



Smithsonian Institution

PLAN FOR
INCREASED PUBLIC ACCESS
TO RESULTS OF
FEDERALLY FUNDED RESEARCH
(2025)

1 JANUARY 2025

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PURPOSE

The Smithsonian Institution reaffirms its commitment to making certain content available to the public through active participation in the U.S. Government initiative for increased public access to federally funded research results.^{1,2} Smithsonian is dedicated to identifying solutions that align with its research mission and to incrementally revise its plan to maximize public access and minimize burden on its research communities, mission-enabling units, and budgets. Differing disciplinary practices and the requirement to utilize existing federal resources remain controlling factors in efforts to improve and expand the plan. The Institution will maintain approaches that have proven effective to increase access to certain scholarly publications and digital research data that arise from research in the sciences and the humanities funded by its federal appropriation (collectively, “Covered Research Products”). Smithsonian’s “Plan for Increased Public Access to Results of Federally Funded Research (2025)” includes revisions in response to the Office of Science and Technology Policy’s August 2022 guidance and takes effect 1 January 2025. Smithsonian’s plan is applicable to intramural research only.³

DEFINITIONS

Covered Primary Data is digital research data that has been designated by Smithsonian as research data that is subject to this plan and does not support or underly one or more Covered Publications.

Covered Publications are scholarly manuscripts that have been posted as preprints (as defined herein) and/or submitted to and accepted by publishers and are subject to this plan.

Covered Research Products describes all research products that are subject to this plan; the term used in this plan to refer collectively to Covered Publications, Covered Underlying Data, and Covered Primary Data.

Covered Underlying Data are digital research data that underly one or more Covered Publications and are subject to this plan; the factual materials recorded in digital format that are commonly accepted in the scientific and scholarly community as necessary to validate research findings contained in a scholarly publication.⁴ These data may vary by format and by discipline.

Final accepted manuscript is an author’s final manuscript accepted for publication in a periodical, serial, or book, including all modifications from the peer-review process.

Official publication date is the date a publisher officially releases a new publication, which may appear on a cover, spine, and/or copyright page of a periodical, serial, or book’s version of record. The official publication date may also be time-stamped on the electronic version of a publication.

¹ Policy mandates issued by the OSTP on behalf of the Executive Branch do not legally apply to the Smithsonian Institution. The Smithsonian elects to voluntarily comply with OSTP’s guidance to the extent it is practicable and consistent with the Institution’s mission and digital asset strategy. Smithsonian participates in and regularly attends subcommittee meetings to advance its public access initiative and offers updates and available compliance data whenever feasible, in consultation with its Office of General Counsel.

² Demonstrated special circumstances that prevent materials from being made publicly available may include, for example, restrictions arising from copyright, privacy, contract, or other “allowable restriction categories” included in Smithsonian Directive 609, *Digital Asset Access and Use*.

³ The Smithsonian is not a grant-making agency, therefore its plan applies only to intramural research results.

⁴ OMB Circular A-110 (Subpart C.36(d)(2)(i)) provides a definition of *research data* that is comparable to the definition of *scientific data* in OSTP’s 2022 guidance and may be consulted in lieu of, or in addition to, discipline-specific standards for identifying supporting digital research data and its treatment in the traditional scientific process.

Page proof is a version of a manuscript generated by the publisher for author review that incorporates publisher editing and layout; a page proof is the version that precedes final publication. A page proof may be used as the publicly accessible version only if granted in the terms of publishing agreements between the Smithsonian and publishers.

Preprint is an author's original version of a manuscript that has been submitted or prepared for submission to a publisher and has not yet been subjected to peer review. In a growing number of disciplines, preprints are made accessible by being posted, usually by authors, on non-commercial discipline-supported preprint repositories (e.g., arXiv, bioRxiv) prior to or contemporaneous with submission to journals or publishers.

Preprint post date is the first recorded date that a preprint is posted or made available online. Subsequent or updated versions of preprints may have different preprint post dates.

Primary research data is digital research data that do not support or underly one or more Covered Publications and that may or may not be designated by Smithsonian as Covered Primary Data and subject to this plan.

Publicly accessible version of a Covered Publication is the version that is made publicly available in compliance with this plan. It may be an author's original version (preprint), a final accepted manuscript, a page proof, or a version of record. The version of a Covered Publication that may be made publicly accessible shall be guided by terms of publishing agreements between the Smithsonian and publishers.

Smithsonian Content is content (e.g., work, asset, product) based on and/or derived from Smithsonian collections, resources, equipment, facilities, property, data (including but not limited to data generated by Smithsonian equipment), and/or staff expertise. Smithsonian Content may not be subject to this plan unless designated by the Smithsonian as one of the following: Covered Publication, Covered Underlying Data, or Covered Primary Data.

Smithsonian Supplemental Terms is Smithsonian's rights retention statement, notifying publishers of Smithsonian's required public access terms at manuscript submission and that acceptance and/or publication of the Covered Publication constitutes the publisher's acceptance of the terms.

Submission date is the date a manuscript that is not yet peer reviewed is submitted to a publisher for consideration.

Version of record is a publisher's authoritative copy of the published work, including all modifications from the publishing peer-review process, copyediting, and formatting or layout. For purposes of this plan, the version of record shall be deemed the final publication, and its official publication date shall be used to establish the applicable embargo period.

SCOPE

Applicability

This plan applies to the following:

- A. Covered Publications

- Scholarly manuscripts that are authored or co-authored by Smithsonian employees in the course of their official duties and are submitted and accepted for publication as journal articles or as book chapters on or after the effective date of this plan.
 - Preprints that are authored or co-authored by Smithsonian employees in the course of their official duties and are posted by the author to an open, discipline-supported server, following accepted practice in the relevant field of study or by a publisher on its own open site prior to completing its peer review process.
- B. Covered Underlying Data
- C. Covered Primary Data

Excluded Materials

This plan shall not apply to the following:

- A. Smithsonian Content that has not been designated by the Smithsonian as one of the following: Covered Publication, Covered Underlying Data, or Covered Primary Data.
- B. Scholarly manuscripts, preprints, and digital research data that are:
- Not the result of research funded by the Smithsonian.
 - Authored by multiple authors and the contribution of Smithsonian employees comprises an insubstantial or indeterminate amount of the work.

and/or

- Subject to demonstrated special circumstances in accordance with allowable restriction categories included in Smithsonian Directive 609.
- C. Scholarly manuscripts that are authored or co-authored by Smithsonian employees, or on behalf of the Smithsonian, and not intended for publication as journal articles or book chapters.

COMPLIANCE

Covered Publications

A Covered Publication shall be compliant when any one publicly accessible version exists. Each of the following establishes compliance with this plan for Covered Publications:

1. Deposit of a publicly accessible version in Smithsonian Research Online (SRO).
2. Publication in a journal that is published by a CHORUS Publisher Member, where the Publisher Member makes or licenses the Smithsonian to make a publicly accessible version of the Covered Publication available.
3. Publication in a journal with a standard practice of releasing its articles/issues to open access, immediately or after a publisher-determined embargo.
4. Deposit of a publicly accessible version in a U.S. government funder–designated repository.
5. Publication in an established open access journal or periodical that makes the version of record available immediately, without embargo.
6. For a preprint, being posted by the author on a discipline-supported server, by a publisher after submission and prior to publication, or in a Smithsonian repository/database.
7. Verification by a trusted aggregation service (e.g., CHORUS) that a publicly accessible version of a Covered Publication is available online.
8. Access through SRO link when SRO is not the chosen repository.

Covered Underlying Data

Each of the following establishes compliance with this plan for Covered Underlying Data:

1. Deposit to a permanent, open, generalist or specialist, discipline-supported database/repository.
2. Deposit to an open Smithsonian database/repository.
3. Deposit to a U.S. government funder–designated database/repository.
4. Publication by a publisher on an open database or repository as supplemental materials.
5. Access through SRO link when SRO is not the chosen repository.

Covered Primary Data

Building a digital research data strategy is an active and ongoing initiative for the Smithsonian. Substantial new resources are required to thoroughly evaluate primary research data, which do not underly or support Covered Publications, and to determine when these data are subject to special demonstrated circumstances or will be designated as Covered Primary Data and made subject to this plan. Also, because a large portion of Smithsonian Content is not available in digital formats, digitization is an essential first step to advancing public access in this category. When practicable and aligned with the Smithsonian’s research mission and digital research data strategy, programs will be established to facilitate public access to Covered Primary Data.

IMPLEMENTATION

The Smithsonian shall implement this plan in a manner consistent with copyright and intellectual property laws, other applicable laws and policies pertaining to privacy and confidentiality, and contractual obligations. This version of Smithsonian’s plan applies, unless otherwise specified, to Covered Research Products with a submission or post date on or after 1 January 2025.

Covered Publications

To fulfill requirements for Covered Publications, Smithsonian will utilize internal content delivery systems and external, Smithsonian-approved repositories and databases. When the Institution stores publicly accessible versions of Covered Publications, it will generally do so through its institutional repository, Smithsonian Research Online (SRO; <http://research.si.edu>), a program maintained by the Smithsonian Libraries and Archives (SLA) that catalogs research outputs created by Smithsonian employees and includes descriptions of published works as well as digital copies of some outputs. To the extent practicable, SRO will make every effort to link to publicly accessible versions made available in external, open repositories or on publishers’ sites or to permanently archive publicly accessible versions, subject to negotiated publisher agreements and/or demonstrated special circumstances. SRO may link, without embargo, to Covered Publications published in established open access journals or through other open channels, including to all preprints as defined herein.

Smithsonian will continue in its agreement with CHORUS to assist with measuring compliance with this plan for Covered Publications that are published by CHORUS Publisher Members.⁵ Smithsonian will continue to use and/or manage other systems that may provide access to metadata of Covered Research

⁵ The Smithsonian–CHORUS agreement applies to Covered Publications published by CHORUS’s Publisher Members, excluding book chapters published by Elsevier and its affiliates. Smithsonian may augment its plan in the future if CHORUS requirements for agency participation change or if other types of content that are subject to this plan are added to its services.

Products or additional links to federal grant-making agencies' repositories, preprint servers, and publishers' sites.

Rights Retention

To fulfill requirements for Covered Publications, excluding preprints, the “Smithsonian Supplemental Terms,” other rights retention statements developed by Smithsonian, or addenda previously negotiated between Smithsonian and individual publishers will be attached at the time of manuscript submission or during negotiation of publishing agreements. Smithsonian will continue to investigate methods of streamlining processes up to and including reservation of all rights necessary to ensure compliance with its plan.

SAO Preprints

Smithsonian's implementation for preprints is customized to accommodate standard disciplinary practices of scholars at the Smithsonian Astrophysical Observatory (SAO). The plan recognizes that astronomy and physics have existing systems for increased access through the discipline-supported, widespread practice of making preprints available and aggregating publication metadata in open repositories, including the SAO/NASA Astrophysics Data System.

Machine Readability

The Smithsonian relies almost entirely on the prevalence and low-barrier nature of PDFs for publicly accessible versions. Upgrading Smithsonian's internal processes to ensure machine readable formats for Covered Publications will require significant new resources.

Covered Underlying Data

As the Smithsonian, U.S. Government, disciplinary communities, and publishing community develop tools and best practices to archive and curate digital research data, and to render such data findable, accessible, interoperable, and reproducible, the Smithsonian will make good faith efforts to incorporate them as appropriate and subject to available resources. Smithsonian-managed or -designated data repositories should align, to the extent practicable, with the National Science and Technology Council's “Desirable Characteristics of Data Repositories for Federally Funded Research.” Pursuant to OSTP's 2013 guidance, Smithsonian uses existing appropriations to fund the significant cost of research data management to facilitate deposit of Covered Underlying Data. Expanding Smithsonian's efforts to fund data submission, curation, and management will require significant new resources.

Currently, the Institution requires its employees to comply with disciplinary standards and publisher requirements for deposit of Covered Underlying Data to an external generalist or specialist repository or to a publisher's repository. When authors deposit Covered Underlying Data directly to external generalist (e.g., Dryad Digital Repository) or specialist (e.g., GenBank) repositories, SRO will include a link to the repository when possible. When publishers require Covered Underlying Data be published as supplemental materials of a Covered Publication, SRO may include a link to the supplemental materials when possible.

When no publisher requirement exists or no external repository is available, Smithsonian researchers may use a Smithsonian-managed open research data repository for deposit of Covered Underlying Data.

Data Management Plans

Data management plans for research projects, grant proposals, etc. are required in accordance with Smithsonian Directive 610, *Digitization and Digital Asset Management Policy*, and, when appropriate, must acknowledge the requirement to make Covered Underlying Data available, consistent with this plan.

Covered Primary Data

Research data designated as Covered Primary Data, absent a demonstrated special circumstance, may be deposited in one or more Smithsonian-managed, -approved, or -designated data repositories.

“Smithsonian Open Access” (<https://si.edu/openaccess>) increases access to and reuse of unrestricted images and archival materials related to Smithsonian collections. Smithsonian units that hold collections directly manage digital assets and may submit unrestricted 2D and 3D digital assets in their collections to the program.

Embargo

Smithsonian will continue to assess various strategies to make Covered Publications freely available and publicly accessible by default with no embargo period after publication. Smithsonian must balance factors including but not limited to embargo periods in exchange for public access to best available versions, existing negotiated terms with major publishers to ensure reasonable or significantly reduced embargo periods for Smithsonian-authored works, a growing number of publishers with standard terms to facilitate self-archiving, journals that transition to open access through transformative policies, minimizing the additional Smithsonian resources required to achieve maximum compliance with a no-embargo plan, and the academic freedom of Smithsonian scholars to submit to the most appropriate and desirable journal or publisher for their respective disciplines.

Scientific and Research Integrity

To strengthen public trust in and ensure scientific and research integrity of the federally funded research outputs generated by the Institution’s intramural researchers, Smithsonian:

- a) Collects and makes metadata associated with Covered Research Products available, when applicable, in the Smithsonian Research Online system(s), including but not limited to:
 - author and co-author names
 - individual researcher identifiers
 - digital object identifiers (e.g., Crossref, DataCite)
 - publication year
 - product type (e.g., journal article, book chapter)
 - affiliated Smithsonian research unit
 - funder(s)
 - identifiers for related products (e.g., supplemental materials, research data sets)
- b) Requires employee researchers in all disciplines to register for ORCID iD, improving and automating tracking of research outputs, including but not limited to publications, datasets, patents, and grants.
- c) Requires employee researchers to follow all requirements and obligations associated with grants received from federal agencies and accepts compliance with those agencies’ plans; and supports

ongoing internal work to effect wider use of suitable unique digital persistent identifiers to expand metadata records for research outputs and activities.

Metadata

The Smithsonian Institution considers metadata to be in the public domain, therefore relevant metadata is made available in a Smithsonian-managed, -approved, or -designated repository as soon as possible after their associated Covered Research Products are deposited, posted, or published, absent a demonstrated special circumstance.

ROLES AND RESPONSIBILITIES

Office of the Under Secretary for Science and Research

- Ensures development and implementation of Smithsonian’s plan for increased public access.
- Ensures implementation of associated policies and procedures.
- Assumes Smithsonian-wide authority, control, and management of this plan.
- Oversees collaboration and cooperation with federal agencies for this plan.

Under Secretaries

- Ensure that all authors of Covered Research Products within their reporting units who are subject to this plan are informed of the plan and all related requirements.
- Ensure that all authors of Covered Research Products within their reporting units who are subject to this plan submit publishing agreements for review, negotiation, and signature in accordance with Smithsonian policy.

Smithsonian Institution Scholarly Press (SISP)

- Creates, updates, coordinates reviews of, implements, and administers this plan on behalf of the Under Secretary for Science and Research.
- Reviews, negotiates, and executes publishing agreements for Covered Publications, in accordance with Smithsonian policy.
- Engages vendors and stakeholders as Smithsonian’s principal representative.
- Collects and prepares publicly accessible versions of Covered Publications for deposit to Smithsonian-managed or -designated repositories.
- Requests and compiles data from partner units across the Smithsonian, to measure public access activities and progress.

Smithsonian Libraries and Archives (SLA)

- Maintains SRO, including a repository, for linking to and/or deposit of publicly accessible versions of Covered Publications.
- Coordinates technical requirements necessary to capture metadata, including PIDs to facilitate linking, of Covered Publications for inclusion in SRO.
- Coordinates deposit of publicly accessible versions of Covered Publications that are collected by SISP and SLA for inclusion in SRO.

- Enables access to publicly accessible versions through permanent archive of full text or actionable links, subject to system requirements, publisher agreements, other contractual obligations, and available resources.

Office of the Chief Information Officer (OCIO)

- Provides and maintains IT infrastructure to enable compliance with this plan.
- Provides technical support for SRO, administered by SLA.
- Manages other Smithsonian repositories that enable access to Covered Research Products.

Smithsonian Employees

- For Covered Research Products authored by the employee, comply with all policies and required internal procedures developed to enact this plan.

REFERENCES

- Office of Science and Technology Policy, 22 February 2013, “Increasing Access to the Results of Federally Funded Scientific Research,” https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf
- Office of Science and Technology Policy, 25 August 2022, “Ensuring Free, Immediate, and Equitable Access to Federally Funded Research,” <https://www.whitehouse.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-access-Memo.pdf>
- OMB Circular A-110, Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations (as amended 30 September 1999), available at <https://www.govinfo.gov/content/pkg/FR-1999-10-08/pdf/99-26264.pdf> (p. 54927).
- Smithsonian Directive 609, *Digital Asset Access and Use*, available at <https://www.si.edu/content/pdf/about/sd/sd609.pdf>.
- Smithsonian Directive 610, *Digitization and Digital Asset Management Policy*, available at <https://www.si.edu/sites/default/files/about/sd610.pdf>.