

U.S. DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C. 20250

<b>DEPARTMENTAL REGULATION</b>	NUMBER: DR 1020-006
SUBJECT: Public Access to Scholarly Publications and Digital Scientific Research Data	DATE: July 20, 2022
OPI: Office of the Chief Scientist	EXPIRATION DATE: July 20, 2027

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1. PURPOSE

- a. This Departmental Regulation (DR) establishes the United States Department of Agriculture (USDA) policy for public access to scholarly publications and digital scientific research data assets. The USDA will make all peer-reviewed, scholarly publications and digital scientific research data assets arising from unclassified scientific research supported wholly or in part by the USDA accessible to the public, to the extent practicable.
- b. Publicly accessible scientific research products contribute to opportunities for collaboration, innovation, and scientific progress. Public access to USDA-supported scholarly publications and digital scientific research data assets helps maintain the integrity, credibility, and transparency of the Department’s research findings and science-based public policy-making. This DR provides a policy for Departmental leadership and employees to ensure that scholarly publications and the relevant digital scientific research data assets are preserved, accessible, and citable.

## 2. SPECIAL INSTRUCTIONS/CANCELLATIONS

- a. All Mission Areas, agencies, and staff offices will align their policies and procedures with this DR within 12 months of the publication date.
- b. This policy will remain in effect until it is superseded or expires.

## 3. SCOPE

- a. This policy applies to:
  - (1) All USDA Mission Areas, agencies, and staff offices;
  - (2) All USDA employees who engage in scientific research during official duties; and
  - (3) Awardees and contractors from non-USDA organizations who are engaged in USDA-supported scientific research. This includes but is not limited to states, localities, regulated parties, volunteer organizations, contractors, cooperative agreement holders, grantees, cooperating Federal Government agencies, intergovernmental organizations, and educational institutions.
- b. This policy applies to all unclassified scientific research, including intramural research and extramural research, that is supported wholly or in part by the USDA, regardless of the USDA funding level or funding mechanism. This includes scientific research that is supported by:
  - (1) Any direct funding from a USDA grant or cooperative agreement active in Fiscal Year 2023 or beyond;
  - (2) Any direct funding from a USDA contract signed on or after October 1, 2022; or
  - (3) Any direct funding or arrangement, including in-kind support, from any USDA Intramural Research.
- c. Any express requirements will be set forth in individual agreements, contracts, statements of work, memoranda of understanding, terms and conditions, or established via issuance of a separate rule or other Departmental policy.

## 4. BACKGROUND

- a. The White House Office of Science and Technology Policy (OSTP) directed Federal agencies with more than \$100M in annual conduct of research and development expenditures to develop plans to make the results of federally funded unclassified

research that are published in peer-reviewed publications and digitally formatted scientific data publicly accessible ([Increasing Access to the Results of Federally Funded Scientific Research](#)). The objectives laid out in the OSTP memorandum were developed with input from the National Science and Technology Council and public consultation in compliance with the *America COMPETES Reauthorization Act of 2010* ([Public Law \(P.L.\) 111-358](#)).

- b. The USDA developed a strategy to increase access to scholarly publications and digitally formatted scientific data assets resulting from unclassified scientific research supported wholly or in part by USDA funds, to the extent feasible with law, agency mission, and resources ([Implementation Plan to Increase Public Access to Results of USDA-funded Scientific Research](#)). Extramural research with previously established funding mechanisms was excluded.
- c. The USDA Science Council established governing policies that all peer-reviewed, scholarly publications (*USDA Public Access Policy for Scholarly Publications*) and digital scientific research data assets (*USDA Public Access Policy for Digital Scientific Research Data*) arising from unclassified scientific research and programs supported wholly or in part by the USDA be made publicly accessible, to the extent practicable. This DR combines and promulgates the two USDA Science Council policies on public access, which are superseded by publication of this DR.
- d. [DR 1074-001](#), *Scientific Integrity*, documents the Department’s policy to make scientific findings or conclusions considered or relied on in policy decisions publicly accessible online and in open formats, to the extent practicable, consistent with the [Memorandum on Transparency and Open Government](#), the *Freedom of Information Act* (FOIA), the [Administrative Procedure Act](#), and other applicable statutes, regulations or document-handling procedures and policies.
- e. Title II of the *Foundations for Evidence-Based Policymaking Act of 2018* ([P.L. 115-435](#)), also known as the *OPEN Government Data Act*, requires that Federal agencies publish their information online as open data, using standardized, machine-readable formats. USDA considers digital scientific research data assets published by Federal agencies to be subject to Title II.

## 5. POLICY

- a. It is USDA policy to provide public access to all scholarly publications and digital scientific research data assets that arise from USDA-supported scientific research meeting the criteria in Section 3b, to the extent practicable.
- b. For scholarly publications that meet the criteria in Section 3b:
  - (1) Final peer-reviewed, accepted manuscripts must be made freely accessible to the public through the USDA public access archive system ([PubAg](#), hosted by the

National Agricultural Library (NAL)). Public access through *PubAg* must be established within 12 months of the date on which the publisher makes the article available online. The final published article may be submitted to *PubAg* in lieu of the final peer-reviewed, accepted manuscript, provided the author has the right to submit the published version (e.g., open access articles).

- (2) Scholarly publications must receive digital persistent identifiers, such as a Digital Object Identifier (DOI).
  - (3) All authors of scholarly publications must have individual digital persistent identifiers, such as the Open Researcher and Contributor ID (ORCID iD), that are linked to their scholarly publications.
  - (4) Digital scientific research data assets connected to a scholarly publication covered by this policy must also receive a digital persistent identifier, such as a DOI, that allows a scholarly publication and its catalog metadata to link to the published digital scientific research data asset from which the publication was developed. Authors of scholarly publications, at their discretion, are also encouraged to obtain digital persistent identifiers for other associated scientific research products, such as software, workflow documentation, curricular materials, and multi-media materials, if these products are not subject to statutory restrictions and would provide information that would help future users of the scholarly publication.
- c. For digital scientific research data assets that meet the criteria in Section 3b:
- (1) All scientific research expected to produce digital scientific research data assets must be accompanied by a reviewed and approved data management plan consistent with agency or staff office policies and procedures if they exist, or Departmental guidance if they do not. The data management plan must describe how digital scientific research data assets applicable under Section 5c(2) will be made publicly accessible and indicate any categories of digital scientific research data assets that are exempt from public access requirements.
  - (2) Digital scientific research data assets should be made publicly accessible to the extent practicable unless they meet any of the following exemption criteria:
    - (a) Digital scientific research data assets that are outside the scope of this policy include:
      - 1 Computational models and computational model-related content (including parameters, inputs, outputs, and other derived output products); and
      - 2 Data from secondary sources (i.e., secondary outside data).

Although these digital scientific research data assets are exempt from public access requirements, data authors are encouraged to make these assets publicly accessible if this information is not subject to any other statutory restrictions.

- (b) Digital scientific research data assets that are not required to be made publicly accessible under this DR include:
  - 1 Data that would not be necessary for validation of scientific research findings (i.e., trivial data);
  - 2 Data assets that include personally identifiable information or other information that could enable re-identification of individuals or businesses, alone or in combination with other publicly available information;
  - 3 Proprietary data assets;
  - 4 Data assets related to protecting critical infrastructure;
  - 5 Data assets related to the physical location of threatened or endangered species or sensitive archaeological sites;
  - 6 Data assets for which release would be inconsistent with U.S. national, homeland, or economic security or would have significant negative impact on intellectual property rights, innovation, and U.S. competitiveness;
  - 7 Data assets for which public access is inconsistent with the agency or staff office mission (e.g., documents designated as Controlled Unclassified Information (CUI));
  - 8 Other data assets whose release is limited by law, regulation, contract, agreement, national security requirements, or policy (e.g., classified data or dual-use research data); and
  - 9 Data covered by a FOIA exemption.
- (3) Digital scientific research data assets covered by public access requirements must be published in a machine-readable format by a data repository that is recognized by reputable registries, such as those hosted by [FAIRsharing](#) (ELIXIR) or [Registry of Research Data Repositories](#) (re3data/DataCite), and provides:
  - (a) Public access for search, retrieval, and analysis;
  - (b) A digital persistent identifier, such as a DOI; and
  - (c) Long-term preservation of the data asset.

- (4) Digital scientific research data assets covered by public access requirements should be made publicly accessible as soon as possible, and within 12 months of the publication date of an associated scholarly publication, or the end of the performance or funding period, whichever comes first. The timeline for making digital scientific research data assets publicly accessible must be described in the approved data management plan. Public access to digital scientific research data assets must be achieved during this timeframe unless a waiver or extension has been obtained following the procedure described in Section 7b.
- (5) Research publications developed from digital scientific research data assets covered by this policy must receive digital persistent identifiers, such as DOI. This allows a standardized metadata catalog entry associated with the published digital scientific research data asset to link to the associated research publications. This requirement includes peer-reviewed, scholarly publications described in Section 5b(1) and USDA-published articles and reports resulting from scientific research. Authors of digital scientific research data assets, at their discretion, are also encouraged to obtain digital persistent identifiers for other associated research products such as software, workflow documentation, curricular materials, and multi-media materials if these products are not subject to other statutory requirements and would provide information that would help future users of the data asset.
- (6) All authors of digital scientific research data assets (data authors) that meet the criteria in Section 5c(2) must have individual digital persistent identifiers (e.g., ORCID iD) that are linked to their data assets and other research products.
- (7) A standardized metadata catalog entry (e.g., using a Project Open Data Metadata Schema) that is machine-readable, references the USDA funding source(s), and describes the digital scientific research data asset must be submitted to the publicly available USDA scientific data catalog system ([Ag Data Commons](#), hosted by the NAL) within 12 months following the publication of a data asset by a repository. The metadata catalog entry must include the digital persistent identifiers of the data authors, the published digital scientific research data asset, and any associated research products described in Section 5c(5).

## 6. ROLES AND RESPONSIBILITIES

- a. The Secretary of Agriculture will assign overall executive responsibility for establishing, managing, and implementing public access to scholarly publications and digital scientific research data assets to the USDA Chief Scientist.
- b. The USDA Chief Scientist will oversee all aspects of this DR and have oversight authority for USDA proceedings to review and implement the policy. Specific responsibilities, include:

- (1) Assuming Departmentwide authority, control, and management of this policy;
  - (2) Consulting with the USDA Science Council on the implementation of this policy;
  - (3) Coordinating a sustainable funding strategy to implement this policy;
  - (4) Coordinating the implementation of this policy by agencies and staff offices, including the monitoring, measurement, auditing, reporting, and enforcement of compliance with policy provisions;
  - (5) Liaising with other Federal agencies on public access policies and implementation;
  - (6) Evaluating this policy and revising as necessary. Input may be sought from the broad community of stakeholders who include, but are not limited to, other Federal science agencies, academia, scientific societies, the private sector, and the public;
  - (7) Monitoring and coordinating the consistency of policy implementation with the Department's uniform administrative requirements, cost principles, and audit requirements for Federal awards ([2 Code of Federal Regulations \(CFR\) § 400, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards](#)); and
  - (8) Establishing a process to review and approve requests for waivers and extensions to public access requirements for digital scientific research data assets.
- c. The USDA Chief Information Officer will:
- (1) Oversee Departmental investment in data management information technology infrastructure necessary for implementation of this policy; and
  - (2) Assume responsibility for the implementation of cybersecurity and privacy controls as they apply to the implementation of this directive and covered digital scientific research data assets.
- d. The USDA Chief Data Officer will:
- (1) Provide recommendations on the alignment of this policy with other Departmental data policies and guidance;
  - (2) Ensure Departmental open data initiative activities are coordinated with the implementation of this policy;
  - (3) Review the impact of Departmental infrastructure on the accessibility of digital scientific research data assets and coordinate solutions that ensure appropriate public access;

- (4) Promote a culture of lifecycle data management and data management best practices; and
  - (5) Coordinate standardization of data and metadata formats, sharing, and publication across digital scientific research data assets.
- e. USDA Agency Administrators and Staff Office Directors will oversee the implementation of this DR through the establishment of appropriate policies and procedures within their units. Specific responsibilities, which may be delegated as appropriate, include:
- (1) Ensuring that their employees and the institutions and awardees receiving applicable grants, contracts, and agreements are aware of and comply with this policy;
  - (2) Including the requirements of this policy as terms and conditions of awards for applicable grants, contracts, and agreements established after the effective date of this policy and updating active grants, contracts, and agreements to include the requirements of this policy to the extent practicable. This should include a statement that scholarly publications and digital scientific research data assets authored solely by USDA employees as part of their official duties are works of the United States Government and are therefore not subject to copyright protection in the United States ([17 United States Code \(U.S.C.\) § 105](#), *Subject Matter of Copyright: United States Government works*) as well as acknowledge and disclose the public funding of the published work by USDA;
  - (3) Developing practical funding mechanisms to ensure the successful implementation of this policy;
  - (4) Ensuring that reporting systems accommodate reporting on published scholarly publications and digital scientific research data assets;
  - (5) Ensuring that research publications and digital scientific research data assets are linked using digital persistent identifiers and that authors obtain and use individual digital persistent identifiers;
  - (6) Ensuring that a policy or procedure exists for reviewing and approving data management plans, and that the agency or staff office has a clearly defined performance or funding period relevant to the public access timeline requirement described in Section 5c(4);
  - (7) Reviewing requests for waivers and extensions to public access requirements for digital scientific research data assets, as described in Section 7, and forwarding approved waiver requests to the Office of the Chief Scientist; and



- (8) Promoting the accessibility and use of published digital scientific research data assets by agency and staff office employees, the public, and contractors.
- f. The NAL Director will:
- (1) Oversee the maintenance of *PubAg*, which serves as the USDA public access archive system for scholarly publications;
  - (2) Oversee the maintenance of the *Ag Data Commons*, which serves primarily as a catalog for metadata entries of published digital scientific research data assets and secondarily as a data repository for a limited number of digital scientific research data assets; and
  - (3) Oversee the development and maintenance of additional resources to support the implementation of this policy.
- g. Individuals covered by this policy (Section 3a) who are authors of scholarly publications (Section 5b) will:
- (1) Work with the journal publisher before any publication rights are transferred to ensure that all conditions of this policy can be met;
  - (2) Not sign any agreements with journal publishers that do not allow the author to comply with the policy described in this DR;
  - (3) Ensure that final peer-reviewed, accepted manuscripts or final published articles are submitted to *PubAg*;
  - (4) Ensure that the final published article is assigned a digital persistent identifier (e.g., DOI) by the publisher, or by NAL when not provided by the publisher; and
  - (5) Ensure that their individual digital persistent identifier is associated with the publication and that their affiliation and acknowledgment information accurately reflect their relationship with the USDA.
- h. Individuals covered by this policy (Section 3a) who are authors of digital scientific research data assets (Section 5c) will:
- (1) Prepare and follow data management plans consistent with agency or staff office policies and procedures if they exist, or Departmental guidance if they do not;
  - (2) Ensure that digital scientific research data assets that are required to be made publicly accessible are published on a data repository that meets the requirements of this policy, following a timeline described in the associated data management plan and meeting requirements described in Section 5c(4);
  - (3) Work with the data publisher to ensure that all conditions of this policy are met;

- (4) Ensure that a metadata catalog entry is submitted to the *Ag Data Commons* and work with relevant USDA metadata reviewers (e.g., support staff associated with the *Ag Data Commons*) to ensure that all conditions of this policy are met;
- (5) Not sign any agreements with journal publishers or data publishers that do not allow the author to comply with the policy described in this DR;
- (6) Ensure that research publications associated with digital scientific research data assets covered by this policy receive digital persistent identifiers;
- (7) Ensure that their individual digital persistent identifier is associated with published digital scientific research data assets and that their affiliation and acknowledgment information accurately reflect their relationship with USDA; and
- (8) Request a waiver for digital scientific research data assets they feel should not be made public but that are covered by the public access requirements of this policy, or for an extension of the timeline for making data publicly accessible, following the process described in Section 7.

## 7. POLICY EXCEPTIONS

It is Departmental policy to make accessible to the public all peer-reviewed, scholarly publications and digital scientific research data assets arising from unclassified scientific research supported wholly or in part by the USDA, to the extent practicable. However, circumstances may exist that would make adherence to the policy in this DR impractical or detrimental to the mission of the Department.

- a. Data authors of digital scientific research data assets that are covered by public access requirements (Section 5c(2)) may submit a waiver request for data assets that they feel should not be made publicly accessible. Data authors may begin the waiver request process at any point, including after the project data management plan is reviewed and approved, and up until the required time of data publication (Section 5c(4)). The waiver request must articulate and justify the policy deviation for any digital scientific research data asset collected or generated during a research project, including data assets listed in the approved project data management plan and unexpected data assets collected or generated during the project that were not included in the data management plan.
- b. Data authors do not need to obtain a waiver for digital scientific research data assets that are exempt from public access requirements, as described in Section 5c(2). Instead, researchers must state in the associated data management plan the applicable exclusion from Section 5c(2) and explain how the proposed digital scientific research data assets meet the exclusion.

- c. Data authors of digital scientific research data assets that are covered by the public access requirements (Section 5c(2)) may submit a request for an extension to the timeline for making digital scientific research data assets publicly accessible (Section 5c(4)). The request should articulate the amount of additional time that will be required before a data asset can be published and provide a justification for the extension.
- d. Agencies and staff offices should process and review initial waiver or extension requests and forward approved requests to the USDA Office of the Chief Scientist for final approval.

## 8. INQUIRIES

Questions about this DR should be directed to the Office of the Chief Scientist at [OCSPolicy@usda.gov](mailto:OCSPolicy@usda.gov) or 202-720-3444.

-END-

## APPENDIX A

### ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
CUI	Controlled Unclassified Information
DOI	Digital Object Identifier
DR	Departmental Regulation
EO	Executive Order
FOIA	Freedom of Information Act
NAL	National Agricultural Library
OMB	Office of Management and Budget
ORCID	Open Researcher and Contributor Identifier
OSTP	Office of Science and Technology Policy of the Executive Office of the President
P.L.	Public Law
U.S.C.	United States Code
USDA	United States Department of Agriculture

## APPENDIX B

### DEFINITIONS

Ag Data Commons. The USDA scientific research data catalog and repository maintained by the NAL.

Arrangement. Term used to describe any and all forms of legally binding documents, whether governed by domestic, foreign, or international law, and non-legally binding documents, signed by representatives of the USDA, as in Section 5a(3).

Computational Model. The use of mathematics, statistics, physics, and computer science to study the mechanism and behavior of complex systems in many domains by computer simulation. A computational model contains numerous variables that characterize the system being studied. Simulation is done by adjusting these variables and observing how the changes affect the outcomes predicted by the model.

Controlled Unclassified Information (CUI). Information that requires safeguarding or dissemination controls pursuant to and consistent with applicable law, regulations, and governmentwide policies but is not classified under [Executive Order \(EO\) 13526](#), *Classified National Security Information*, or the *Atomic Energy Act*, [42 U.S.C. § 2011](#), *et seq.*, as amended. (Source: [EO 13556](#), *Controlled Unclassified Information*). CUI encompasses and replaces previous sensitive information labels (e.g., For Official Use Only).

Data. Observations that are measured, collected, and recorded; they can be quantitative or qualitative in nature. Singular is datum, although the word rarely appears in science discussions.

Data Asset. Also commonly referred to as a dataset. A collection of factual information and observations generally collected for analysis and interpretation to answer research questions. An asset represents the outcome of Federally funded work and has potential future value.

Data Author. An individual who is credited as responsible for a digital scientific research data asset covered by this policy. While a data asset may have many authors, one data author should appear as the primary contact for a published digital scientific research data asset, as listed in the standardized metadata catalog entry for the data asset in the *Ag Data Commons*.

Data Management Plan. A written plan for managing data as an asset throughout the scientific research life cycle, including information such as expected data types, data formats and standards, data storage and preservation of access, data sharing and public access, roles and responsibilities, and monitoring and reporting. A data management plan describes how research data assets will conform to this policy for preservation and public access or explains why this cannot be justified.

Data Publisher. An organization or entity that archives data, provides a digital persistent identifier, and makes the data accessible for use by others.

Data Repository. A place that holds data, makes data available to use, and organizes data in a logical manner. A data repository may also be defined as an appropriate, subject-specific location where researchers can submit their data. Data repositories may have specific requirements concerning subject or research domain; data re-use and access; file format and data structure; and the types of metadata that can be used ([National Library of Medicine](#)).

Digital Object Identifier (DOI). Globally unique character string that references a physical, digital, or abstract object. A DOI provides an actionable, interoperable, persistent link to information about the object it references (United States Geological Survey, [Digital Object Identifiers](#) website).

Digital Persistent Identifier. A unique digital identifier that permanently and unambiguously identifies a digital object (e.g., DOI) or an individual (e.g., ORCID iD).

Digital Scientific Research Data Asset. A digitally formatted data asset resulting from unclassified scientific research supported wholly or in part by the USDA. The digital recorded factual material commonly accepted in the scientific community as necessary to validate scientific research findings includes data used to support scholarly publications, but does not include laboratory notebooks, preliminary analyses, draft manuscripts, plans for future scientific research, peer review reports, communications with colleagues, or physical objects, such as laboratory specimens. Data assets arising from routine analysis in support of program operations are not considered digital scientific research data assets, even if they are related to intramural or extramural scientific research supported by the USDA.

Extramural Research. Research conducted by any research institution other than the Federal agency to which the funds supporting the research were appropriated. Research institutions conducting extramural research may include Federal research facilities ([USDA, Departmental Guidebook \(DG\) 0100-002](#)).

Final Peer-reviewed Accepted Manuscript. An author's final version of a publisher-accepted, peer-reviewed article. It contains the same content as the final published article but does not include the publisher's copyediting, stylistic, or formatting edits that will constitute the final "version of record" that appears in a trustworthy, peer-reviewed, scholarly journal.

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

Intramural Research. Research conducted by a Federal agency to which funds were appropriated for the purpose of conducting the research ([USDA, DG 0100-002](#)).

Machine-readable Data. Data in a format that can be easily processed by a computer without human intervention while ensuring no semantic meaning is lost.

Metadata. Information that describes the content, characteristics, format (e.g., numeric, date, text), and attributes of a data asset. The metadata for structured data objects describes the structure, data elements, interrelationships, definitions and other characteristics of information, including its creation, disposition, access and handling controls, formats, content, quality (accuracy, completeness), and context, as well as related audit trails. For any particular datum, the metadata may describe how the datum is represented, ranges of acceptable values, its relationship to other data, and how it should be labeled. Metadata also may provide other relevant information, such as the responsible steward, associated laws and regulations, and access management policy.

Open Access Article. An article, made freely accessible at the time of publication without any embargo period, typically supported by open access fees or higher article processing charges paid by the author or their research institution to the publisher. Open access articles may appear in hybrid journals or completely open access journals.

ORCID iD (Open Researcher and Contributor ID). An alphanumeric code digital persistent identifier that uniquely identifies an individual scientist or researcher.

Peer Review. An assessment process widely used by scholarly journals to evaluate the quality of manuscripts submitted for publication. The process commonly includes reviews by subject experts who critique the methodology, assumptions, results, and interpretations underlying the manuscript. In concert with reviewers, the editor-in-chief decides whether to accept or reject the manuscript for publication or request further modifications.

Peer-reviewed Journal Article. An article published in a journal in which the manuscripts are sent by editors to scientific experts in the field of research to determine acceptance for publication.

PubAg. The USDA public access archive system for scholarly publications maintained by the NAL.

Public Access. Access to information that is available to the public. Public access does not necessarily mean free for use, and restrictions for reuse or redistribution may apply.

Published Digital Scientific Research Data Asset. A digital scientific research data asset that has a digital persistent identifier associated with it that is expected to persist over time and therefore, is citable.

Researcher. Any USDA employee, contractor, awardee, or collaborator involved in the process of scientific research, including those responsible for data asset design, collection, analysis, or quality assurance to ensure data are fit for use.

Scholarly Publication. A peer-reviewed publication that disseminates scientific research findings and communicates insights, intended for an audience of researchers, scholars, or scientists. For the purposes of this DR, the term specifically applies to peer-reviewed journal articles published by nongovernmental organizations.

Scientific Research. Systematic investigation, including development, testing, analysis, and evaluation, that involves the application of scientific methodologies and is designed to develop or contribute to generalizable knowledge. Scientific research activities include data collection, inventorying, monitoring, statistical analysis, surveying, observations, experimentation, study, research, analysis, integration, economic analysis, forecasting, predictive analytics, modeling, scientific assessment, and technology development that involve the application of scientific methodologies in a systematic manner. Research includes all basic, applied, and demonstration research in all fields of science, technology, engineering, and mathematics. This includes, but is not limited to, research in economics, education, linguistics, medicine, nutrition, psychology, natural sciences, social sciences, statistics, and research involving human subjects, animals, and in vitro and in silico techniques.

Version of Record. Final, authoritative version of a scholarly article published by a scholarly publisher and intended to reflect any corrections that occurred after original publication and to serve independent preservation and archival purposes.



## APPENDIX C

### AUTHORITIES AND REFERENCES

[2 CFR § 400](#), *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*

[5 U.S.C. § 552](#), *Freedom of Information Act*

[5 U.S.C Chapter 5, Subchapter II](#), *Administrative Procedure*

[15 U.S.C. § 3710a](#), *Cooperative Research and Development Agreements Act*

[17 U.S.C. § 105](#), *Subject Matter of Copyright: United States Government works*

[44 U.S.C. § 3501](#), *The Paperwork Reduction Act*

[44 U.S.C. Chapter 31](#), *The Federal Records Act*

*America COMPETES Reauthorization Act of 2010*, [P.L. 111-358](#), January 4, 2011

*Atomic Energy Act*, [42 U.S.C. § 2011, et seq.](#), August 1, 1946

*Federal Information Security Modernization Act of 2014*, [P.L. 113-283](#), December 18, 2014, codified at [44 U.S.C. §§ 3551-3559](#), *Information Security*

[EO 13526](#), *Classified National Security Information*, December 29, 2009

[EO 13556](#), *Controlled Unclassified Information*, November 4, 2010

FAIRsharing.org (ELIXIR), [FAIRsharing Standards, Databases, Policies](#) website

*Foundations for Evidence-Based Policymaking Act of 2018*, [P.L. 115-435](#), January 14, 2019

National Institutes of Health, National Library of Medicine, [Data Thesaurus](#) website

Office of Management and Budget (OMB), [Circular A-130](#), *Managing Information as a Strategic Resource*, July 28, 2016

OMB, [Memorandum M-13-13](#), *Open Data Policy – Managing Information as an Asset*, May 9, 2013

OMB, [Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking](#), January 27, 2021

OMB, [Transparency and Open Government](#), January 21, 2009

OMB, [United States Government-Supported Research and Development National Security Policy](#), January 14, 2021

OSTP, [Increasing Access to the Results of Federally Funded Scientific Research](#), February 22, 2013

[re3data.org \(DataCite\), Registry of Research Data Repositories website](#)

USDA, [DG 0100-002](#), *USDA Departmental Directives Definitions Glossary*, September 26, 2018

USDA, [DR 1074-001](#), *Scientific Integrity*, November 18, 2016

USDA, [DR 1410-001](#), *Publications Review and Clearance Policy*, January 14, 2021

USDA, [DR 3440-001](#), *USDA Classified National Security Information Program*, June 9, 2016

USDA, [DR 3440-002](#), *Control and Protection of "Sensitive Security Information,"* January 30, 2003

USDA, [DR 3440-003](#), *Controlled Unclassified Information (CUI) Program*, September 13, 2021

USDA, [DR 3445-001](#), *Media Protection*, October 30, 2019

USDA, [DR 3515-002](#), *Privacy Policy and Compliance for Personally Identifiable Information (PII)*, October 30, 2020

USDA, [Implementation Plan to Increase Public Access to Results of USDA-funded Scientific Research](#), November 7, 2014

USDA, NAL, [Ag Data Commons](#) website

USDA, NAL, [PubAg](#) website

United States Geological Survey, [Digital Object Identifiers](#) website