Policy Change Overview

• NIH has issued the Data Management and Sharing (DMS) policy (effective January 25, 2023) to promote the sharing of scientific data.

• Under the DMS policy, NIH expects that investigators and institutions:
  • Plan and budget for the managing and sharing of data
  • Submit a DMS plan for review when applying for funding
  • Comply with the approved DMS plan
Effective Date for DMS policy

The effective date for the DMS Policy is January 25, 2023. Specifically, the policy applies to:

- Competing grant applications
- Proposals for contracts
- NIH Intramural Research Projects
- Other funding agreements
Presentation Overview

• Planning and budgeting considerations
• Submission and review process
• Implementation and compliance
• UH support and resources
Policy
Claudia Neuhauser
The NIH Data Management & Sharing (DMS) Policy applies to all research, funded or conducted in whole or in part by NIH, that results in the generation of scientific data.

The DMS Policy applies to all research that generates scientific data, including:
• Research Projects
• Some Career Development Awards (Ks)
• Small Business SBIR/STTR
• Research Centers

DMS Policy does not apply to research that do not generate scientific data, such as:
• Training (T)
• Fellowships (Fs)
• Construction (C06)
• Conference Grants (R13)
• Resource (Gs)
• Research-Related Infrastructure Programs (e.g., S06)
Budget and Planning Considerations

- Investigators and institutions are encouraged to consider these crucial elements early in research planning:
  - Determine if your proposed research is subject to the DMS policy
  - Identify appropriate methods and repositories for managing and sharing scientific data
  - Develop a Plan for managing and sharing scientific data and submit this Plan within the funding application or proposal
    * Note that applications subject to both the DMS Policy and the Genomic Data Sharing Policy will submit a single plan
  - Estimate and request funds for data management and sharing activities if not already covered by institution or other sources

Tip: Consider consulting institutional resources such as UH Libraries and DMPTool to help plan effectively!
Appropriate Methods and Repositories for Managing and Sharing Research Data

- Data Preservation and Sharing Timelines: *Shared scientific data should be made accessible as soon as possible, and no later than the time of an associated publication, or the end of performance period, whichever comes first*

- Methods for Sharing Scientific Data: use an established repository
  * Note: NIH publishes and maintains a list of acceptable data repositories for compliance

- Sharing Data from Human Participants: NIH has specific requirements and expectations for research staff, and policies regarding research conduct, safety monitoring, and reporting of information about research progress

Tip: Consider consulting UH Libraries to help plan effectively for data sharing!
(Requesting Funds for Data Management and Sharing)

To request funds toward DMS costs, investigators should include:

1. A line item in the budget form
2. A brief summary of the DMS Plan and a description of the requested DMS costs in the budget justification*

* Note: some NIH programs require supplemental budget forms. See program guidelines and speak with your program officer prior to drafting your proposed budget.

Assessment of DMS budget proposal

• Peer reviewers may provide comments on the reasonableness of the budget, but these comments will not impact the score
### Estimating and requesting funds for DMS

#### Allowable Costs
- Curating data
- Developing supporting documentation
- Formatting data according to accepted community standards, or for transmission to and storage at a selected repository for long-term preservation and access
- De-identifying data
- Preparing metadata to foster discoverability, interpretation, and reuse
- Local data management considerations, such as unique and specialized information infrastructure necessary to provide local management and preservation
- Preserving and sharing data through established repositories, such as data deposit fees (repository(ies) must be listed in DMS Plan)

#### Unallowable Costs
- Infrastructure costs that are included in institutional overhead ([Facilities and Administrative costs](#))
- Costs associated with the routine conduct of research, including costs associated with collecting or gaining access to research data.
- Costs that are double charged or inconsistently charged as both direct and indirect costs
Data Management Plan (DMS)

Santi Thompson
Writing a Compliant DMS Plan

• Maximize appropriate sharing of scientific data
• The DMS Plan should be submitted as follows:
  • **Extramural (grants)**: DMS Plans should be included within the “Other Plan(s) field on the PHS 398 Research Plan or PHS 398 Career Development Award Supplemental Form
  • **Extramural (contracts)**: as part of the technical evaluation
  • **Other funding agreements**: prior to the release of funds
• **DMS Plans should be two pages or less in length**
  • Consider using DMPTool to construct your DMS Plan
6 Elements to Include in a DMS Plan

- Data type
- Related tools, software and/or code
- Standards
- Data Preservation, Access, and Associated Timelines
- Access, distribution, or reuse considerations
- Oversight of data management and sharing
DMS Plan Submission and Review Process

• Submit **DMS Plans and budget requests** as part of the funding application or proposal.

• DMS plans are NOT part of scored peer review criteria unless specifically noted in the Funding Opportunity Announcement.

• NIH program staff will review the **DMS Plan** for acceptability and may request modifications prior to award as appropriate.

• Plans must be approved by the funding institute prior to award.
Assessment of Data Management and Sharing Plans

Program staff at NIH will assess DMS Plans to ensure the elements of a DMS Plan have been adequately addressed and to assess the reasonableness of those responses.

Applications selected for funding will only be funded if the DMS Plan is complete and acceptable.
Revising Data Management and Sharing (DMS) Plans

- **Pre-Award Plan Revisions**
  - Applicants will be notified if additional information is needed
  - Applicants will then be expected to communicate with their Program Officer and/or Grants Management Specialist to resolve any issues
  - If needed, applicants should submit a revised DMS Plan.

- **Post-Award Plan Revisions**
  - Plans may need to be updated or revised over the course of a project
  - If any changes occur during the award or support period, investigators should update the Plan to reflect the changes
  - Discuss potential changes with the Program Officer. In addition, the funding NIH ICO will need to approve the updated Plan
Implementation and Compliance

• Awardees are expected to carry out data management and sharing as outlined in approved plans and as a term and condition of award.
• Manage and share data as described in the approved DMS Plan.
• Provide updates on data management and sharing activities in annual progress reports.
• If plans change over the course of the project, work proactively with NIH Program Officer to obtain review and approval of modifications.
• NIH staff will monitor DMS compliance; failure to comply may affect future funding.
Considerations for Proprietary Data

- Some scientific data generated with NIH funds may be proprietary
- Issues related to proprietary data can arise when co-funding is provided by the private sector
- Data sharing may be limited by restrictions imposed by licensing limitations attached to materials needed to conduct the research
- **Applicants should discuss projects with proposed collaborators early to avoid agreements that prohibit or unnecessarily restrict data sharing**
- NIH staff will evaluate the justifications of investigators who believe that they are unable to share data
- For questions or concerns about data sharing expectations for proprietary data, please contact the [Office of Science Policy](#). Small businesses may wish to contact the [NIH SEED Office](#).
UH Support and Resources

Santi Thompson
UH support and available resources

- Data management planning support through DMPTool

- Archiving and Data Repositories
  - Disciplinary and Generalist Data Repositories
  - UH Dataverse Repository
  - Large datasets
https://dmptool.org

- Agency templates & guidance
- Institutional login
- Submit plans for feedback
Select Guidance

To help you write your plan, DMPTool can show you guidance from a variety of organizations.

Select up to 6 organizations to see their guidance.

- DMPTool
- University of Houston (uh.edu)

Find guidance from additional organizations below

See the full list

Save
NIH DMS Components

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<tr>
<td>Related Tools, Software and/or Code</td>
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</tr>
<tr>
<td>Standards</td>
<td>0 / 1</td>
</tr>
<tr>
<td>Data Preservation, Access, and Associated Timelines</td>
<td>0 / 3</td>
</tr>
<tr>
<td>Access, Distribution, or Reuse Considerations</td>
<td>0 / 3</td>
</tr>
<tr>
<td>Oversight of Data Management and Sharing</td>
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This plan is based on the "NIH-GEN DMSP (Forthcoming 2023)" template provided by National Institutes of Health (nih.gov) - (ver: 4, pub: 2022-10-06).
Section Overview

There are various ways in which to disseminate, preserve, and make scientific data discoverable. In this section, you should describe where and when the scientific data associated with your research will be made available. The primary way to satisfy this requirement is to put your scientific data into a repository, which will support preservation of that data and provide long term access. In some cases, a repository may be specified by the funding institute or center; if a repository is not specified, then you have discretion in selecting the repository for your scientific data. When identifying a repository, consider how your scientific data will be made discoverable through the platform. For example, the repository’s ability to provide persistent identifiers (e.g., DOIs, handles, ARKs) for your scientific data is a good starting point to ensure consistent access. If there are restrictions as to the manner or length of time in which the scientific data can be preserved and/or accessed, be clear as to what those restrictions are in this section.
Content creation

Repository where scientific data and metadata will be archived: Provide the name of the repository(ies) where scientific data and metadata arising from the project will be archived; see Selecting a Data Repository

Save
All dataset(s) that can be shared will be deposited in ________ [Add appropriate NIH-supported data repositories] OR ________ [Add appropriate subject or disease repositories]

Sample Language for Dryad Data Repository

Dataset(s) resulting from this research will be shared via the generalist repository Dryad, which provides metadata, persistent identifiers (i.e., DOIs), and long-term access. Dryad is the institutional data repository supported by the University of California and all data is shared under a CC0 waiver, which makes the dataset(s) publicly available. Data will be made available as soon as possible or at the time of associated publication. Dryad datasets are backed up to Merritt, the UC’s CoreTrustSeal-certified digital repository, for long-term storage and accessibility. Procedures in place to ensure dataset preservation include storage of data files in multiple geographic locations, regular audits for fixity and authenticity, and succession plans in the event of repository closure.
Guidance

Data repository

**Guidance:** Subject-specific data repositories may be the best option for maximizing your data's exposure and impact (re3data.org provides a directory of repositories). Another option is to consider the Texas Data Repository, a web-accessible and widely indexed Dataverse repository, hosted by the Texas Digital Library and managed by the University of Houston. TDR provides persistent, citable, Digital Object Identifiers (DOIs), searchable metadata, full-text indexing, and preservation. TDR is free and appropriate for:

- individual data files up to 4GB and up to 10GB total;
- data in raw and/or final format;
- data that needs to be stored long term;
- code and/or documentation that facilitate data use

**Sample language:** Following consultation with Reid Boehm at University of Houston Libraries, I plan to deposit my research data in the Texas Data Repository (TDR). I will provide the necessary metadata and other resources to make those data accessible and to enable their reuse. TDR is a web-accessible and widely indexed Dataverse repository hosted by the Texas Digital Library and managed by the University of Houston. TDR provides persistent, citable URLs via Digital Object Identifiers (DOIs), searchable metadata, full-text indexing, and preservation of content.
Data Preservation, Access, and Associated Timelines

DATA ARCHIVING  DATA DISCOVERY  DATA AVAILABILITY  DATA SHARING
Archiving and Data Repositories

Benefits

• File integrity and documentation
• Digital Object Identifiers and Cite-ability
• Greater discovery and access
• Less pain and time for you
• Policy recommends or requires

There are a wealth of repositories for disciplines, domains, and data types.
NIH-supported Scientific Data Repositories

• In general, NIH does not endorse or require sharing data in any particular repository, although some initiatives and funding opportunities will have individual requirements.

• **Overall, NIH encourages researchers to select the repository that is most appropriate for their data type and discipline.**

• NIH supplies a list of supported repositories that researchers can use to learn more about some places to share scientific data.
  • Note that this list is not exhaustive.
Disciplinary and Generalist Data Repositories

Repositories offer varying levels of features and support

• Metadata and file format standards
• Linking to other relevant digital information
• Metrics
• Business models
UH Dataverse Repository

Archive, Preserve, and Share

- Open Access
- Free to all UH researchers
- Digital Object Identifier & Citation
- Up to 10 GB per project
- Local support

https://dataverse.tdl.org/dataverse/uh
UH Dataverse Repository

Meets NIH Desirable Characteristics

• Long-Term Sustainability
• Metadata
• Free and Easy Access
• Clear Use Guidance
• Provenance

https://dataverse.tdl.org/dataverse/uh
Archiving and Preserving Large Data Sets

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<th>Storage Size</th>
<th>UIT Solution (per year)</th>
<th>External Cloud Solution (per year)</th>
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<td>1 TB</td>
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Data Management Resources

This guide is for researchers at the University of Houston in all disciplines and at all levels. Here we discuss core elements of research data management and provide guidance about managing data and related materials.

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NIH DMSP Workshop

On November 10, 2022, representatives from UH Division of Research, Hewlett Packard Enterprise Data Science Institute, and UH Libraries hosted a virtual workshop on the NIH DMSP.

The workshop provided an overview of the DMSP, outlined changes to the NIH submission and review process, and reviewed campus resources that can help researchers comply with the NIH DMSP during the planning and archiving, sharing, and preservation stages of their grant award.

You can view the workshop slides here.

https://guides.lib.uh.edu/datamanagement
For Additional Information

- [UH Libraries Data Management Resources](#)
  - Additional information on NIH DMS Policy, general data management best practices, and recording of this webinar all found here
- [DMPTool](#)
- [Cougar ROAR](#)
- [NIH Data Management](#)
Questions and Contacts

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