

U.S. Department of Education Plan for Public Access:
Improving Access to Results of Federally Funded Scientific Research
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1.0 BACKGROUND AND PURPOSE

The revised U.S. Department of Education Plan for Public Access: Improving Access to Results of Federally Funded Scientific Research (Public Access Plan) is issued in response to the August 25, 2022, Office of Science and Technology (OSTP) Memorandum for the Heads of Executive Departments and Agencies, “Ensuring Free, Immediate, and Equitable Access to Federally Funded Research.” Through Section 3 of this Memorandum, OSTP directed all agencies with investments in research and development¹ to prepare a plan to update their public access policies to ensure that the public has immediate access to the publications and their supporting data resulting from federally funded research. The Department of Education (ED) Public Access Plan relies on the definitions of “research and development” set out in Office of Management and Budget (OMB) Circular A-11 and 2 CFR 200.87. ED supports open access to information across its wide range of program evaluation activities, but these are covered under other guidance. The guidance in this Public Access Plan applies both to external researchers who receive federal funding to conduct research and federal employees who conduct research. Federal researchers must follow federal laws and OMB policies that govern federal agencies’ information management practices and protect certain types of data to the extent that the scientific data created by, collected by, under the control or direction of, or maintained by federal researchers is subject to those laws and policies.

The U.S. Department of Education (ED) supports a wide range of research in and related to the education sciences. Providing rigorous and relevant evidence on which to ground education practice and policy is a key function of the education sciences. By identifying what works, what does not, and why, education science aims to improve educational and life outcomes for all learners, particularly those at risk of failure, including children living in poverty, English learners, and individuals with or at risk for disabilities. ED has a long-standing commitment to supporting not only the conduct of education research to address the largest challenges in education, but also the sharing of research activities and outcomes. The Institute of Education Sciences (IES) has required public access to scientific outputs created by grantees since 2011, and the ED Public Access Guide, established in 2016, provided a framework and guidance for policy development related to information sharing and public access to research findings generated from ED-supported research. As the scientific community and the federal government have continued to develop mechanisms to address barriers to open science, infrastructure and standards for sharing have continued to evolve. The 2022 OSTP memo established new standards for sharing of publications and data, including establishing timing policies and expectations for sharing metadata such as persistent digital identifiers to facilitate findability. This revised ED Public Access Plan reflects these new expectations.

ED is committed to allowing, in accordance with applicable law, the public access to research findings and scientific data supported by federal funds as an important component of the scientific process. Access to peer-reviewed scholarly publications and scientific data provides opportunities for other researchers to review, confirm, or challenge study findings. In addition, providing public access can enhance scientific inquiry through a variety of other analytic activities, including the use

of data to test alternative theories or hypotheses; explore different sets of research questions than those targeted by the original researchers; combine data from multiple sources to provide potential new insights and areas of inquiry; and/or conduct methodological studies to advance education research methods and statistical analyses. Ensuring access and sharing also creates a more equitable research environment in which researchers have access to resources regardless of their own career stage, scholarly network connections, institution type, or resources. In short, by providing public access to peer-reviewed scholarly publications and scientific data, ED believes it maximizes the potential for creative reuse of research to enhance value to all stakeholders; avoids unnecessary duplication of research; and maximizes the impact of the federal research investment. This revised ED Public Access Plan reflects the new standards established in the 2022 OSTP memo, while ensuring appropriate data privacy protections are met, including requirements for confidentiality specified in Section (Sec.) 183 of the Education Sciences Reform Act (ESRA).

ED expects all data collected to be made freely available and publicly accessible by default and at the time of publication, with some limited exceptions indicated below. The ED Public Access Plan establishes objectives to ensure, in accordance with applicable law, public access to peer-reviewed scholarly publications and digital data arising from ED-funded research, including both data sets reported in peer-reviewed publications and unpublished data sets. The majority of research and development activities at ED are supported through discretionary grants administered by the two research centers of IES. Additional investments in research and development are supported through the Office of Elementary and Secondary Education, Office of Special Education and Rehabilitative Services, Office of Postsecondary Education, and Office of Career, Technical, and Adult Education.

IES, the research arm of ED, established its commitment to providing public access to peer-reviewed scholarly publications emerging from IES-funded research and to the sharing of scientific data collected through its grant-funded research programs in two policy statements released in 2011. Current versions of these policies extend these requirements to IES-funded research contracts. The Department intends to conduct rulemaking to extend these requirements to awards that produce peer-reviewed scholarly publications and scientific data funded by ED offices other than IES.

The ED Public Access Plan is aligned with current public access policies and public access requirement implementation at IES. Information about policies currently in place is available at <https://ies.ed.gov/funding/researchaccess.asp>. Once approved, the ED Public Access Plan will guide policy development and implementation throughout ED, including any required modifications to current practice and policy at IES. ED intends to have public access rules, policies, and accompanying guidance in place as expeditiously as possible, and to fully implement them across the Department no later than December 31, 2025.

The ED Public Access Plan:

- Affirms and enhances ED's commitment to public access to research results;

- Supports adoption of best practices for managing public access to peer-reviewed scholarly publications and scientific data across ED;
- Supports access to and preservation of ED-funded peer-reviewed scholarly publications and scientific data sets for research, development, and education purposes; and
- Increases opportunities for the use of research results to enhance scientific discovery and deployment of research results.

The ED Public Access Plan is organized into sections that describe its scope, applicability, requirements, authority, stakeholder roles and responsibilities, and implementation. It also includes plans for assuring compliance with and evaluation of the implementation of the ED Public Access Plan, public consultation, interagency coordination, and a timeline for rollout.

2.0 DEFINITIONS

Awardee refers to the recipient organization or institution of a federal grant or contract.

Data in the ED Public Access Plan follows the definition for “scientific data” included in the August 2022 OSTP Memo. These data include the recorded factual material commonly accepted in the scientific community as of sufficient quality to validate and replicate research findings. Such scientific data do 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” defined by 2 CFR 200.315 (e).

Data access refers to locating and having the ability to read and utilize scientific data used in research conducted or funded by ED, including the final data underlying peer-reviewed scholarly publications as well as unpublished data.

Data Repository refers to an archive or library where data sets can be stored. This refers to an electronic platform in which data can be saved, tagged, and annotated for the purposes of sharing and reporting, reanalyzing, or repurposing.

Digital Persistent Identifier is a unique code that refers to a specific individual person, written work, data set, or grant in a universal, machine-readable format such as Digital Object Identifiers or ORCID.

Metadata refers to information about a particular resource or data set that indexes details to assist with identification and discoverability. Metadata of relevance include date of publication, all author and co-authors names, affiliations, sources of funding, and digital persistent identifiers, as appropriate, for individuals, publications, awards, and data sets.

Peer review is defined as the evaluation of scholarly or scientific work, including proposed and conducted research, by independent scholars who have expertise in the topic area of the work in

question, to assess elements such as the clarity of the work, the rationale and research questions, the design, methodology, and analyses, and the findings and their interpretation.

Peer-reviewed scholarly publication is defined as a *final peer-reviewed manuscript* accepted for publication, that arises from research funded, either fully or partially, by federal funds awarded through an ED-managed grant, contract, or other agreement. A *final peer-reviewed manuscript* is defined as an author's final manuscript of a peer-reviewed scholarly paper accepted for publication, including all modifications resulting from the peer review process. The final peer-reviewed manuscript is not the same as the *final published article*, which is defined as a publisher's authoritative copy of the paper including all modifications from the publishing peer-review process, copyediting, stylistic edits, and formatting changes. However, the content included in both the final peer-reviewed manuscript and the final published article, including all findings, tables, and figures should be identical.

3.0 SCOPE

Once the revised IES public access requirements are established and appropriate regulations are in place, the guidance included in the revised ED Public Access Plan will apply to all research activities supported through ED research grant awards, cooperative agreements, and contracts, and to any research activities carried out by ED intramural scientists. The Secretary of Education will be responsible for management of the development of policies and procedures for all offices within ED that support research through grants, cooperative agreements, or contracts, or intramurally, to ensure that awardees, contractors, and intramural staff provide plans that outline how peer-reviewed scholarly publications and scientific data, including data underlying peer-reviewed scholarly publications, will be made publicly available immediately upon publication. While peer-reviewed scholarly publications describing education evaluation findings resulting from ED contracts are widely available through the IES (<https://ies.ed.gov/ncee/pubs/>), ED (www.ed.gov), and Education Resources Information Center (ERIC) (<https://eric.ed.gov/>) websites, peer-reviewed scholarly publications not published by the federal government are often inaccessible to the public without purchase, and the intent of the ED Public Access Plan is to outline a framework for ensuring that those publications be made available to the public without any embargo or delay after publication and without charge.

Similarly, once appropriate regulations are in place, the ED Public Access Plan will apply to scientific data collected by researchers during the course of award-funded research as well as to data created by researchers through transforming or linking extant datasets. It aims to maximize access to data resulting from ED-funded research and development, taking into consideration privacy and confidentiality concerns under applicable law and other limitations imposed by determinations made by Institutional Review Boards (IRBs) and/or informed consent for the data collection provided by study subjects or their representatives (e.g., students and parents). There are circumstances, such as when a state or Federal law does not allow student data to be further disclosed, where investigators will not be able to share their complete data set. However, ED

expects those data not restricted by law, including primary data collected by the project or extant data obtained from a private source, to be shared at the time of initial publication of the findings or within a certain time period following award close-out, whichever occurs first, in machine readable formats. As with publications, these data should be made available to the public without charge and with accompanying metadata to facilitate discoverability and re-use.

The ED Public Access Plan is subject to applicable laws on the protection of privacy and individually identifiable information (including, but not limited to, the Family Educational Rights and Privacy Act, as amended (FERPA), the Privacy Act of 1974, as amended (Privacy Act), the Common Rule for the Protection of Human Subjects in Research, and Sec. 183 of ESRA), as well as indigenous rights, foreign policy and international development objectives, and national security considerations. By providing public access to the results of federally funded education research, ED anticipates that there will be opportunities for innovation from multiple sectors including the business sector. The ED Public Access Plan recognizes potential legal, privacy, ethical, technical, intellectual property, or security limitations -- including national security concerns.

4.0 APPLICABILITY

The ED Public Access Plan applies to peer-reviewed scholarly publications and scientific data produced in whole or part by ED awardees, contractors, or employees. ED awardees and contractors include, but are not limited to, nonprofit and for-profit organizations, public and private agencies and institutions, such as colleges and universities, and individuals. While ED normally does not conduct intramural research *per se*, to the extent that ED federal employees produce peer-reviewed scholarly publications and scientific data as part of their federal duties, the ED Public Access will also apply to them, as will the requirements of OMB Memo M-13-13.

5.0 AUTHORITY

A number of legal and policy elements promote the concept of access to peer-reviewed scholarly publications and scientific data produced in full or in part with the support of federal funds. The elements most relevant to public access and ED are summarized below:

- The Director of OSTP is responsible for coordinating “Federal science agency research and policies related to the dissemination and long-term stewardship of the results of unclassified research, including digital data and peer-reviewed scholarly publications, supported wholly, or in part, by funding from the Federal science agencies.” 42 U.S.C. § 6623(a).
- Title II of the Foundations for Evidence-Based Policy Making Act (Public Law 115-435), also known as the Open, Public, Electronic, and Necessary (OPEN) Government Data Act, which requires that government data are open by default, unless otherwise prohibited by law.
- OMB Circular A-11 (“Preparation, Submission and Execution of the Budget”; July 2016) defines research and development activities as “creative and systematic work undertaken in order to increase the stock of knowledge—including knowledge of people, culture, and society—and to devise new applications using available knowledge.”

- The Freedom of Information Act (FOIA; 5 U.S.C. § 552) provides for public access to the records of the federal government under certain circumstances.
- The Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 CFR Part 200, as adopted by ED at 2 CFR Part 3474, provides that ED retains a royalty-free, nonexclusive, and irrevocable right to reproduce, publish, or otherwise use works produced with grant funds for federal purposes, and to authorize others to do so (2 CFR § 200.315).
- The E-Government Act of 2002, Public Law 107-347 (44 U.S.C. § 3601 notes) has among its primary purposes the promotion of “the use of the Internet and emerging technologies within and across Government agencies to provide citizen-centric Government information and services” as well as providing “enhanced access to Government information and services.”
- OMB Circular A-130 (“Managing Information as a Strategic Resource”; July 28, 2016) specifies that “[t]he open and efficient exchange of scientific and technical Federal information, subject to applicable security and privacy controls and the proprietary rights of others, fosters excellence in scientific research and effective use of Federal research and development resources.”
- The Paperwork Reduction Act of 1995 (44 U.S.C. §§ 3501-3521) has as one of its key purposes to “ensure the greatest possible public benefit from and maximize the utility of information created, collected, maintained, used, shared and disseminated by or for the Federal Government.”
- OMB Memorandum M-10-06 (“Open Government Directive”; December 8, 2009), in furtherance of transparent government and openness, directs agencies to “publish information online in an open format that can be retrieved, downloaded, indexed, and searched by commonly used web search applications.” It further defines an open format as one that is “platform independent, machine readable, and made available to the public without restrictions that would impede the re-use of that information.”
- OMB Memorandum M-13-13 (“Open Data Policy – Managing Information as an Asset”; May 9, 2013) states that agencies must take the following five actions:
 - 1) Collect or create information in a way that supports downstream information processing and dissemination activities by using machine-readable and open formats, data standards, and common core and extensible metadata, and by ensuring information stewardship through the use of open licenses.
 - 2) Build information systems to support interoperability and information accessibility.
 - 3) Strengthen data management and release practices by creating and maintaining an enterprise data inventory and a public data listing, creating a process to engage with customers to help facilitate and prioritize data release, and clarifying roles and responsibilities for promoting efficient and effective data release practices.
 - 4) Strengthen measures to ensure that privacy and confidentiality are fully protected and that data are properly secured.

- 5) Incorporate new interoperability and openness requirements into core agency processes.
- ED's Scientific Integrity Policy (ACSD-IES-001, September 12, 2018) affirms as a core principle that all ED awardees and contractors are expected to make public the findings resulting from their scientific activities, including research.

6.0 ROLES AND RESPONSIBILITIES

The Secretary of Education:

- Has overall responsibility for management and oversight of the ED Public Access Plan.

The Director of IES:

- Coordinates the implementation of the ED Public Access Plan.
- Coordinates a sustainable funding strategy to implement the ED Public Access Plan, leveraging current resources devoted to repositories of education research (e.g., ERIC).
- Coordinates knowledge sharing and implementation of public access across federal agencies.

ED Offices that fund or carry out research:

- Adopt and implement requirements that will direct recipients of funds awarded under grants or contracts to make any peer-reviewed scholarly publications produced with that funding and scientific data collected with the support of that funding publicly available consistent with the requirements of the approved ED Public Access Plan and applicable laws and regulations, including the Education Department General Administrative Regulations (EDGAR).
- Develop practical funding mechanisms to ensure the successful implementation of the ED Public Access Plan and resulting policies.
- Consult with the Grants Policy Office as ED offices adopt and implement these requirements.
- Inform ED employees that any works they create as part of their official duties, including peer-reviewed scholarly publications, are not copyrightable because works created exclusively by ED employees as part of their official duties are in the public domain (17 U.S.C. § 105).
- Notify funded awardees of ED requirements established in response to the ED Public Access Plan and monitor awardees' compliance with those requirements.

Awardees and their institutions:

- Comply with contract and grant conditions concerning public access to peer-reviewed scholarly publications produced with that funding and data collected with that funding.
- Ensure all terms and conditions of awards are met, including those concerning the submission to ERIC of final accepted peer-reviewed manuscripts that arise directly from their awards, even if they are not an author or co-author of the paper, and the development and implementation of a Data Sharing and Management Plan (DSMP), even if the data to be shared are not ready for access until after the award is completed.
- Participate in ED annual public access training.

Authors of Peer-Reviewed Scholarly Publications:

- Comply with applicable ED policies to ensure compliance with the ED Public Access Plan.
- Ensure that no terms and conditions of publication impede the obligation of the authors to comply with the requirements established in ED regulations and policies that result from the implementation of the ED Public Access Plan and resulting requirements.
- Participate in ED annual public access training.

7.0 PROPOSED REQUIREMENTS FOR PUBLIC ACCESS

ED will develop policy and regulations that will require awardees and ED staff to comply with ED requirements on public access to peer-reviewed scholarly publications and scientific data, including metadata. As IES is not subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act, IES will be the first office in the Department to update their public access requirements, and will do so through their notices inviting applications published in the Federal Register. The ED Public Access Plan will be fully applicable once Department-wide regulations are adopted and implemented.

7.1 Publications

Consistent with the ED Public Access Plan, once Department-wide regulations are in place, ED will take appropriate steps to require awardees and contractors who are receiving ED funding to carry out research, as well as ED employees who produce peer-reviewed scholarly publications, to submit their final peer-reviewed scholarly publications to ERIC upon acceptance. Authors who are depending upon publishers to submit publications on their behalf should ensure that the publisher has a system for implementing the “zero-day embargo” policy reflected in the Nelson memo (<https://www.whitehouse.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-access-Memo.pdf>) to ensure timely compliance. This “zero-day embargo” requirement will not apply to publications resulting from previous support from ED, including IES awards that are governed by the IES Public Access Policy established for awards made beginning in fiscal year (FY) 12. However, all ED award recipients are strongly encouraged to submit any peer-reviewed scholarly publications from ED-funded awards to ERIC immediately upon acceptance.

Access to the ERIC database is free to the public, with the full text of many documents, including those that are not products of ED-funded research, available at no cost. ERIC includes citations to

indexed peer-reviewed journal articles and education-related materials from a variety of sources including ED and other federal agencies, scholarly organizations, professional associations, research centers, policy organizations, and university presses. Much of the content indexed in ERIC pre-dates the IES Public Access Policy and the ED Public Access Plan and is not subject to current public access requirements. Thus, many journal articles pre-dating the ED Public Access Plan need to be obtained through library print and electronic holdings or directly from the publisher, although some may be available at no cost. In order to identify which publications are covered by IES public access policies commencing in 2013, and to facilitate implementation of policies and guidance developed in response to the current ED Public Access Plan, associated IES or ED award numbers have been included in ERIC to the extent possible since IES published its initial public access policy. ERIC will ensure that the system can include any future persistent identifier formats associated with awards and peer-reviewed scholarly publications.

Consistent with the ED Public Access Plan, ED will develop and implement policies and regulations to ensure new awards to researchers or institutions are not finalized until the awardee's performance under prior awards from ED has been reviewed, including applicable requirements concerning making final peer-reviewed scholarly publications freely available to the public in ERIC without any embargo or delay after publication. Beginning with the FY21 competition cycle, IES included requirements in their Requests for Applications for the principal investigators of awardees on the funding slate to demonstrate their compliance with the IES Public Access Policy prior to new awards being issued. Awardees subject to public access policies and guidance derived from the current or previous ED Public Access Plans will be required to include information about the availability of their peer-reviewed scholarly publications in ERIC in their annual and final reports. If non-compliance with these requirements is noted during the annual review of reports, appropriate administrative actions will be taken to bring the awardee into compliance. In addition, procedures will be developed as expeditiously as possible to help ensure that ED employees submit to ERIC peer-reviewed scholarly publications produced proceeding from their federal research activities.

7.2 Data

The intent of the ED Public Access Plan is to ensure access to scientific data resulting from ED-funded research, including research completed by ED employees as part of their federal employment, in accordance with applicable law, and to require that awardees and ED employees² provide access to scientific data collections supported by federal funds free of charge to the public, except when otherwise prohibited by law. ED will develop and implement regulations as expeditiously as possible to require that applications/proposals to carry out scientific research, including projects proposed by ED employees, include a DSMP. DSMPs for covered awards generally address a number of items, including the data to be generated by the research, how the data will be managed, how the privacy and confidentiality of personally identifiable information will be ensured, how the security of the data will be assured, and the details of how the data will be made accessible

² Federal employees and their contractors are also subject to OMB's M-13-13, as described in Section 5.0 of this document.

to others in machine readable formats, accompanied by relevant metadata, for free at the time of publication or within 5 years of award close-out, whichever is sooner. Lack of acceptance of a publication based on federally funded data will not be grounds for withholding data sharing. The DSMP should include a plan to share data in public repositories that align with the characteristics described in the National Science and Technology Council document entitled “Desirable Characteristics of Data Repositories for Federally Funded Research,” (<https://www.whitehouse.gov/wp-content/uploads/2022/05/05-2022-Desirable-Characteristics-of-Data-Repositories.pdf>) whenever feasible.

In addition to describing the approval process for the DSMP by ED, we further anticipate that proposed regulations will address the responsibility of the Project Director/Principal Investigator (PD/PI) and the institution’s office that oversees sponsored research to have its DSMP for covered human subjects research or other research approved by the IRB or other appropriate entity to ensure its compliance with human subjects review policy and to protect the privacy and confidentiality of personally identifiable information.

Those requirements will also make it clear that once the DSMP is approved by ED, the PD/PI and the institution are required to carry it out, and to report progress, amendments, and problems through the regular reporting channels (e.g., annual reports, monitoring contacts with ED staff overseeing the project). Compliance with ED data access requirements is expected even though the final dataset may not be completed and prepared for access until after the award period is over. New awards to researchers or institutions will not be finalized until ED has reviewed the awardee’s performance under prior awards, including the applicable requirements of the PD/PI/awardee DSMP and deposit of data in machine readable formats into an agreed-upon data repository. In addition, if noncompliance with the data access requirements is noticed during the course of a project, ED will take appropriate administrative action to secure compliance with these requirements. Investigators will need to plan their study design and procedures to ensure data access in machine readable formats (e.g., .csv or .xml). In addition, ED will develop procedures to guide the review of DSMPs and monitoring of compliance for ED intramural staff conducting scientific research as part of their ED responsibilities.

Human Subjects and Privacy Issues

Researchers funded by ED through grants or contracts must be committed to protecting the rights and privacy of human subjects at all times. Data access must not compromise this commitment. ED recognizes that data sharing may be complicated or limited by institutional policies, local IRB determinations, as well as state and federal laws and regulations that address the rights and privacy of human subjects. Researchers should work to maximize access to digital data, while protecting participant privacy and confidentiality. Specifically, the awardees have the responsibility to develop informed consent procedures and a DSMP that protects the rights of study participants and privacy and confidentiality of the data, as required by their IRB and state and federal laws and regulations. Data that are made accessible should be free of identifiers that would allow linkages to individuals

participating in the research as well as other elements that could lead to deductive disclosure of the individual study participants. Deductive disclosure is particularly challenging before data collection that may include "indirect" identifiers, such as research involving study participants drawn from small geographic areas or rare populations (e.g., individuals with low-incidence disabilities), when there is a joint occurrence of several rare factors (e.g., multilingual learners attending a rural school with unique characteristics), or when, as is often the case in education research, there is a hierarchical structure in the data (e.g., students nested within classrooms within schools). Disclosure risk might also be a concern when databases are linked or when using digital photographs or videos. Where necessary, researchers may address these limitations through the aggregation of data. In cases where data cannot be free of identifiers or when identifiers are important for linking datasets, investigators should set restrictions on data access as permitted by applicable law.

One important consideration will be consent forms and agreements used in recruiting individuals and/or institutions (e.g., schools and early childhood programs) to participate in research studies. The content of the informed consent limits how those data can subsequently be used, including data sharing and accessibility. In addition, some IRBs, as well as federal statutes and regulations that govern access to education data (e.g., FERPA), generally require that personally identifiable information from students' education records not be disclosed without prior written consent, whether through single or multiple releases and taking into account other reasonably available information. Investigators should seek to maximize the opportunity for data access in the design of informed consent procedures and while working with their IRB to protect the privacy rights of study participants and confidentiality of the data, in compliance with relevant statutes and regulations.

If researchers believe that full data access is not possible, such as when states or districts limit access or access is limited by applicable law, they must provide a written rationale in their DSMP. Researchers should also describe how a more limited set of data can be made accessible, in cases where not all data are restricted by such data sources.

Proprietary Data

ED acknowledges that there may be issues associated with data access when the data collected are proprietary (e.g., when a published curriculum is being evaluated). Any restrictions on data access, such as a delay of disclosing proprietary data, should be presented in the DSMP. If proprietary issues emerge during the course of the research, they should be brought to the attention of ED staff, and the DSMP will be reviewed in light of these issues.

Indigenous Data Sovereignty

ED acknowledges that there may be special standards and considerations pertaining to the management of Tribal or indigenous data sources, and recognizes the importance of ensuring that Indigenous People have control over the use of indigenous data through adherence to the CARE Principles for Indigenous Data Governance (https://www.gida-global.org/s/dsj-1158_carroll.pdf), as

the researchers deem appropriate. Plans for data access in adherence with these principles should be presented in the DSMP.

Data Documentation

Documentation that provides all the information necessary for other researchers to use the data, including pertinent metadata, must be prepared and made accessible with the data at the time of initial publication of research results or within 5 years of award close-out, whichever occurs first. The documentation should include a summary of the purpose of the data collection, methodology and procedures used to collect the data, timing of the data collection, as well as details of the data codes and weights, definition of variables, variable field locations, and frequencies. The data documentation should be a comprehensive and stand-alone document that includes all the information necessary to replicate the analysis performed by the original research team. The DSMP described more fully below, will outline the contents of the data documentation and provide a timeline of when and where it will be made available.

8.0 IMPLEMENTATION AND COMPLIANCE

ED will implement the objectives articulated in the ED Public Access Plan in phases, addressing the processes and procedures to be followed before research begins, as well as the submissions process, management of the components of the ED Public Access Plan including measures of successful implementation and compliance enforcement, access, and preservation for peer-reviewed scholarly publications and scientific data. All ED research awardees will be required to comply with ED public access policies for awards as soon as possible after ED policies and associated regulations are adopted and implemented across the Department. ED intends to incorporate these requirements into all new notices inviting applications and solicitations for research and development as expeditiously as possible.

This guidance will also apply to any ED employees producing peer-reviewed scholarly publications and research data as part of their federal duties as soon as ED policies are approved and implemented. This requirement will not be applied retroactively to activities that have already been approved.

As described in Section 8.1, many IES research awards are already covered by extant IES Policies Regarding Public Access to Research and Data Sharing. When the ED Public Access Plan is finalized and approved, necessary modifications to extant IES policies will be completed. Each ED office that supports research will develop policy guidance aligned with the objectives articulated in the ED Public Access Plan. In the following sections, we describe current and planned implementation steps in IES and ED.

8.1 Timeline for Implementation and Compliance

There are a number of aspects of the revised ED Public Access Plan that will be implemented within IES over the next several years. Other ED offices will require additional planning and rollout upon

final approval of the ED Public Access Plan and adoption of associated regulations. The current implementation status of the ED Public Access Plan and IES Policy are summarized below.

Current Implementation of Public Access Requirements at IES Includes:

- Beginning with awards made in FY 2012, IES awards that support research are covered by the IES Policy Regarding Public Access to Research (<https://ies.ed.gov/funding/researchaccess.asp>), and a Policy Statement on Data Sharing in IES Research Centers (https://ies.ed.gov/funding/datasharing_policy.asp).
- Information for staff and applicants about public access requirements has been included in all IES Requests for Applications (RFAs) since our FY12 competitions. These requirements serve as written guidance for staff and applicants.
- As IES prepares competition notices for the FY24 discretionary grant competition season and is preparing contract awards to support scientific activities, IES is considering which aspects of the new requirements can be implemented now, and which will need to be implemented during the FY25 competition cycle.
- All IES Requests for Applications released since April 2014 include expanded Data Management Plan requirements that align with the expectations laid out in the ED Public Access Plan. One additional change to these requirements will be the updating of the name Data Management Plan to Data *Sharing* and Management Plan (DSMP) to better reflect the emphasis on public access.
- IES is developing protocols for the review of DSMPs submitted with applications to FY 2024 grant competitions. Those protocols will be used to review DSMPs for all new awards made in FY24. Training for staff on the review of DSMPs will occur prior to award time, and refresher training will be completed by staff annually.
- IES has several mechanisms already in place for informing the field about current IES requirements and any future changes. When IES releases annual Requests for Applications, a series of funding opportunities webinars are held that include information on public access requirements. In Spring 2015, IES launched a web page (<https://ies.ed.gov/funding/researchaccess.asp>) where information about IES policies and resources available for implementation of public access requirements are compiled and regularly updated. ERIC regularly provides training and workforce development for IES staff on how to successfully comply with public access requirements using available resources. These resources can be found here: <https://eric.ed.gov/?multimedia-submissions>.
- Training for awardees on the IES Public Access Policies is completed through a number of venues. All IES awardees participate in a post-award meeting (by phone or in person) within 30 days of the award being obligated. During this meeting, IES staff provide detailed information on the terms and conditions of awards, as well as reporting requirements (including compliance with stated terms and conditions). This information is included in the post-award memo prepared for each individual grant award. Instruction on the IES Public Access Policies is incorporated into that post-award meeting, and awardees are directed to the ERIC webinar referenced above. Training for new grantees will be prepared as well. IES

- staff monitor awards throughout the duration of a project, and review products and reports from the awards. Discussions with awardees during monitoring meetings include updates on awardee compliance with IES public access requirements and provide opportunities to discuss any anticipated issues or problems.
- IES will include specific language in publisher contracts with ERIC to ensure that publishers understand the obligation of some of their authors to enable timely access to peer-reviewed scholarly publications describing federally sponsored research.
 - IES has identified data archives and repositories to help provide awardees with optimal choices for public access to the data underlying peer-reviewed scholarly research publications (described more fully in section 8.3.4). Resources available to awardees and the public to support making findings, methods, and data open are included on this Standards for Excellence in Education Research webpage (https://ies.ed.gov/seer/open_data.asp). These resources are consistent with the National Science and Technology Council's (NSTC's) report on Desirable Characteristics of Data Repositories for Federally Funded Research.

Implementation Steps to be Taken Upon Approval of the Revised ED Public Access Plan:

- IES will post a copy of the revised ED Public Access Plan to the IES website (<https://ies.ed.gov/funding/researchaccess.asp>) upon approval from OSTP and clearance from ED.
- IES will use current outreach mechanisms to distribute the information widely to current awardees and the public.
- IES will review and update the content of its current Public Access Policies to ensure that they are aligned with the expectations specified in the ED Public Access Plan. Many offices require that new awardees participate in a webinar upon receipt of an award. ED intends to incorporate training about the ED Public Access Plan (upon approval) into these webinars. IES will prepare a standard deck and video presentation that will be made available across ED.
- ED will establish universal, machine-readable persistent identifier standards that will support identification of individuals, awards, data sets, and publications.
- ED will explore the possibilities of working with the private sector to improve access and compatibility of scientific data underlying peer-reviewed scholarly research publications, as described in section 8.3.3.
- ED will evaluate options for improving data set identification, attribution, and discovery as described in sections 8.3.3 and 8.3.4.
- ED intends for all ED offices that support scientific research to develop policies, regulations, and guidance that align with the approved ED Public Access Plan as expeditiously as possible, and to begin to develop the needed policies, regulations, and guidance prior to December 31, 2025.
- IES will lead an effort to evaluate the lessons learned from implementing public access requirements and will devise implementation guidance to share with other offices and programs in ED as the new policies and regulations are put in place.

Compliance steps to be taken upon approval of the revised ED Public Access Plan:

- Measures of successful implementation will include identifying whether all peer-reviewed scholarly publications that are required to be available in ERIC were in fact made available in ERIC. Compliance enforcement will occur at the time of annual and final report reviews, and retroactively at the time of new awards, and a summary report for ED will be prepared on a regular basis as required by OSTP.
- Measures of successful implementation of the data access requirements will be developed over the next several years, and reported to OSTP as required.

8.2 Publications

8.2.1 Incorporating Language about Public Access to Peer-Reviewed Scholarly Publications into the Pre-Award Process

To complement the existing federal purpose language, ED will establish new regulations and requirements that apply to all ED funding agreements that support research activities. IES will continue, as it has since FY12, to require its awardees and contractors to submit their peer-reviewed scholarly publications to ERIC via the user submission facility (<http://eric.ed.gov/submit/>). ERIC will also seek to establish new and maintain existing relationships with publishers that allow publishers to submit peer-reviewed scholarly publications on behalf of investigators in adherence with the zero-day embargo policy. ED will develop and seek public comment on regulatory requirements that would implement the same requirement for other Department awardees that develop peer-reviewed scholarly publications under their grants. Once these regulatory requirements are established, ED will reference them in grant competition announcements. These regulations will address the following issues:

- Clarifying ED's rights to obtain and make public metadata available upon submission of the final accepted manuscript to ERIC.
- Ensuring that awardees understand that copyrightable works resulting from federally funded research, excluding peer-reviewed scholarly publications and digital research data, may be subject to other ED regulations and intellectual property laws.
- Ensuring that awardees will not enter into agreements with other parties that conflict with the rights above.

8.2.2 Submission

ED currently houses peer-reviewed scholarly publications in the ERIC repository, which has an established submission process. The publications indexed in ERIC refer to commercially published articles, either resulting from federally funded research or not, or they may be the full-text of final peer-reviewed manuscripts resulting from federally funded research. ERIC houses full-text copies of many of the articles in addition to those reporting on the results of federally funded research. ERIC

has written agreements with many commercial and scholarly society publishers in order to index their journals, and indexes thousands of articles yearly according to these agreements. The agreements with the publishers to index some of their articles do not change the obligation of the grantee or contractor to deposit their final accepted peer-reviewed article in ERIC, unless that publisher specifically agrees that ERIC can index the full text in an appropriate format. ERIC has listed the journals where such an agreement exists (<https://eric.ed.gov/?pajournals>) and will update it as new agreements are enacted. As part of the submission process, ERIC asks recipients of ED funding who are submitting manuscripts to review and acknowledge the terms and conditions of any copyright agreement(s) that apply to the manuscripts.

Beginning with the FY12 grant competitions and contract awards, IES requires its awardees to submit their peer-reviewed scholarly publications to ERIC via the user submission facility (<https://eric.ed.gov/submit/>), unless the publication was published by IES or a source agreeing to deposit on an awardee's behalf. The ED Public Access Plan confirms that requirement for IES awardees and will extend it, as expeditiously as possible, to awards made by other ED program offices that support research. Under the requirements currently applied by IES, which will likely form the basis for the requirements that will apply to other ED awardees, PIs submit to ERIC the electronic version of their final peer-reviewed scholarly manuscripts upon acceptance for publication in a peer-reviewed journal or upon completion of an institution's internal peer-review process. This manuscript version is displayed and preserved in ERIC. In lieu of the final peer-reviewed manuscript, ED accepts the final published article, provided the author has the right to submit the published version. This version is likewise displayed in ERIC.

Awardees are responsible for submitting a package containing their peer-reviewed manuscript and all associated materials as soon as possible. IES will revise current policies to ensure that the peer-reviewed manuscript will be available publicly on ERIC at the same time as the publication becomes available on the publisher's website. If the publisher has agreed that ERIC can provide access to the publisher's version of the article in an approved format, then the awardee will not need to submit the manuscript to ERIC. The list of approved publisher agreements is posted at: <https://eric.ed.gov/?pajournals>. The link to the publisher's version remains on a separate ERIC record from the manuscript, unless the publisher has signed an agreement to deposit a version on the author's behalf.

The metadata from all articles in ERIC are available for free download from <http://eric.ed.gov/?download> and <https://eric.ed.gov/?api>. The full text from ED funded articles will be available as an API feed at <https://eric.ed.gov/?api>.

Metadata elements that are currently gathered include:

- Unique, agency-specific persistent ID
- Author name(s)
- Title and abstract of article or paper
- Journal or serial title with identifier (ISSN) or other relevant publishing information

- Name(s) of funding agency or agencies with award numbers
- When possible and appropriate, links to the underlying data including, but not limited to, the Supplementary Material published with the journal article.

In order to meet the requirements included in the August 2022 memo, ED will seek to ensure that ERIC is able to include the following metadata:

- Digital Object Identifiers for articles
- Publication dates
- Author affiliations and universal persistent identifiers
- Universal persistent identifiers for awards that supported the published research
- Universal persistent identifiers for associated data sets

8.2.3 Management

ED will continue to use ERIC as its primary system to serve as a public repository of full-text peer-reviewed scholarly publications.

8.2.4 Access to Publications

No later than December 31, 2025, ERIC will ensure, for current IES awardees and contractors and, after the adoption of appropriate regulations, grants made by other ED offices, that the public can read, download, and analyze in digital form the final peer-reviewed manuscript or the final published article resulting from research funded by ED. ERIC will allow easy human or machine search, analysis, and download of peer-reviewed scholarly publications without charge as soon as practically possible after becoming publicly available, but no later than 30 days after the awardee has submitted a complete set of files. ERIC permits the download of all citation records in the database and allows them to be downloaded through XML and API formats. The ERIC website permits crawling and is indexed in all major commercial search engines. ED's responsibilities to ensure public access include:

- Properly maintaining the system to ensure it is reliably available through the Internet.
- Ensuring the system is accessible to people with disabilities and compliant with Section 508(a) of the Rehabilitation Act (29 USC 794d(a)).

For peer-reviewed research articles developed under IES grants and contracts, ED requires that, as soon as practically possible after publication, any member of the public, or their machine may:

- Access the publication.
- Download the publication for any lawful purpose; however, the end user may not sell, republish, or redistribute copies of the publication (e.g., paper copies, electronic copies, reformats, revised editions, translations) except as permitted under the fair use doctrine. ERIC's copyright policy is prominently displayed on its website at <https://eric.ed.gov/?copyright>.

- Analyze any publication for research purposes with no restrictions other than complying with the restrictions listed above and providing proper attribution.

These requirements are not intended to limit any rights that the end user may already have. ED will conduct notice-and-comment rulemaking to propose the extension of these requirements to grants issued by offices other than IES that support the development of peer-reviewed research articles.

8.2.5 Preservation of Publications

ED shall ensure the permanent preservation and long-term accessibility of peer-reviewed scholarly publications through ERIC by:

- Adopting sound, non-proprietary preservation standards and archival formats such as PDF and XML for publications and reviewing these practices as technology evolves.
- Incorporating universal, machine-readable, persistent identifiers into ERIC metadata.
- Implementing practical backup, migration, and technology refreshing strategies on a periodic basis.
- Partnering with other appropriate scientific publication archives across the federal, academic, and business communities.

8.2.6 Metrics, Compliance, and Evaluation of Public Access to Publications

IES will continue to track compliance with the requirement to submit final peer-reviewed manuscripts to ERIC that was established with IES awardees beginning with those awarded in FY 12. IES will continue to work with agency colleagues who are members of OSTP's Subcommittee on Open Science and to follow best practices for reporting metrics and tracking compliance with the IES and ED policies for public access.

Compliance strategies for other ED offices will be consistent with those outlined in the ED Public Access Plan, including not finalizing new awards without reviewing the potential grantee's compliance with public access requirements that applied under previous awards.

8.3 Data

8.3.1 Scope of Data Sharing and Management Plan Activities

At IES, the implementation of public access to scientific data continues to be carried out in phases, in order to ensure that requirements to maintain privacy and confidentiality of individuals' data are met. Initial implementation of the requirement for data management plans applied to IES grants and contracts carrying out causal inference studies. These requirements have been extended to additional types of grants and IES grant competitions. These studies are expected to include DSMPs in their applications and proposals. Applications requiring DSMPs are screened for compliance when submitted. Trained IES staff evaluate the merits of DSMPs for applications being considered for awards. Protocols are being used to assist in the review of the DSMPs, and training sessions will be

held to discuss the reviews. IES will continue to review and improve these materials going forward and broaden the scope of projects requiring data sharing. Guidance for investigators on public access mechanisms are provided at https://ies.ed.gov/seer/open_data.asp. IES will continue to maintain and update support resources and link to them in its RFAs. IES will continue to review processes for supporting data sharing while ensuring the privacy and confidentiality of the digital data collected by researchers.

In the coming months, ED will begin the process of developing regulations that would propose requiring other awardees not funded by IES that conduct research resulting in peer-reviewed research articles to develop DSMPs. IES will provide assistance based on its experience. ED will ensure that all DSMPs are evaluated on their merits by either ED staff or external peer reviewers. Opportunities will be provided for ED staff with direct oversight of new awards to contact key IES staff members designated to assist in DSMP review should issues arise. In addition, ED will develop, as necessary and with the advice of ED's Office of the General Counsel, additional guidance and terms and conditions for institutional compliance with DSMP activities. It is ED's intention that following the completion of notice-and-comment rulemaking, the requirements adopted will be incorporated into all notices inviting applications or solicitations to carry out research.

8.3.2 Data Submission

As ED increases the number of research applicants required to submit DSMPs, IES will lead an ED-wide effort to develop new, standardized requirements for DSMPs for research funding recipients under ED-managed grants and contracts. DSMPs must provide a comprehensive overview of how the final research data will be made accessible. DSMPs are expected to differ, depending on the nature of the project and the data collected. However, applicants will be expected to address the following in their DSMP:

- Type of data to be shared;
- Procedures for managing and for maintaining the privacy and confidentiality of the data to be shared;
- Roles and responsibilities of project or institutional staff in the management and long-term preservation – to the extent legally permissible – of research data, including a discussion of any changes to the roles and responsibilities that will occur should the PD/PI and/or Co-PDs/Co-PIs leave the project or institution;
- Expected schedule for data access, including how long the data will remain accessible (at least 10 years, unless a shorter period of time is required to comply with applicable federal or state laws or agreements promulgated to ensure compliance with such laws in which the destruction of records or personal information is required within a shorter period of time) and acknowledgement that the timeframe of data accessibility will be reviewed at the time of annual progress reviews and revised as necessary;
- Format of the final dataset and any standards to which the data conform;
- Documentation to be provided;

- Location where data will be stored and method of data access (e.g., via a publicly accessible data archive, institutional repository, or from the PD/PI);
- Whether or not a data agreement that specifies conditions under which the data will be made accessible is required; and
- Any circumstances that prevent all or some of the data from being made accessible. This includes data that may fall under multiple statutes or regulations and hence must meet the privacy and confidentiality requirements for each applicable statute or regulation (e.g., data covered by the Common Rule for Protection of Human Subjects, FERPA, the Health Insurance Portability and Accountability Act of 1996 Privacy Rule (45 CFR Part 160 and Subparts A and E of Part 164), Sec 183 of ESRA, or the Privacy Act).

The costs of data sharing can be included in grant, cooperative agreement, or contract budgets. The costs can include those associated with preparing the dataset and documenting and storing the data.

8.3.3 Data Management and Monitoring

DSMPs will identify how the research team will manage and provide access to data collected during the research in accordance with applicable law.

After an award is made, the DSMP will be monitored by ED staff through regular monitoring contacts, as well as through annual and final reports or other contract deliverables. ED will include both the data management and data sharing requirements in the Performance Agreement, cooperative agreement, or contract documentation (as appropriate for each award). These documents dictate the expected products and reporting requirements during the award period, including what is expected in annual and final reports. Annual reports must provide information on the progress of data management and the issues outlined in the DSMP. The final report must discuss execution and any updating of the original DSMP. ED staff will review awardee progress, updates, and changes to DSMPs through the regular monitoring and reporting process. In cases where non-compliance occurs during the course of an award, ED will take appropriate action to ensure requirements are met.

IES will continue to work on issues related to compliance and reporting, data management, analysis, storage, preservation, discoverability, and stewardship, in coordination with other agencies and the private sector. IES will provide ongoing training opportunities for data management oversight in consultation with other agencies and private sector organizations. ED will also coordinate with other agencies and private sector organizations to support training, education, and workforce development related to scientific data management, analysis, storage, preservation, and stewardship, as appropriate.

Given that the data of interest will not likely be complete until after the grant or cooperative agreement is over, ED will need to continue to monitor and enforce awardee compliance with the terms spelled out in the DSMPs and award mechanism. In cases where the awardee is non-

compliant with the requirements of the DSMP after the grant award period, subsequent awards to individuals or institutions may be affected. ED will add DSMP compliance to the list of items used to evaluate prior performance and to consider in decisions for new grant or contract funding.

When awardees have completed the tasks in their DSMP, they will need to notify the designated ED program officer via email with the information on the disposition of the data and documentation. Awardees will also provide metadata to ED to be made available to the public, in order to support discoverability of the data. As described below, ED will evaluate various alternatives for implementing this part of the process, including the determination of the most appropriate location(s) for storing and making accessible the metadata about available research data, and will include the best options in guidance to awardees and contractors.

8.3.4 Data Access

Timely data access is important to the scientific process. ED thus expects that scientific data will be shared no later than when the findings from the final study dataset are published or released or 5 years after the award is closed, whichever is sooner. In the revised implementation of the ED Public Access Plan, ED intends to require that awardees and contractors plan for final data created or gathered in the course of federally funded research to remain accessible for at least 10 years following their release, except in cases where prohibited by law. However, the DSMPs for each research award will take into account the relative values of long-term preservation and access and the associated cost, administrative burden, and legal restrictions. ED will also look to the education sciences research community for additional input and guidance to determine the appropriate duration for access to data.

ED will encourage deposit of data in publicly accessible repositories that adhere to NSTC's desirable repository characteristics in all cases where the disclosure of such data to the repositories is legally permissible. IES will continue to help awardees to identify data archives and repositories with optimal choices for public access to the data resulting from ED-funded research. ED will review the need for data repositories in fields of research it supports. Relevant data repositories will be added to the dedicated IES web page on public access as they are identified. ED will also provide guidance for identifying and providing appropriate attribution to data sets that are made available.

IES will provide support to other offices within ED to ensure coordinated ED level plans to measure and enforce compliance with these new requirements, including an exploration of possible technological solutions within extant grant and contract monitoring systems for ED-wide reporting.

As part of this plan to ensure that all ED-funded scientific data are publicly accessible, ED will design, implement, and maintain data management capabilities to enable discovery, appropriate use, and long-term management of digitally formatted scientific data. This includes, but is not limited to:

- Establishment of standard attributes and persistent identifiers to include in metadata, to enable data discovery, identification, and attribution.
- Exploration of ways to link scientific data to existing repositories of journal literature.

- Development of procedures to ensure data accessibility over time.

ED also generates data from evaluations conducted under contract to and grants from ED, and through its statistical data collections. IES currently maintains online inventories of agency generated datasets (e.g., those that result from evaluations carried out via contract through the National Center for Education Evaluation and Regional Assistance, National Center for Special Education Research, and National Center for Education Research) at <https://ies.ed.gov/funding/datasets.asp>, and makes the datasets available to the public to the extent consistent with law (including confidentiality, privacy, and human subject protection laws). Many of these data are restricted use data files, and individuals who wish to make use of the restricted use datasets are required to apply for a restricted use data license. Non-restricted use data are directly accessible on the ies.ed.gov website.

8.3.5 Preservation of Data

ED will promote the preservation and long-term accessibility of digitally formatted scientific data by developing rigorous guidelines for DSMPs that stress preservation and accessibility and monitoring awards for strict adherence to these plans, using repositories with recommended desirable characteristics when feasible.

IES maintains a section of its website where relevant information about public access is available (<http://ies.ed.gov/funding/researchaccess.asp>). This page includes information about repositories for digital data that we have identified as possible storage sites.

In instances where ED intends to collect digital data resulting from supported research, including research data generated by ED staff and contractors, or stored in ED-managed repositories, additional requirements for data management may be necessary to ensure ED meets the requirements of the Open Data Policy. Those requirements are specified in OMB Memorandum M-13-13 and are fully described in section 5.0 of this document.

8.3.6 Metrics, Compliance, and Evaluation of Public Access to Scientific Data

Initial compliance with the requirement to provide access to scientific data, including the data that lie behind peer-reviewed publications, will be tracked using data available to ED via ERIC and IES internal content management systems currently under development. ERIC provides a field whereby authors can indicate where the scientific data underlying a publication is stored. In addition, program officers will continue to indicate through internal tracking systems whether the award is subject to the public access data requirements, and where the investigators propose to store the data. At the point of annual and final review, the program officers will update information about access to the data, in addition to information about publications. This system provides the flexibility to incorporate tracking information for ED employees who produce research data and will facilitate longer term monitoring following award close-out as needed.

9.0 ADDITIONAL MATERIAL

Additional information is described below.

IES Policies Related to Public Access to Research Findings and Data include:

- IES Policy Regarding Public Access to Research:
<https://ies.ed.gov/funding/researchaccess.asp>.
- IES Policy Statement on Data Sharing in IES Research Centers:
https://ies.ed.gov/funding/datasharing_policy.asp.

Public Access Plans Prepared by Other Federal Agencies are available here:

- https://www.cendi.gov/projects/Public_Access_Plans_US_Fed_Agencies.html

Additional information

- Memorandum for the Heads of Executive Departments and Agencies – Open Government Directive, Executive Office of the President, Office of Management and Budget, December 8, 2009: https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2010/m10-06.pdf.
- National Digital Information Infrastructure & Preservation Program: A Collaborative Initiative of the Library of Congress: <http://www.digitalpreservation.gov/>.
- Interagency Public Access Coordination (March 2012):
https://www.whitehouse.gov/sites/default/files/microsites/ostp/public_access-final.pdf.
- Scholarly Publishing Roundtable, Report and Recommendations from the Scholarly Publishing Roundtable (2009):
http://www.aau.edu/policy/scholarly_publishing_roundtable.aspx?id=6894.
- Common Education Data Standards: <https://ceds.ed.gov/>.

10.0 METRICS, COMPLIANCE, AND EVALUATION

ED will monitor on an annual basis the compliance of awardees with the ED Public Access Plan. ED will establish as expeditiously as possible a coordinated reporting structure, in which offices that support research activities will annually report the degree to which their awardees are complying with the requirements of public access. Compliance reporting will begin once required public notifications are complete. Additional information on compliance is included in sections 8.2.6 and 8.3.6.

11.0 PUBLIC CONSULTATION EXPERIENCE

As ED proposes new regulations to support the establishment of public access policies, there will be opportunities for public engagement.

12.0 INTERAGENCY COORDINATION

IES modeled its existing data sharing policy and implementation procedures after research agencies most similar in their research missions, the National Institutes of Health and the National Science Foundation. Each agency has now had experience with implementing this process, and ED plans to continue to coordinate with these agencies to share what works, what does not, and strategies for improving the implementation of the ED Public Access Plan. ED has been an active member of OSTP's Subcommittee on Open Science since 2013, where conversations about implementation have been held on at least a monthly basis.

In the event that there are multiple sources of funding for a single research project during a single time period, ED intends to defer to the requirements for the agency committing the most resources to the project. Staff responsible for oversight of the awards from each agency will be involved in assuring that the requirements are clear to the awardee. ED will continue to explore whether there are automated sharing options, so that articles available in one repository (e.g., ERIC) may be automatically shared and made available in the repository of another funding agency (e.g., PubMed).

13.0 PUBLIC NOTICE

ED will work with other executive agencies in publicizing the ED Public Access Plan and in soliciting comment on implementation policies from federally funded researchers, librarians, publishers, professional organizations, users of federally funded research results, civil society groups, and the general public.

In addition, ED will share the ED Public Access Plan with the public. IES will put the approved ED Public Access Plan on the IES website, as well as on ED's Open Government webpage (<http://www2.ed.gov/about/open.html>). IES will discuss the ED Public Access Plan at its annual Project Director/Principal Investigator meeting and will include links to the Plan in all RFAs and planning conversations with investigators for new awards.

14.0 REPORTING TO OSTP ON STATUS OF PUBLIC ACCESS PLAN

As required in the August 25, 2022, memo from Dr. Alondra Nelson, while performing the duties of OSTP Director, ED will report to OSTP, when requested, on the status of public access plans and policy implementation, including the number of all scholarly publications proceeding from ED funding by ED and any other relevant statistics collected by the agency.

15.0 RESOURCES

This plan is not a budget document and does not imply support for or approval of any specific action or investment. The ED Public Access Plan in the near term requires staff resources within IES to develop all guidance, work with applicants, review and monitor DSMPs, develop and maintain a

system for metadata, and continue thoughtful rollout of the ED Public Access Plan. The Research and Development budget of IES allocated to ERIC will be used to build the required functionality in the ERIC infrastructure to manage public access to peer-reviewed articles produced from ED funding, as described in the ED Public Access Plan. The budget will also include an ongoing commitment of funds to support the ERIC repository. It may also require a commitment of funds to develop and support data repositories to provide options for ED researchers. In addition, IES/ED anticipates increased resource needs to support costs accrued by grantees to ensure open access at the time of publication. Overall funding needs and priorities for implementation will be reflected in future budget submissions.

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