Free, Immediate, and Equitable Access to Federally Funded Research

Department of Defense Implementation Plan

December 2024

DoD IMPLEMENTATION PLAN FOR FREE, IMMEDIATE, AND EQUITABLE ACCESS TO FEDERALLY FUNDED RESEARCH

This plan is issued in response to the August 25, 2022, Office of Science and Technology Policy (OSTP) Memorandum for the Heads of Executive Departments and Agencies entitled "Ensuring Free, Immediate, and Equitable Access to Federally Funded Research." Through its August 25, 2022, memorandum, OSTP provides guidance to Federal agencies with research and development expenditures on updating their public access policies. To the extent consistent with applicable law, Federal agencies are expected to:

- Update public access policies to make publications and the supporting data resulting from Federally funded research publicly accessible in agency-designated repositories without an embargo or delay after publication.
- Establish transparent procedures that ensure scientific and research integrity is maintained in public access policies.
- Coordinate with OSTP to ensure equitable delivery of Federally funded research results and data.

This plan outlines the Department of Defense's (DoD) proposed approach to implementing the objectives of the August 25, 2022, OSTP memorandum, making scholarly publications, data sets, and associated metadata resulting from DoD-funded research readily and immediately accessible to the public consistent with law, regulation, and DoD policy.

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1. INTRODUCTION/BACKGROUND.

This document is a plan submitted to the Office of Science and Technology Policy (OSTP) in accordance with the requirement specified in the August 25, 2022, Office of Science and Technology Policy (OSTP) Memorandum for the Heads of Executive Departments and Agencies entitled "Ensuring Free, Immediate, and Equitable Access to Federally Funded Research" (hereinafter the August 2022 OSTP Memorandum). This plan is a proposed approach that does not impose any new requirements or responsibilities on any DoD Component.

In response to a previous OSTP memorandum, "Increasing Access to the Results of Federally Funded Scientific Research," dated February 22, 2013, DoD implemented policy and regulations that require development of data management plans at the start of research projects and public access to scholarly publications and digital data resulting from such research after a 12-month embargo.

New policy and guidance, or updates in cases of existing policy and guidance, that are implemented pursuant to this plan will be issued in accordance with DoD Instruction 5025.01 "DoD Issuances Program," and will be published in Title 32 of the Code of Federal Regulations (CFR), as appropriate. DoD policy for intramural research will be established through amendments to DoD Instruction 3200.12 "DoD Scientific and Technical Information Program (STIP)" and DoD Manual 3200.14, Volumes 1 and 2, "Principles and Operational Parameters of the DoD Scientific and Technical Information Program (STIP): General processes [Volume 1]" and "Principles and Operational Parameters of the DoD Scientific and Technical Information Program (STIP): Information Analysis Centers (IACS) [Volume 2]." Defense Federal Acquisition Regulation Supplement (DFARS) (48 CFR §§ 200-299) and Department of Defense Grant and Agreement Regulations (32 CFR, Chapter I, Subchapter C and 2 CFR, Chapter XI) will be revised for extramural research programs.

2. OBJECTIVES.

A primary mission of Defense research is to safeguard national security and maintain the technological superiority of the United States military through advances in science, technology, and engineering. Greater public access to DoD-funded research will encourage and accelerate scientific breakthroughs and innovation of potential interest to DoD. A robust industrial base and commercialization of DoD technologies will also benefit entrepreneurship and enhance economic growth and job creation.

Through the approach described in this plan, DoD intends to promote the following objectives:

- Support the free exchange and dissemination of the direct results of DoD-funded research in a manner that: protects confidentiality, privacy, business confidential information, and security; avoids negative impact on intellectual property rights, innovation, program and operational improvements, and U.S. competitiveness; and

preserves the balance between the relative value of long-term preservation and access and the associated cost and administrative burden therewith.

- Enhance the publication and sharing of DoD-funded fundamental research results within the scientific community.
- Encourage the public availability of non-fundamental research through security and policy review.
- Make available for public access the results of DoD research funded through other than research, development, test, and evaluation appropriations[1] that have been approved through appropriate channels for public release.
- Ensure that all DoD-funded research projects have approved data management plans that, at a minimum, describe which data will be preserved, where it will be stored, and whether the data will be accessible by the public.
- Support: equity of access for all researchers to peer-reviewed resources; the opportunity for all researchers to publish their work; equity of access for the public to access the products of DoD-funded fundamental research; and public access to research results that have been reviewed and approved for release to the public.
- Continue investigating tools and techniques to understand and counter the risk that publicly released information could lead, through data aggregation, de-anonymization, or synthesis technologies, directly to the release of knowledge or information that is otherwise controlled.

3. RELEASE OF DoD-FUNDED SCIENTIFIC AND TECHNICAL INFORMATION TO THE PUBLIC.

Federal law and policy direct that, subject to any constraints therein, Federal executive departments and agencies must provide the public with the results of their research efforts, consistent with their missions. Public release of Federal research efforts fosters excellence in scientific research and ensures effective use of research and development resources. Statutory and policy directions include:

- National Security Decision Directive (NSDD) 189, “National Policy on the Transfer of Scientific, Technical, and Engineering Information.”
- Section 3704b-2 of Title 15, United States Code – “Transfer of Federal scientific and technical information.”
- Title 44, United States Code, Chapter 35, Subchapter I – “Federal Information Policy.”
- Office of Management and Budget, Circular A-130, “Managing Information as a Strategic Resource.”
- Title II of Public Law 115–435, “OPEN Government Data Act.”

[1] Such research efforts include, but are not limited to, clinical studies at Defense medical facilities, research at Military educational institutions, and research funded by working capital funds.

4. PEER-REVIEWED SCHOLARLY PUBLICATIONS.

Currently, DoD maintains a public facing web-based tool that provides access to published journal articles, accepted manuscripts, and public data sets. Final, peer-reviewed manuscripts documenting the results of DoD-funded research are uploaded, at the time of acceptance for publication, to a submission portal hosted and maintained by the Defense Technical Information Center (DTIC). Final, peer-reviewed manuscripts uploaded to the DTIC submission portal are released to the public after a 12-month embargo and final versions of open access journal articles are released immediately upon publication.

DoD plans to adopt, through appropriate guidance and policy, a systematic approach to maximize free, immediate, and equitable access to peer-reviewed scholarly publications by ensuring that publications documenting the results of DoD-funded research are free and publicly accessible at the time they are published. As a result of this plan, DoD seeks to ensure that publications documenting the results of DoD-funded research are:

- Available without embargo or delay.[2]
- In machine-readable format. DoD will investigate methods to convert articles in Word or PDF format to ANSI/NISO Z39.96-2021, Journal Article Tag Suite (JATS) format. DoD will also investigate whether such conversion services are available for commercial purchase.
- Broadly accessible through assistive devices.

DoD plans to develop appropriate guidance and policy that allows researchers broad discretion on decisions to publish the results of their DoD-funded research. DoD policy will not direct a specific open access publication model. Data and reuse rights will be consistent with Title 17, United States Code, and government license rights in intangible property as determined by the terms and conditions of contract or award instruments. Consistent with law, regulation, and DoD policy, publications and data sets produced by intramural researchers will be released to the public for reading, downloading, and use for analysis and data or text mining without any embargo or delay.

5. SCIENTIFIC DATA.

5.1. Scientific data underlying peer-reviewed scholarly publications.

Currently, the DoD public facing web-based tool provides access to published journal articles, final peer-reviewed manuscripts, and public data sets. DoD works with information available

[2] DoD will: (1) Work, in conjunction with the interagency, to accomplish equitable implementation of its policies and minimize impact on potentially affected communities, including single or limited areas of science publishers and smaller societies with fewer sources of funding, and universities (and their researchers) that are developing and building programs that currently receive fewer Federal research funds; and (2) Monitor costs charged to researchers for publication fees and their access to scholarly journals.

from publishers and other third-party organizations to provide metadata and location information on data sets.

DoD plans to adopt, through appropriate guidance and policy, a systematic approach to ensure:

- Scientific data underlying peer-reviewed scholarly publications will be publicly accessible by default at the time of publication consistent with law, regulation, and DoD policy.
- Data sets will be accompanied by metadata that describes the data in sufficient detail to support analysis and reuse.
- Metadata describing data sets will be freely available for reuse to include downloading, analysis, and data or text mining.

DoD's public access efforts will focus on collection and release of public scientific data resulting from extramural fundamental research efforts as well as publicly releasable scientific data documenting the results of research funded by the military health system.

For scientific data protected by privacy, confidentiality, security, intellectual property, or other rights or requirements, the data management plan[3] will include a statement that the data cannot be made available to the public. Classified or controlled unclassified information will not be made publicly available. When applicable, the data management plan will require compliance with human research regulations, including review by a DoD Human Research Protections Official and any restrictions or limitations on data access, use, and disclosure that convey from a data use agreement or stipulations of an Institutional Review Board.

5.2. Scientific data that are not associated with peer-reviewed scholarly publications.

DoD currently maintains the DoD Data Set Directory,[4] a directory of scientific data sets from research efforts conducted by or for DoD. The DoD Data Set Directory includes metadata for each data set in the Directory and points to either a uniform resource locator for the location of data sets or provides contact points for researchers to request access to data sets. The DoD Data Set Directory is behind a firewall, accessible to DoD employees and DoD contractor personnel only and is not available to the general public.

DoD plans to adopt, through appropriate guidance and policy, a systematic approach to centralize the collection, preservation, and release of scientific data that are not associated with peer-reviewed scholarly publications. DoD plans to:

- Develop data management practices for scientific data that are classified, controlled unclassified, subject to statutory or regulatory disclosure restrictions, or protected by written agreement. Such scientific data will be safeguarded in secure repositories in accordance with appropriate data management practices.

[3] Recommended format for data management plans is described in Enclosure 3, Section 3, of DoD Instruction 3200.12.
[4] Available at: https://www.dodtechipedia.mil/dodwiki/pages/viewpage.action?pageId=772375027.

- Make relevant metadata available to authorized users, allowing for the discovery and retrievability of protected scientific data. Access to relevant metadata will be subject to security protocols in accordance with DoD information and cyber security policies.
- Consider options to establish a central repository for DoD scientific data.

Extramural researchers will store data sets underlying or resulting from DoD-funded research in digital repositories. DoD will issue guidance for selection of repositories based on the National Science and Technology Council Subcommittee on Open Science document entitled "Desirable Characteristics of Data Repositories for Federally Funded Research."

6. PROSPECTIVE ROLES. The following roles will be established by appropriate policy documents, regulations, and issuances.

The Assistant Secretary of Defense for Science and Technology will provide leadership and policy direction for free, immediate, and equitable access to the results of DoD-funded research, consistent with Federal law, regulation, and DoD policy, and will appoint a senior-level DoD official to:

- Develop and publish, through the DoD Regulatory Program and the DoD Directives Division, regulatory actions and guidance to ensure DoD is in compliance with the August 2022 OSTP Memorandum and to execute this plan.
- Develop requirements for Federal award recipients through the DoD Grant and Agreement Regulations.
- Undertake the necessary measures to ensure publication costs and costs associated with submission, curation, and management of scientific data are allowable under DoD contracts and awards.
- Make necessary adjustments, in coordination with Office of Management and Budget and Federal science agencies, to allowable costs in Titles 2 and 48 of the CFR.
- Serve as the point of contact for parties in the Federal scientific ecosystem, including researchers, organizations, publishers, and Federal research funding agencies, to discuss equitable opportunities to publish and access research findings regardless of funding availability, discipline, organizational affiliation, or other barriers.
- Establish a repository for DoD scientific data.
- Sustain a publicly accessible search and retrieval system for peer-reviewed scholarly publications and data sets.
- Report to OSTP on the status of plans and policy implementation, including the number of all scholarly publications funded by DoD and any other relevant statistics.
- Continue to participate in collaboration and coordination activities with Federal science agencies and the National Science and Technology Council Subcommittee on Open Science and its working groups.

Additionally, the senior-level DoD official will evaluate:

- Polices that DoD uses to establish researcher responsibilities on how Federally funded scientific data is managed and stored;
- DoD measures to prevent unauthorized mass redistribution of scholarly publications;
- Policies designed to protect intellectual property rights;
- The impact of government purpose rights licenses on efforts to maximize public access to Federally funded research; and
- Courses that provide data management and data sharing training, education, and workforce development.

DoD will amend policies or establish new policies to address instances in which policies either do not exist or are deemed inadequate for their intended purpose.

7. LAWS AND REGULATIONS PROTECTING DATA.

The results of DoD-funded research will be protected in accordance with applicable laws, regulations, and policies, including, but not limited to:

- Executive Order 13526, "Classified National Security Information."
- Section 2002 of Title 32, CFR, "Controlled Unclassified Information (CUI)."
- DoD Instruction 5200.48, "Controlled Unclassified Information (CUI)."
- DoD Manual 5200.1, Volumes 1-3, "DoD Information Security Program: Overview, Classification, and Declassification [Volume 1]," "DoD Information Security Program: Marking of Information [Volume 2]," and "DoD Information Security Program: Protection of Classified Information [Volume 3]."

Responsibly managing and sharing scientific data derived from human participants is a DoD priority, subject to applicable laws, regulations, statutes, guidance, and institutional policies that govern research involving human participants and the sharing and use of scientific data derived from human participants.

8. ALLOWABLE EXPENSES.

In accordance with Section 200.461(a) of Title 2, CFR, publication costs for electronic and print media, including distribution, promotion, and general handling are allowable. If these costs are not identifiable with a particular cost objective, such costs are allocated as indirect costs to all benefiting activities of a Federal award recipient.

Page charges for professional journal publications are allowable where the underlying work was DoD-funded and the charges are levied impartially on all items published by the journal, whether or not under a Federal award. DoD anticipates that implementation of the August 2022 OSTP Memorandum will shift costs from library subscriptions to article publication charges. Elimination of the 12-month embargo that was established by the OSTP memorandum dated February 22, 2013, may lead publishers to increase costs to researchers in the form of increased article processing charges, with the additional charges billed against funds allocated

for research. DoD will evaluate the impact such changes in the allocation of funds will have on research objectives and investigate other options to fund publication charges.

9. REPORTING TO OSTP.

DoD will develop procedures for reporting on compliance with the requirements of the August 2022 OSTP Memorandum and will compile statistics to report to OSTP. Statistics will demonstrate progress in plans and policy implementation, number of scholarly publications, and other information as required.

10. ENSURING SCIENTIFIC AND RESEARCH INTEGRITY.

OSTP recommends that Federal agencies take actions to ensure that elements of scientific and research integrity are in place in order to strengthen public trust in Federally funded science. DoD will submit plans to implement the provisions of Section 4 of the August 2022 OSTP Memorandum by December 31, 2024. A notional draft of projected DoD plans, incorporating the elements articulated in the August 2022 OSTP Memorandum, is at Appendix 1, but may change as policy for the provisions of Section 3 of the August 2022 OSTP Memorandum is implemented.

11. COORDINATION AMONG FEDERAL AGENCIES.

DoD plans, through appropriate guidance and policy, to:

- Adopt procedures to coordinate with other Federal science agencies to enhance efficiency and reduce redundancy in response to the provisions of the 2022 OSTP Memorandum.
- Continue its relationship with the National Science and Technology Council Subcommittee on Open Science and continue to work with its working groups.
- Seek opportunities to coordinate and standardize work across agencies and scientific disciplines.
- Continue to work with the Commerce, Energy, National Aeronautics and Space Administration, Defense Information Managers Group (CENDI), an interagency working group of senior Federal Government scientific and technical information managers from 11 U.S. Federal agencies, sharing expertise and best practices on topics related to the management of scholarly publications and scientific data.

12. IMPLEMENTATION TIMELINE.

Action	Suspense
Submit the DoD implementation plan for free, immediate, and equitable access to Federally funded research to OSTP	February, 2024
Publish policy to achieve the elements in Section 3 of the August 2022 OSTP Memorandum	July 31, 2024
Submit an update to DoD implementation plan for free, immediate, and equitable access to Federally funded research to include plans for Section 4 of the August 2022 OSTP Memorandum to OSTP	May 31, 2025
Effective date for DoD policies to achieve the elements in Section 3 of the August 2022 OSTP Memorandum	December 31, 2025
Complete and publish policy to achieve the elements in Section 4 of the August 2022 OSTP Memorandum	December 31, 2026
Effective date for all policy for free, immediate, and equitable access to Federally funded research	December 31, 2027

APPENDIX 1. Ensuring Scientific and Research Integrity.

In response to the requirements set forth in Section 4 of the August 2022 OSTP Memorandum, DoD will develop a plan for implementing the following elements of scientific and research integrity:

Disclosure Requirements.

DoD will develop policies that support scientific and research integrity by communicating to the public critical information, including authorship, funding, affiliations, and development status of DoD-funded research. The public will be able to identify which DoD Component or Federal agency supported research, which scientists conducted that research, and the extent to which that research has been peer-reviewed.

Appropriate metadata.

Metadata for publications and data sets will include all author and co-author names, affiliations, sources of funding, and publication date.

Digital persistent identifiers (DPI).

Metadata for publications and data sets will include a DPI for:

Research output, including data sets and scholarly publications.

DoD will consider joining a consortium for those authors whose institutions have not arranged to assign DPIs to data sets. DPIs for scholarly publications are assigned by publishers.

Individuals, including authors and principal investigators.

Generally, authors and principal investigators obtain DPIs free of charge from a DPI service. Through the Department of Energy Open Researcher and Contributor Identifier (ORCID) consortium, DoD can populate ORCID author profiles with affiliation data or bulk assign or download DPIs.

Scientific research and development awards and intramural research protocols.

When an appropriate web-based resource infrastructure for awards and intramural research protocols is identified or created, DoD will consider joining a service that assigns DPIs to awards.

DEFINITIONS.

data management plan. A document that describes which data generated through the course of proposed research will be shared and preserved and how such sharing and preservation will be accomplished. A data management plan may explain why data sharing or preservation is not possible or scientifically appropriate, or why the costs of data sharing or preservation are incommensurate with the value of doing so.

digital persistent identifier. A digital code that is globally unique, persistent, machine resolvable and processable, and has an associated metadata schema. Consistent with National Security Presidential Memorandum-33, digital persistent identifiers for individuals are used to disambiguate and identify an individual person.

extramural research. Research conducted by any research institution other than the Federal agency to which the funds supporting the research were appropriated.

final peer-reviewed manuscript. Author's final manuscript of a peer-reviewed paper accepted for journal publication, including all modifications from the peer-review process.

final published article. A publisher's authoritative copy of an article, including all modifications from the publishing peer-review process, copyediting, stylistic edits, and formatting changes.

fundamental research. Basic and applied research in science and engineering, the results of which are ordinarily published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

human research protections official. A Federal employee designated to conduct administrative reviews of DoD-supported research in accordance with the requirements of the DFARS, or comparable requirement, and whose review of DoD-supported research is intended to ensure compliance with DoD human subject research requirements.

intramural research. Research conducted by scientists employed by DoD and using DoD resources.

machine-readable. A format that can be easily processed by a computer without human intervention while ensuring no semantic meaning is lost (such as the NISO Z39.96-2015 JATS XML standard currently used by PubMed Central).

open access. The provision of free access to peer-reviewed scholarly and research information to all. Open access requires that the rights holder grant a world-wide irrevocable right of access in the information to copy, use, distribute, transmit, and make derivative works in any format for any lawful activities with proper attribution to the original author.

public access. Free, immediate, persistent ability for the public to obtain the results of scientific research funded in whole or in part by a Federal agency consistent with law; agency mission; resource constraints; and U.S. national and economic security.

research integrity. The use of honest and verifiable methods in proposing, performing, and evaluating research; reporting research results with particular attention to adherence to rules, regulations, and guidelines; and following commonly accepted professional codes or norms.

scholarly publication. Works written by experts in a particular field and include peer-reviewed research articles or final manuscripts published in scholarly journals, and may include peer-reviewed book chapters, editorials, and peer-reviewed conference proceedings published in other scholarly outlets that result from Federally funded research.

scientific data. As defined in the August 2022 OSTP Memorandum, the recorded factual material commonly accepted in the scientific community as of sufficient quality to validate and replicate research findings. Such scientific data does not include laboratory notebooks, preliminary analyses, case report forms, drafts of scientific papers, plans for future research, peer-reviews, communications with colleagues, or physical objects and materials, such as laboratory specimens, artifacts, or field notes. The definition of "scientific data" is similar to, but broader than, the term "research data" as defined by 2 CFR 200.315(e) and 45 CFR 75.322(e).

scientific integrity. 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.

REFERENCES.

Code of Federal Regulations, Title 2

Code of Federal Regulations, Title 32

Code of Federal Regulations, Title 36

Code of Federal Regulations, Title 45

Code of Federal Regulations, Title 48

American National Standards Institute, National Information Standards Organization, ANSI/NISO Z39.96-2021, "Journal Article Tag Suite (JATS)," July 7, 2021

Executive Office of the President, "Presidential Memorandum on United States Government-Supported Research and Development National Security Policy," National Security Presidential Memorandum 33, January 14, 2021

Executive Office of the President, Office of Science and Technology Policy Memorandum, "Ensuring Free, Immediate, and Equitable Access to Federally Funded Research," August 25, 2022

Executive Office of the President, Office of Science and Technology Policy Memorandum, "Increasing Access to the Results of Federally Funded Scientific Research," February 22, 2013

Executive Office of the President, National Science and Technology Council, Scientific Integrity Fast-Track Action Committee, "Protecting the Integrity of Government Science," January 2022

Executive Office of the President, National Science and Technology Council, Subcommittee on Open Science, "Desirable Characteristics of Data Repositories for Federally Funded Research," May 2022

Executive Office of the President, Office of Management and Budget, Circular A-130, "Managing Information as a Strategic Resource," July 2016

Executive Order 13526, "Classified National Security Information," December 29, 2009

Department of Defense, Office of the Chief Data Officer, "DoD Data Strategy," October 8, 2020

DoD Instruction 3200.12, "DoD Scientific and Technical Information Program (STIP)," August 22, 2013, as amended

DoD Instruction 3216.02, "Protection of Human Subjects and Adherence to Ethical Standards in DoD-Conducted and -Supported Research," April 15, 2020, as amended

DoD Instruction 5200.48, "Controlled Unclassified Information (CUI)," March 6, 2020

DoD Instruction 5230.09, "Clearance of DoD Information for Public Release," January 25, 2019

DoD Instruction 5230.29, "Security and Policy Review of DoD Information for Public Release," August 13, 2014, as amended

DoD Manual 5200.01, Volume 1, "DoD Information Security Program: Overview, Classification, and Declassification," February 24, 2012, as amended

DoD Manual 5200.01, Volume 2, "DoD Information Security Program: Marking of Information," February 24, 2012, as amended

DoD Manual 5200.01, Volume 3, "DoD Information Security Program: Protection of Classified Information," February 24, 2012, as amended

DoD Public Access Plan, "Plan to Establish Public Access to The Results of Federally Funded Research," February 2015

Title II of Public Law 115–435, "OPEN Government Data Act," January 14, 2019

Under Secretary of Defense (Acquisition, Technology, and Logistics) Memorandum, "Fundamental Research," May 24, 2010

United States Code, Title 15

United States Code, Title 17

United States Code, Title 44

Department of Defense