examples, reference Best Practices for Designating Authorship. Available at: https://www.epa.gov/scientific-integrity/authorship-best-practices
[70] Approaches for Expressing and Resolving Differing Scientific Opinions. Oct. 8, 2020. EPA. Available at: https://www.epa.gov/scientific-integrity/approaches-expressing-and-resolving-differing-scientific-opinions

q. Prohibit knowingly directing economists, analysts, and other scientists to change the quantification and valuation of benefits and costs based on internal or external political concerns. The agency's economic analyses, including benefit-cost analyses, are products intended to inform the decision making process, like risk assessments and other scientific assessments. Further, an economic assessment should not be changed except as needed to correct technical errors in the science or application of science or incorporate scientifically justified information.[71]

r. Provide that scientific information derived from emerging modes of science, such as participatory science and community-engaged research, that are considered in EPA decision making, are subject to well-accepted scientific processes.[72] The EPA's Meaningful Engagement Policy may also be useful.[73]

s. Ensure that artificial intelligence tools are used consistent with agency and federal government policy.[74] Care should be taken that any future permitted uses are closely monitored to be sure they do not violate this Policy, for example, as concerns authorship and attribution.[75]

t. Enhance the security and integrity of the EPA research enterprise and protect against foreign government interference and misappropriation, while maintaining an open environment to foster research discoveries and innovation. Research security policies, such as the National Security Presidential Memorandum 33 (NSPM-33)[76] and subsequent Guidance for Implementing NSPM-33,[77] provide guidance for guarding against foreign abuses and protecting intellectual property rights by coordinating appropriate and effective risk management.

u. Consult and collaborate with Tribal Nations and Indigenous peoples to include Indigenous Knowledge in decision making as appropriate. Ensure that Indigenous Knowledge is not obtained and included in EPA decision making without first obtaining consent and communicating federal abilities and limitations to protect Indigenous Knowledge provided to the EPA from disclosure or re-use.[78]

2. Reviewing Science, Including the Use of Federal Advisory Committees[79]

Independent review of agency science is crucial to scientific integrity at the EPA. To ensure that scientific and technical work products undergo appropriate peer review by qualified experts, the EPA relies on its

[71] The EPA's Guidelines for Performing Economic Analyses provides scientific considerations for assessing benefits, costs, and economic impacts. Available at: https://www.epa.gov/environmental-economics/guidelines-preparing-economic-analyses-2016

[72] Policy Guidelines and Checklist for EPA Participatory Science Projects. Available at: https://www.epa.gov/participatory-science/policy-guidelines-checklist-participatory-science-projects

[73] EPA Meaningful Engagement Policy. Available at: https://www.epa.gov/environmentaljustice/epas-meaningful-engagement-policy

[74] EPA's Artificial Intelligence Compliance Plan. Available at: https://www.epa.gov/data/ai-compliance-plan

[75] Ibid.

[76] Presidential Memorandum on United States Government-Supported Research and Development National Security Policy. January 14, 2021. Available at: https://trumpwhitehouse.archives.gov/presidential-actions/presidential-memorandum-united-states-government-supported-research-development-national-security-policy/

[77] Guidance for Implementing National Security Presidential Memorandum 33 (NSPM-33) on National Security Strategy for the United States Government-Supported Research and Development. January 2022. Available at: https://www.whitehouse.gov/wp-content/uploads/2022/01/010422-NSPM-33-Implementation-Guidance.pdf

[78] Guidance for Federal Departments and Agencies on Indigenous Knowledge. Available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/OSTP-CEQ-IK-Guidance.pdf

[79] This section does not apply to peer review conducted by journals in their consideration of a manuscript for publication.

Peer Review Policy[80] and Peer Review Handbook.[81] The Peer Review Handbook describes the range of peer review options, from individual letter reviews from outside experts to large, formal reviews such as by EPA federal advisory committees (FACs) or the National Academies of Sciences, Engineering, and Medicine. FACs play a vital role in peer review. They are a critical tool for ensuring the credibility, quality, and transparency of agency science, and enhancing the transparency of the peer review process. In almost all cases, FACs meet and deliberate in public, and materials prepared by or for the FAC are made available to the public. At the EPA, FACs are overseen by the Federal Advisory Committee Management and Oversight Division (FACMOD) with legal support from the Office of General Counsel (OGC). All EPA FACs are expected to comply with the requirements of the Federal Advisory Committee Act (5 USC Chapter 10),[82] the Federal Advisory Committee Management regulations issued by the U.S. General Services Administration (41 CFR Part 102-3),[83] the EPA's Federal Advisory Committee Handbook,[84] and guidance that lobbyists not serve on FACs.[85]

a. Peer Review

It is the policy of the EPA to:

i. Adhere to applicable agency peer review policies and procedures, so that the agency produces scientific products of the highest quality, rigor, and objectivity for use to inform agency decisions.[86]
ii. Independently peer review science that is the basis of or informs EPA decisions in accordance with the EPA's Peer Review Policy[87] and Peer Review Handbook.[88]
iii. Address scientific questions relevant to agency decision making in peer review charge questions, which may include those raised in DSOs expressed during prior internal agency review, and ensure charge questions are free from any political interference or inappropriate influence.
iv. Utilize a recruitment and selection process for scientific and technical FAC members and other EPA peer reviewers that is as transparent as practicable and free from conflicts of interest. When recruiting for scientific and technical FAC members, the EPA will announce scientific and technical FAC member vacancies widely, including notification in the Federal Register, with an invitation for the public to recommend individuals for consideration and

[80] Memorandum on Peer Review and Peer Involvement at EPA. January 31, 2006. EPA. Available at: https://www.epa.gov/sites/default/files/2015-01/documents/peer_review_policy_and_memo.pdf
[81] U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015
[82] Federal Advisory Committee Act Title 5 United States Code, Chapter 10 (1972). October 7, 2010. Available at: https://uscode.house.gov/view.xhtml?path=/prelim@title5/part1/chapter10&edition=prelim
[83] Title 41 Code of Federal Regulations, Part 102-3 (2006) Federal Advisory Committee Management. July 19, 2001. Available at: https://www.ecfr.gov/current/title-41/subtitle-C/chapter-102/subchapter-A/part-102-3
[84] EPA Federal Advisory Committee Handbook (August 2021).
[85] The White House, Office of the Press Secretary (2010) Presidential Memorandum – Lobbyists on Agency Boards and Commissions. June 18, 2010. Available at: https://obamawhitehouse.archives.gov/the-press-office/presidential-memorandum-lobbyists-agency-boards-and-commissions
[86] U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015
[87] Memorandum on Peer Review and Peer Involvement at EPA. January 31, 2006. EPA. Available at: https://www.epa.gov/sites/default/files/2015-01/documents/peer_review_policy_and_memo.pdf
[88] U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015

for the submission of self-nominations.[89] For other peer review, the EPA should also make the solicitation for reviewers widely available.

v. Select peer reviewers, including internal and external scientific reviewers and scientific and technical FAC members, based on expertise, knowledge, contribution to the relevant subject area, and balance of the scientific or technical points of view represented by the reviewers. When an EPA scientific or technical FAC conducts a peer review, the agency shall endeavor to ensure that all necessary scientific viewpoints and expertise relevant to the scientific issues under review are represented.[90]

vi. Use best practices for selecting reviewers and conducting scientific review for contractor-led peer reviews, including review for conflicts of interest and selection based on expertise and familiarity with the subject matter with as much transparency as is practicable.[91]

vii. Evaluate external peer reviewers and scientific and technical FAC members for conflicts of interest prior to selection and transparently address any conflicts of interest to determine whether the conflicts are substantive and warrant preclusion of the reviewer from selection or participation in the review.[92]

viii. Appoint members of scientific and technical FACs as special government employees, except when prohibited by law, and make all conflict of interest waivers granted to committee members publicly available (e.g., via a website).[93]

ix. Make professional biographical information (including current and past professional affiliations) for appointed peer reviewers and scientific and technical FAC members widely available to the public (e.g., via a website) subject to the Privacy Act of 1974 and other statutory/regulatory considerations. Such information should clearly illustrate the individuals' qualifications for serving.[94]

x. Ensure that external reviewers of EPA science, including members of scientific and technical FACs appointed as special government employees, receive onboarding training on EPA's Scientific Integrity Policy and that designated federal officials provide them with access to this Policy.

xi. Treat all reports, recommendations, and products produced by FACs as solely the findings of such committees rather than of the EPA, and thus not subject them to intra- or inter-agency revision except when explicitly stated in a prior agreement between the EPA and a FAC.[95]

b. Other Scientific Review

Agency scientific products are often subject to other types of scientific review, including internal agency review and interagency review by other federal agencies. It is the policy of the EPA to:

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[89] Memorandum for the Heads of Executive Departments and Agencies; Ensuring Free, Immediate, and Equitable Access to Federally Funded Research. Office of Science and Technology Policy. August 2022. Available at: https://www.whitehouse.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-Access-Memo.pdf

[90] Ibid.

[91] U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015

[92] Memorandum for the Heads of Executive Departments and Agencies; Ensuring Free, Immediate, and Equitable Access to Federally Funded Research. Office of Science and Technology Policy. August 2022. Available at: https://www.whitehouse.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-Access-Memo.pdf

[93] Ibid.

[94] Ibid.

[95] Ibid.

i. Document in writing and, as appropriate, make publicly available comments received on draft scientific documents during any interagency review. Provide for authors to make the final determination concerning suggested changes to scientific content in response to internal and external (including interagency) comments, consistent with the EPA's Peer Review Handbook.
ii. Consult early with the EPA offices and regions on scientific products that substantively impact their office or region and provide sufficient time for scientific review.

3. Ensuring the Free Flow of Scientific Information

Scientific research and analyses inform many EPA decisions. This Policy recognizes the importance of, and the need to foster, a culture of openness regarding the results of research, scientific activities, and technical findings. Therefore, the agency shall ensure that scientific research and results are presented openly and with integrity, accuracy, and timeliness.

Before release, scientific products go through clearance, which is an internal review and approval process implemented by managers. The EPA makes its reports, data, tools, and models and associated code publicly available to allow access to EPA scientific results and use of publicly available tools and models. Scientific and technological information produced by or funded by the EPA will be disseminated to the extent allowed by and consistent with privacy[96] and classification standards,[97,98] government policies, and responsible communication of scientific information. The EPA strongly encourages and supports transparency and active, open communications through mechanisms including, but not limited to, publication in peer-reviewed or refereed journals, conference papers and presentations, along with communication to the general public via media interviews, responses to Congressional inquiries, web postings, and news releases.

This Policy outlines the agency's expectations for developing and communicating scientific information to the scientific community, to the public, to Congress, and to the news media uncompromised by political interference or inappropriate influence.

It is the policy of the EPA to:

a. Clearance
   i. Require adherence to agency clearance procedures for all scientific products prepared as part of an employee's official duties (including, but not limited to, manuscripts for scientific journals, presentations for workshops, conferences, and symposia).
   ii. Allow managers in the clearance chain to suggest edits to a scientific product or ask for additional scientific review during clearance. Managers shall allow authors to review changes or edits for scientific accuracy and ensure DSOs were addressed. Clearance reviews shall be focused on scientific quality considerations (e.g., the methods used are clear and appropriate, the presentation of results and conclusions is accurate and impartial, and does

[96] The Privacy Act of 1974, as amended, 5 U.S.C. § 552a. Available at: https://www.law.cornell.edu/uscode/text/5/552a Available at: https://www.govinfo.gov/content/pkg/USCODE-2023-title5/pdf/USCODE-2023-title5-partI-chap5-subchapII-sec552a.pdf
[97] 32 CFR Part 2001 Classified National Security Information. Available at: https://www.ecfr.gov/current/title-32/subtitle-B/chapter-XX/part-2001
[98] Executive Order 13526 Classified National Security Information. Available at: https://www.archives.gov/isoo/policy-documents/cnsi-eo.html

not include policy statements unless the authors are otherwise authorized to include such content).

iii. Require that clearance processes include provisions for timely clearance and expressly forbid unreasonable delay and suppression of scientific products without scientific justification. Authors are responsible for completion of manuscripts and other products subject to clearance to allow time for the clearance process. Clearance should generally not result in missing media and other publication deadlines or the removal of EPA scientists from joint publications with external co-authors.

iv. Not suppress, unreasonably delay, or alter scientific findings and products for non-scientific reasons or due to political interference or inappropriate influence. This includes scientific findings and products generated by contractors, grantees, or other agency partners who assist with developing or applying the results of scientific activities.

v. Have timely and consistent clearance of scientific products in all EPA offices and regions through well-documented clearance processes.

vi. Facilitate the free flow of scientific information, as appropriate and consistent with applicable law. The EPA promotes access to EPA-funded scientific information in a timely fashion consistent with the agency's open data and public access policies.[99]

vii. Develop mechanisms to resolve internal disputes that may arise related to releases of scientific information.

viii. Inform EPA employees and increase awareness of the agency's Elevation Policy and associated internal web tool for providing agency senior management with notice of a perceived unaddressed significant risk to public health or the environment that is within the scope of the EPA's authorities.[100]

ix. Permit agency employees to objectively communicate their cleared scientific activities without political interference or inappropriate influence.

b. Communication with the Public and the Media:

i. Support agency employees' participation in communications with the media regarding their scientific activities and areas of scientific expertise in their official capacities where appropriate.

ii. Expect scientists and managers to notify and coordinate with appropriate agency offices and regions that might receive public inquiries to ensure that scientific information for the general public and media is clearly, comprehensively, consistently, and accurately presented and explained. In communicating with the media, scientists are advised to take advantage of advice or assistance from trained EPA career communications experts.

iii. Expect agency employees to notify their supervisors or other appropriate officials before, or if unable to do so, as soon as possible after they respond to media inquiries regarding their cleared scientific or technical findings in their official capacity.

iv. Require that scientists not make or publish statements that could be construed as being judgments of, or recommendations on, the EPA or any other federal government policy when speaking or writing on behalf of the EPA unless they have secured appropriate prior approval to do so. When acting in their official capacity, such communications shall remain

[99] Open Data Policies. Available at: https://www.epa.gov/data/open-data-policies

[100] EPA's Elevation Policy. Available at: https://www.epa.gov/aboutepa/reaffirming-epas-elevation-policy-2024

within the bounds of their cleared scientific or technological findings, unless specifically otherwise authorized.

v. Allow employees to express personal views by not limiting their right to communicate with the media or the public in their personal capacities subject to the applicable federal ethics rules including misuse of position.[101] For example, if writing or speaking in a personal capacity on topics that relate to official duty, then employees may not be able to accept compensation and may not be able to refer solely to their EPA positions and titles. After consultation with an ethics official, they may also be required to include a disclaimer that meets the requirements of EPA Ethics. Employees are encouraged to consult with an agency ethics official in advance.

vi. As resources allow, offer communication and media training to agency employees to expand their ability to clearly communicate their scientific findings and understand their role in communicating scientific information.

vii. Accurately represent the work and conclusions of work funded/supported by the federal government in agency communications.

viii. Allow EPA employees to review and correct the scientific content of any proposed agency communications document intended for public dissemination that significantly relies on their research or analysis or identifies them as an author.

ix. Require that covered entities, including public affairs officers, not alter nor direct that agency experts alter their scientific or technological findings or the presentation of those findings in a manner that may compromise the objectivity or accurate representation of the scientific information in a product.

x. Require the Office of Public Affairs to closely coordinate with involved agency scientists to ensure the accuracy of any agency scientific information to be issued by EPA communications based on or informed by science, including during a nationally significant incident or environmental crisis.

xi. Have the Office of Congressional and Intergovernmental Relations coordinate with agency scientists and managers to ensure that Congressional inquiries, official testimony, and other requests regarding EPA science receive accurate and responsive answers. If testifying before Congress in their official capacity (i.e., on behalf of the EPA), agency experts should communicate on matters associated with their work or area(s) of expertise in an accurate and clearly understandable manner. As appropriate, scientists shall be permitted to testify on their scientific results.

xii. Accurately represent the work and conclusions of agency employees in official agency social media communications. When communicating on social media in their personal capacities, EPA scientists may express their personal views and opinions provided they do so pursuant to the applicable federal ethics rules.[102] If employees disclose their EPA employment on

[101] Federal ethics rules at 5 C.F.R. Part 2635. Available at: https://www.ecfr.gov/current/title-5/chapter-XVI/subchapter-B/part-2635?toc=1; EPA Supplemental Ethics Regulations at 5 C.F.R. Part 6401. Available at: https://www.ecfr.gov/current/title-5/chapter-LIV/part-6401; The representational conflict of interest laws at 18 U.S.C. §§ 203. Available at: https://www.govinfo.gov/content/pkg/USCODE-2009-title18/pdf/USCODE-2009-title18-partI-chap11-sec203.pdf; Federal ethics rules at 5 C.F.R. Part 2635. Available at: https://www.ecfr.gov/current/title-5/chapter-XVI/subchapter-B/part-2635?toc=1

[102] Standards of Ethical Conduct for Employees of the Executive Branch, 5 C.F.R. Part 2635. Available at: https://www.ecfr.gov/current/title-5/chapter-XVI/subchapter-B/part-2635?toc=1

their personal social media, a disclaimer clarifying that the account or communication represents personal views shall be included.[103]

xiii. Require that social media managers correct any scientific errors identified by scientists whose work is represented in EPA social media.

xiv. Allow EPA scientists to respond to internal or external scientific criticisms of EPA scientific products, findings, or conclusions that they were significantly involved in developing.

4. Supporting Decision Making Processes

The science that informs EPA decisions must be derived from appropriate and accepted practices and procedures that ensure its credibility, accuracy, utility, rigor, independence and objectivity, transparency, and ethics. Scientific integrity requires the distinction between scientific information, analyses, and results, and the policy decisions informed by that science.

As determined by statutory authority, decision makers within the agency may weigh the science along with additional factors, such as practicality and economic and societal impact, when making science-informed decisions.

It is the policy of the EPA to:

a. Ensure the quality and accuracy of scientific information used to support policy and decision making, including:
   i. Using scientific information that is subject to well-accepted scientific processes.
   ii. Using the best available science to inform science-based decisions and requesting scientific data and scientific information from regulated entities when it is permitted by law and necessary to ensure all regulatory decisions are fully informed and based on the best available science.
   iii. Accurately communicating the science upon which a policy decision is based.
b. Conduct peer review and quality assurance reviews by qualified experts on scientific data, information, and research used to support policy decisions, where feasible and appropriate, and consistent with law in accordance with the EPA's Peer Review Handbook.
c. Ensure that draft science documents are appropriately reviewed[104] and finalized for use in decision making. Draft documents that are released as part of transparency efforts should not be used in decision making and are not considered disseminated as defined by the Office of Management and Budget.[105]
d. Be transparent as to the criteria for consideration of science where a statute gives the agency discretion in weighing scientific information in its actions and make the criteria publicly available.
e. Use the Action Development Process (ADP) for any action that is informed by science and covered by the ADP.

[103] Ethics Disclaimers chart or consult with your agency ethics official or EPA Ethics (ethics@EPA.gov)

[104] U.S. Environmental Protection Agency Science and Technology Policy Council Peer Review Handbook 4th Edition (2015). October 2015. EPA. Available at: https://www.epa.gov/scientific-leadership/peer-review-handbook-4th-edition-2015

[105] Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication. Available at: https://www.federalregister.gov/documents/2002/02/22/R2-59/guidelines-for-ensuring-and-maximizing-the-quality-objectivity-utility-and-integrity-of-information

f. Ensure participating members and scientists in an ADP workgroup are cognizant of potential scientific integrity issues and seek to review and resolve any potential and actual issues as early as possible within the ADP or elevate them to their DSIO or the SIO.
g. Have appropriate scientific expertise represented on ADP workgroups for actions that are informed by science. Scientific perspectives of internal stakeholder offices should be considered in decisions informed by science.
h. Recognize the expression of DSOs as a legitimate and necessary part of the scientific process. When DSOs are raised, and when resolved, include a description of the DSO and any resolution, in draft materials during both policy and scientific decision making processes where appropriate and allowable by law. When an agency employee who is substantively engaged in a scientific project disagrees with the scientific data, scientific information, interpretations, or conclusions that are part of that project or that may be relied upon for any decision making, the employee is encouraged to express that scientific opinion complete with rationale and in writing. "Substantively engaged in the science" refers to having contributed scientific expertise in an official capacity as a co-author, or team member, or subject matter expert in the development of a scientific product, beyond presence at meetings or on mailing lists. The EPA has developed Approaches for Expressing and Resolving Differing Scientific Opinions[106] to assist scientists with this process. If DSOs are not resolved during internal deliberations, they can be part of peer review charge questions. When there is no peer review, the DSO will be represented in the agency draft and in deliberative documents for the decision maker's consideration. This does not apply to policy options or decisions or address personal opinions about scientific issues that are not accompanied by scientific arguments.
i. Prohibit decision makers from misrepresenting, exaggerating, or downplaying areas of scientific uncertainty in scientific, policy, and communications documents and in scientific sections of policy decisions.
j. Require open and honest communication at all levels, including opportunities for staff to contact senior leaders regarding scientific issues without fear of retaliation, retribution, or reprisal and encourage they report claims of retribution, retaliation, or reprisal to the OIG[107] or Office of Special Counsel.[108]
k. Where legally permissible and appropriate and without recommending a specific agency action, allow authors of scientific products to include descriptive content about the historical and current policy context for scientific content, as part of explaining the motivation for the work and the rationale for selection of hypotheses.
l. Where legally permissible and appropriate, enable EPA scientists to directly participate in policy and management discussions that inform decisions where their science is significantly relied on so that the science is accurately represented and interpreted.

5. Ensuring Accountability

Safeguarding scientific integrity includes procedures to encourage reporting of concerns and potential losses of scientific integrity; addressing concerns; and when concerns or alleged losses of scientific integrity are found to be valid, restoring scientific integrity, correcting the scientific record, and making

[106] Approaches for Expressing and Resolving Differing Scientific Opinions. Oct. 8, 2020. EPA. Available at: https://www.epa.gov/scientific-integrity/approaches-expressing-and-resolving-differing-scientific-opinions
[107] Office of the Inspector General Hotline. Available at: https://www.epaoig.gov/epa-oig-hotline-information#:~:text=About%20the%20Hotline&text=Posters%20may%20also%20be%20obtained,%2D888%2D546%2D8740
[108] Office of the Special Counsel Online Filing Portal. Available at: https://osc.gov/Pages/file-complaint.aspx

recommendations for preventing similar or related potential future losses of scientific integrity, regardless of whether the loss was intentional or inadvertent. Substantiated losses of scientific integrity are communicated to management for their correction of the scientific record and imposition of specific administrative actions, including any warranted disciplinary action. Losses of scientific integrity should be taken as seriously as violations of government ethics rules and should lead to appropriate action.

It is the policy of EPA to:

a. Require that both career and appointed supervisors, managers, and senior leaders exemplify firm commitment to scientific integrity and hold staff accountable for upholding this Policy.
b. Encourage and facilitate early consultations with the SIO or DSIOs for advice on preventing, identifying, and reporting potential losses of scientific integrity. Early consultations are not considered allegations of a loss of scientific integrity.
c. Promptly have the SIO or DSIO report any scientific integrity concern of political interference by senior agency employees to the EPA OIG Hotline.
d. Require that managers and supervisors do not prevent private and direct communication by covered entities with the OIG, U.S. Government Accountability Office, U.S. Office of Special Counsel,[109] or other investigative bodies on scientific issues, inappropriate influence, political interference, or other potential losses of scientific integrity.
e. Provide clear guidance on how and where to report concerns and allegations of losses of scientific integrity. Those who report concerns and allegations need not be directly involved in the loss of scientific integrity or witness a loss directly.
f. Mandate that the SIO, together with the Scientific Integrity Committee, draft and implement procedures such that when responding to allegations of losses of scientific integrity, the response is done in a timely, objective, fact-based, and thorough manner. These procedures will include an initial assessment, a fact-finding process, a determination including descriptions of remedies and preventative measures to safeguard the science, and an appeals process.
g. Provide that, whenever possible, the SIO and Scientific Integrity Committee shall track implementation of remedies so that losses of scientific integrity are promptly addressed with an emphasis on how to prevent them in the future.
h. Use existing administrative tools for accountability for losses of scientific integrity and consider updates to clarify the agency's table of penalties to identify more specifically appropriate administrative actions for losses of scientific integrity.
i. Ensure to the extent possible, and as allowed by law, the confidentiality of the identities of staff named in or participating in inquiries into potential losses of scientific integrity.
j. Correct the scientific record when inaccuracies or deficiencies are identified or an allegation of a loss of scientific integrity is substantiated.
k. Require all parties to cooperate during the assessment, inquiry, fact-finding, or investigation of scientific integrity concerns.
l. Designate the National Science and Technology Council Subcommittee on Scientific Integrity (SOSI) or the Chief Scientist to serve as an alternate in scientific integrity adjudication processes if the EPA SIO is alleged to have violated the EPA Scientific Integrity Policy or has a conflict of interest. If the Chief Scientist is recused, then SOSI or the Scientific Integrity Committee shall handle any appropriate investigative and or adjudication procedure.

[109] Office of the Special Counsel Online Filing Portal. Available at: https://osc.gov/Pages/file-complaint.aspx

m. Require EPA Assistant and Regional Administrators to submit an annual certification of internal controls for scientific integrity and their implementation of this policy as part of their compliance with FMFIA.[110]

6. Protecting Employees

While legitimate scientific critique and peer review are fundamental parts of the scientific process, care must be taken not to intimidate, suppress, coerce, or otherwise inappropriately influence scientists or science. The Whistleblower Protection Act of 1989[111] and the Whistleblower Protection Enhancement Act of 2012[112] protect government employees who make protected disclosures from retaliation. In 2002, the U.S. Congress passed the Notification and Federal Employee Antidiscrimination and Retaliation Act ("No FEAR Act")[113] to promote a federal work environment that is free of discrimination and retaliation. All agency employees should be familiar with these protections, and managers must avoid taking or the appearance of taking retaliatory actions.

It is the policy of EPA to:

a. Prohibit EPA employees from intimidating or coercing any covered entity to alter, suppress, or unreasonably delay scientific activities, scientific products, scientific data, scientific and environmental information, findings, or scientific opinions or from inappropriately influencing federal scientific advisory boards.
b. Require that EPA employees and other covered entities engaged in scientific activities establish a work environment where they can conduct their work free from reprisal or concern for reprisal. Likewise, require that scientists and other technical experts engaged in field and response technical work are not removed, reassigned, or otherwise excluded from their appointed duties and activities, solely for the purpose of suppressing the accurate and complete communication of collected data, environmental assessments, critical reviews, or action plans arising from those activities.
c. Protect individuals[114] who in good faith report allegations of potential losses of scientific integrity or raise a differing scientific opinion, and those agency employees and other covered entities alleged to have compromised scientific integrity from retribution, retaliation, and reprisal and other prohibited personnel practices (as defined in 5 U.S.C. § 2302(b)).
d. Prohibit the inclusion of good faith employee expression of DSOs as negative behavior in performance appraisals.

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[110] Pub. L. 97-255. Available at: https://www.govinfo.gov/content/pkg/STATUTE-96/pdf/STATUTE-96-Pg814.pdf

[111] S.20 Whistleblower Protection Act of 1989. April 10, 1989, 5 U.S.C. § 2302(b)(8)-(9), Pub. L. 101-12 as amended. Available at: https://www.congress.gov/bill/101st-congress/senate-bill/20/text

[112] Whistleblower Protection Enhancement Act of 2012, Pub. L. 115-73. November 27, 2012. Available at: https://www.congress.gov/bill/112th-congress/senate-bill/743/text. Congress amended the Whistleblower Protection Enhancement Act through the Dr. Chris Kirkpatrick Whistleblower Protection Act of 2017. However, the agency is not extending the mandatory disciplinary procedures found in 5 U.S.C. § 7515 to violations of this policy.

[113] H.R. 169 Notification and Federal Employee Antidiscrimination and Retaliation Act of 2002. May 15, 2002. Available at: https://www.congress.gov/bill/107th-congress/house-bill/169/text

[114] This includes the SIO and DSIOs, who may not be terminated or reassigned without good cause consistent with applicable law.

e. Comply with whistleblower protections, specifically by enforcing the requirements of the Whistleblower Protection Act of 1989[115], 5 U.S.C. § 2302(b)(8)-(9), Pub. L. 101-12 and the Whistleblower Protection Enhancement Act of 2012[116], Pub. L. 112-199.
   i. By recognizing the expansion of certain whistleblower protections to employees of Federal government contractors, subcontractors, and grant recipients. 41 U.S.C. § 4712; and
   ii. By adhering to Presidential Policy Directive 19[117], which includes a prohibition of 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.
f. Encourage that all allegations of retaliation, retribution, or reprisal, whether experienced or observed, be promptly reported to EPA Labor and Employee Relations, EPA Office of Civil Rights[118], the EPA OIG Hotline, or the U. S. Office of Special Counsel.[119] Employees may also report these concerns to their Agency supervisors or leadership, union or Congress.[120]
g. Recruit, 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 ethical behavior.
f. Ensure safe workspaces that are free from harassment and discrimination.[121]

7. Encouraging Professional Development for Agency Scientists

The agency allows its scientists and other employees and covered entities involved in agency scientific activities to interact with the broader scientific community in a manner that is consistent with federal law, rules of ethics, job responsibilities, and supervisor approval; and to the extent that is practicable given the availability of funding, to support such interactions.

It is the policy of the EPA to:

a. Encourage timely publication of research findings, such as in peer-reviewed, professional, scholarly journals; EPA technical reports; and publications or other appropriate outlets.
b. Allow and enable agency scientists to obtain training to keep their scientific qualifications and professional certifications current, consistent with agency priorities, funding, and workload.
c. Encourage and support, as resources allow, attendance and presentation of research at professional meetings including, but not limited to, workshops, conferences, and symposia.
d. Approve the outside activity requests of scientists to serve on editorial boards, as peer reviewers, or as editors of professional or scholarly journals, provided that they do so in their

[115] S.20 Whistleblower Protection Act of 1989. April 10, 1989. Available at: https://www.congress.gov/bill/101st-congress/senate-bill/20/text
[116] Whistleblower Protection Enhancement Act of 2012. November 27, 2012. Available at: https://www.congress.gov/bill/112th-congress/senate-bill/743/text
[117] Presidential Policy Directive 19. October 10, 2012. Available at: https://www.va.gov/about_va/docs/president-policy-directive-ppd-19.pdf
[118] EPA Office of Civil Rights information. Available at: https://www.epa.gov/ocr
[119] EPA OIG Hotline information. Available at: https://www.epa.gov/office-inspector-general/epa-oig-hotline-information#:~:text=OIG%20Hotline%3A%201%2D888%2D546%2D8740. Office of the Special Counsel. Available at: https://osc.gov/Agency
[120] The Notification and Federal Employee Antidiscrimination and Retaliation Act of 2002 (No-FEAR Act) Pub. L. 107-174.
[121] Procedure for Addressing Allegations of Workplace Harassment EPA Order 4711. November 20, 2015. Available at: https://www.epa.gov/sites/default/files/2016-01/documents/epa_order_4711_workplace_harassment_final.pdf

personal capacities only and consistent with federal ethics rules[122] and EPA supplemental ethics regulations.[123]

e. Allow participation when appropriate in professional societies, committees, task forces, and other specialized bodies of professional societies in official or personal capacity, to the extent consistent with funding and workload, and to the extent permissible by the representational conflict of interest laws[124] and federal ethics regulations.[125]
f. Allow government scientists to receive honors, awards, and rewards for patentable inventions, contributions to scientific activities and discoveries, and to accrue the professional recognition of such honors or awards as permitted by federal ethics laws and regulations.
g. Permit scientists to perform outreach and engagement activities related to science, such as speaking to community and student groups, as part of their official duties.

IX. Scientific Integrity Committee

The EPA has established a Scientific Integrity Committee, which comprises senior agency career employees designated as DSIOs for their office or region and is chaired by the SIO. The Scientific Integrity Committee will provide oversight for the implementation of the Scientific Integrity Policy at the EPA; act as liaisons for their respective agency units; assist with training, policy review, updates, and amendments; and address any questions or concerns regarding this Policy. The SIO and the Scientific Integrity Committee have a Scientific Integrity Committee Charter[126] outlining criteria for selection as a member, duties of members, and the frequency of meetings. The Charter may be amended by the Scientific Integrity Committee and will be reviewed every three years.

X. Procedures

The SIO, in conjunction with the Scientific Integrity Committee, will expeditiously draft and prominently post on the EPA's website necessary procedures, including those on addressing scientific integrity concerns, addressing DSOs, and others such as clearance of scientific products, scientific communications, authorship and attribution, and other topics as needed.

XI. Roles and Responsibilities

While scientific integrity is everyone's responsibility, the following individuals have specific scientific integrity roles and responsibilities:

1. EPA Administrator and Deputy Administrator

[122] Federal ethics rules at 5 C.F.R. Part 2635. Available at: https://www.ecfr.gov/current/title-5/chapter-XVI/subchapter-B/part-2635?toc=1
[123] EPA Supplemental Ethics Regulations at 5 C.F.R. Part 6401. Available at: https://www.ecfr.gov/current/title-5/chapter-LIV/part-6401
[124] The representational conflict of interest laws at 18 U.S.C. §§ 203. Available at: https://www.govinfo.gov/content/pkg/USCODE-2009-title18/pdf/USCODE-2009-title18-partI-chap11-sec203.pdf
[125] Federal ethics rules at 5 C.F.R. Part 2635. Available at: https://www.ecfr.gov/current/title-5/chapter-XVI/subchapter-B/part-2635?toc=1
[126] U.S. Environmental Protection Agency Scientific Integrity Charter. March 2020. EPA. Available at: https://www.epa.gov/sites/default/files/2020-03/documents/scic_charter_final_march2020.pdf

a. Provide leadership for the EPA on scientific integrity by leading through example and upholding scientific integrity. Regularly communicate the importance of scientific integrity to the agency, including an annual mass mailer.
b. Require that all agency activities associated with scientific processes are conducted in accordance with the Scientific Integrity Policy.
c. Ensure all supervisors and managers comply with the Scientific Integrity Policy and ensure accountability for those who do not.
d. Provide adequate resources and funding to implement this Policy including staffing, annual evaluation and reporting, and training.
e. Regularly communicates with and consults the SIO and on recommendations and other matters related to scientific integrity.
f. Require that the agency takes, as necessary, clear administrative actions for substantiated violations of agency policies relevant to scientific integrity consistent with EPA Order 3120.1[127] and EPA Order 3120.2,[128] designating responsibility for each aspect of accountability.

2. EPA Science Advisor

a. Is the Assistant Administrator for the Office of Research and Development and serves as the principal advisor to the EPA Administrator and both appointed and career senior leaders on scientific issues and ensures that the agency's research programs are scientifically and technologically well-founded and conducted with integrity.
b. Is aware of and upholds the principles contained in this Policy. Attends and actively participates in all required training.
c. Provides strategic science direction with focus on Administration priorities.
d. Provides the agency's science viewpoint when participating in meetings with the Administrator and external organizations.
e. Regularly communicates with and consults the SIO on recommendations and other matters related to scientific integrity.

3. EPA Chief Scientist

a. Is the Principal Deputy Assistant Administrator for the Office of Research and Development and a designated, full-time equivalent, career employee who holds a permanent career appointment and has EPA-appropriate scientific credentials such that this official may provide the agency with the needed technical expertise across the widest possible variety of contexts; and is appointed at a senior level, for example as an ST (scientific and professional), Senior Level (SL), or a Senior Executive Service (SES) member.
b. In cooperation with the SIO and Scientific Integrity Committee, oversees the implementation and iterative improvement of policies and processes affecting the integrity of science funded, conducted, communicated, managed, or used by the agency, as well as policies affecting federal and non-federal scientists who support the scientific activities of the agency, including policies related to scientific integrity.
c. Is aware of and upholds the principles contained in this policy. Attends and actively participates in all required training.

[127] Conduct and Discipline, EPA Order 3120.1 (September 26, 1985). Available at: https://intranet.epa.gov/ohr/rmpolicy/ads/orders/3120_1.pdf
[128] Conduct and Discipline Senior Executive Service, EPA Order 3120.2 (July 14, 1994). Available at: https://intranet.epa.gov/ohr/rmpolicy/ads/orders/3120_2.pdf.

a. Advocates for the appropriate engagement of career scientists with relevant scientific expertise in decision making.
d. Ensures agency compliance with corrective scientific actions when violations of this policy are substantiated, and along with administrative actions for substantiated losses of scientific integrity, designates responsibility for each aspect of accountability. May seek assistance from the National Science and Technology Council Subcommittee on Scientific Integrity in cases of disagreement.
e. Provides science oversight and management of the EPA's Science and Technology Policy Council,[129] including ensuring the consistency of their actions with this Policy.
f. Regularly communicates and consults with the SIO on recommendations and other matters related to scientific integrity.

4. Scientific Integrity Official (SIO)

a. Is a designated, full-time equivalent, career employee who holds a permanent career appointment, has agency-appropriate scientific credentials, and is appointed at a senior level, for example as an ST (scientific and professional) or Senior Level (SL).
b. Provides leadership, acts to champion scientific integrity, and serves as the primary agency-level contact for questions regarding scientific integrity. Ensures that scientific integrity activities and outcomes are appropriately monitored and evaluated.
c. Oversees implementation and iterative improvement of scientific integrity policies and processes.
d. Leads training and outreach initiatives to facilitate employee awareness and understanding of this Policy.
e. Chairs the EPA Scientific Integrity Committee and leads their regular meetings.
f. Serves as a neutral point of contact for receiving scientific integrity questions and concerns and allegations of compromised scientific integrity.
g. Provides independent 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.
    ii. Conducting initial assessments of allegations and submitted materials.
    iii. Following established procedure to make determinations.
    iv. Maintaining a status report of responses to allegations as a means of monitoring the progress toward resolution.
    v. Reviewing and responding to OIG audits, evaluations, and other reports.
h. Reports to the Chief Scientist on matters involving scientific integrity.
i. Coordinates with the OGC, OIG, EPA Ethics Office, Office of Human Resources, Office of Public Affairs, and other offices, as needed.
j. Reports to the OIG any potentially criminal behavior; claims of immediate and significant risk to public health or safety; immediate or significant threats to agency resources or interests; retaliation, retribution, or reprisal against employees; fraud, waste, and abuse in EPA programs; circumstances where action is required to safeguard evidence or protect the rights of whistleblowers; and misconduct in research procured through EPA contracts or assistance agreements that is uncovered while responding to an allegation of a loss of scientific integrity; and coordinates as appropriate with the OIG.

[129] Information on EPA's Science and Technology Policy Council. Available at: https://www.epa.gov/scientific-leadership/about-scientific-leadership

k. Keeps the EPA Administrator, Deputy Administrator, Science Advisor, and Chief Scientist informed on the status of the implementation of this Policy and any compliance concerns.
l. Delegates responsibilities to DSIOs, as appropriate.
m. Releases a publicly available annual scientific integrity report in conjunction with the Scientific Integrity Committee, as described below.
n. Leads efforts to update this Policy and any accompanying policies, procedures, and practices, and 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.
o. Advocates for appropriate engagement of career scientists with relevant scientific expertise in decision making.
p. To the extent possible, is involved in high-level discussions and strategic planning on the processes for recruitment, retention, development, and advancement of scientists to help ensure that scientific integrity is appropriately and carefully considered.
q. Oversees appropriate administrative records when addressing allegations.
r. 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). The SIO will coordinate with the EPA's Evaluation Officer, Chief Data Officer, and Statistical Official for effective and consistent implementation of the Scientific Integrity Policy and Policy for Evaluations and Other Evidence-Building Activities.[130]

5. Deputy Scientific Integrity Official (DSIO)

a. Annually collects the Assistant Administrator and Regional Administrator certifications of compliance with the Scientific Integrity Policy.
b. Coordinates with the Office of the Chief Financial Officer, and provides, through the annual FMFIA process, descriptions of their office's or region's efforts to ensure scientific integrity. This annual reporting will include scientific integrity successes, as well as identifying areas for improvement.
c. Implements relevant parts of EPA strategic plans, as appropriate.[131]
d. Serves as needed to evaluate allegations of losses of scientific integrity and addresses them and ensures implementation of recommendations to safeguard the science.
e. Convenes and leads meetings within their respective units to update and inform colleagues on the status of scientific integrity at the EPA, as well as their office or region.
f. Prepares for and attends Scientific Integrity Committee meetings, including providing comments on scientific integrity documents as needed.
g. Develops, encourages, and facilitates appropriate training within their office or region.
h. Facilitates their office's or region's participation in agency scientific integrity surveys and other evaluation and assessment of the EPA's scientific integrity.
i. Notifies the SIO ahead of discussions or decisions if a potential or actual conflict of interest exists between their interests and the Scientific Integrity Committee's commitments or obligations, such as may arise in the Scientific Integrity Committee or a review panel's discussion of an allegation or other matter.

[130] EPA Policy for Evaluations and other Evidence-Building Activities. 2022. Available at: https://epa.gov/system/files/documents/2022-05/epa-evaluation-evidence-building-policy.pdf
[131] For example, Cross-Agency Strategy #1 in FY 2022 – FY 2026 EPA Strategic Plan, especially Cross-Agency Strategy 1. Available at: https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf

j. Communicates any concerns or allegations of a loss of scientific integrity received from their office or region, or from other sources, to the SIO.
k. As appropriate, oversees implementation and iterative improvement of scientific integrity policies and processes.
l. Is available to address any questions or concerns regarding scientific integrity and this Policy.
m. Assists the SIO or Chief Scientist as needed and agreed to.
n. Keeps the agency's senior appointed and career leadership informed on and involved with the agencywide status of scientific integrity, as necessary and appropriate.

6. Scientific Integrity Committee

a. Provides leadership for the agency on scientific integrity.
b. Implements this Policy across the agency in a consistent manner.
c. Promotes agency compliance with this Policy, including creating mechanisms to ensure accountability for safeguarding against political interference or inappropriate influence by managers and other agency appointed and career leadership.
d. Addresses Scientific Integrity Policy concerns, updates, and amendments and offers suggestions for implementation improvements.
e. Provides an annual meeting and annual report on Scientific Integrity Policy implementation.
f. Develops agencywide best practices on topics related to scientific products and communications for use by each office and region to develop and document consistent, transparent, and predictable procedures for clearance with the goal of standard practices across the agency.
g. Oversees the development and implementation of training related to scientific integrity for all agency employees.

7. EPA Ethics Office and Ethics Officials

a. The EPA Ethics Office, located in the OGC, provides overall direction for the agency's deputy ethics officials, who are delegated specific duties pursuant to EPA Order 1000.28.[132]

8. EPA Public Affairs Officials

a. With input from program managers, designate knowledgeable and articulate scientific spokespersons from offices or regions to coordinate with EPA scientists and managers to ensure that agency research is clearly, accurately, and accessibly presented, in a timely manner, thereby best serving the needs of both the media and the public.
b. Are aware of and uphold the principles contained in this Policy. Attend and actively participate in all required training.
c. Alert, support, and assist as requested, and coordinate with involved scientists and managers when they receive media inquiries about their research or other scientific activities.
d. Plainly and clearly communicate science for the intended audience in a timely fashion. Public Affairs Officials shall not attempt to alter or change scientific information, findings, or results.
e. May, but are not required to, attend interviews of scientists with members of the media, to confirm that the agency is being fully responsive to media questions in a timely manner and to improve responsiveness, consistency, and accuracy both on the part of the interviewer and when responding to future information requests.

9. Managers and Supervisors

a. Comply with and ensure agency and employee compliance with the Scientific Integrity Policy.

[132] EPA Order 1000.28. Available at: https://www3.epa.gov/ogc/IPACourse/EA94-15.pdf

b. Listen to and advise employees and other covered entities about allegations of losses of scientific integrity and take action as appropriate when allegations are substantiated.
c. Are aware of and uphold the principles contained in this Policy. Attend and actively participate in all required training.
d. Provide professional development for EPA employees involved in agency scientific activities, as appropriate and to the extent practicable.
e. Lead through example by upholding scientific integrity principles and communicating the importance of doing so.
f. Report any knowledge of potential losses of scientific integrity to the SIO or any DSIO.
g. Refrain from committing prohibited personnel practices (as defined in 5 U.S.C. 2302(b)) against all employees, including those agency employees and other covered entities who uncover and report allegations of compromised scientific integrity in good faith, as well as those agency employees alleged to have compromised scientific integrity.
h. Consult, as appropriate depending upon the nature of the allegation or assistance needed, with the SIO or any DSIO on any SI concerns.

10. Employees and Other Covered Entities

a. Are aware of the principles contained in this Policy and how it applies to their duties. Attend and actively participate in all required training.
b. Adhere to accepted professional values and practices of the relevant research/scientific communities to ensure scientific integrity.
c. Report to the SIO or any DSIO any knowledge of and/or allegations of losses of scientific integrity.
d. Participate as needed and appropriate in any assessment, fact-finding, inquiry, or investigation of alleged losses of scientific integrity.

XII. Monitoring and Evaluating Scientific Integrity Activities and Outcomes

The EPA will develop and implement an evaluation plan to regularly measure, monitor, and evaluate ongoing scientific integrity activities, outcomes, and impacts. The plan will include a roadmap of activities and expected outcomes, the steps needed to assess them, the methods and metrics used in that assessment, and how the data and information will be analyzed on a regular basis and used for ongoing improvement of scientific integrity processes, procedures, and policies. The plan will also include a timeline for implementation and frequency of data and information collection, such as through agencywide scientific integrity surveys, analysis and review of information collected, development of recommendations, and implementation of these recommendations. Monitoring and evaluation results, recommendations, and policy/procedure changes based on results will be reported to agency leadership and will be made available to agency staff and the public in a timely manner.[133]

XIII. Annual Review, Annual Reporting, and Annual Meeting

Annual Review and Certification

The DSIOs will conduct an annual review of scientific integrity in their respective office or region. Certification of their respective office's or region's compliance with the Scientific Integrity Policy, and a

[133] M-20-12 — OMB Phase 4 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Program Evaluation Standards and Practices.

summary of accomplishments and challenges, are to be included in this review. The agency will utilize its FMFIA Management Integrity Program to collect these certifications and annual reviews.

Annual Report

The SIO, with input from the Scientific Integrity Committee, will generate and release an annual report on the status of scientific integrity at the EPA, making it prominently available on the agency's public facing website, and delivering it to the EPA Administrator, Deputy Administrator, Science Advisor, Chief Scientist, and other leadership. The report will highlight scientific integrity successes and accomplishments across the EPA, such as any new scientific integrity hires, training, and changes to scientific integrity practices and policies. It will identify areas for improvement and weaknesses and include a plan for addressing critical weaknesses, if any are identified. It will report on progress toward achieving the critical criteria and metrics in the National Science and Technology Council 2023 Framework for Federal Scientific Policy and Practice,[134] including comparisons to the same metrics from prior years to show trends over time. It will also include the number of requests for advice and assistance, number of reported allegations, number of closed cases and the number of open cases. Annual reporting will also include anonymized individual closed scientific integrity allegation summaries. These summaries may be posted in a timely manner after completion of inquiries and/or incorporated into the annual report. The identities of complainants, respondents, witnesses, and others involved in the investigations will be protected subject to applicable federal law.

The report may also include lessons learned during the previous year, input from the annual meeting, and recommendations for action/deliberation by the Scientific Integrity Committee during the upcoming fiscal year, to provide for continuous improvement in implementation of the Scientific Integrity Policy.

Annual Meeting

The SIO and Scientific Integrity Committee will conduct an agencywide annual meeting on scientific integrity that will include the EPA Administrator or Deputy Administrator and the Chief Scientist. The annual agency scientific integrity meeting will summarize the status of scientific integrity at the EPA, accomplishments and challenges, and reports from offices and regions, and provide an opportunity for attendees to ask the SIO and Chief Scientist questions.

[134] A Framework for Federal Scientific Policy and Practice. January 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf