**Data Management and Sharing Plan Components**

**General**

Principal Investigators and Program/Project Directors are responsible for developing a Data Management and Sharing Plan (DMSP) for projects that generate research data. In general, a DMSP should include the following information. Be sure to review any funder-specific requirements and IRB or IACUC regulations, if applicable.

1. **Types of data**:What research data will be created? What is the source of the data? In what formats are the data? Will the data be fixed, or will it change over time? How much data will the project produce?
2. **Relevant Policies.** What policies apply to the data – funder, institutional, legal/regulatory, IRB, IACUC?
3. **Contextual details (metadata)**: How will you document and describe the data?
4. **Storage, backup, and security**: How and where will you store and secure the data?
5. **Provisions for protection/privacy/confidentiality**: What privacy and confidentiality issues must be addressed and how will privacy and confidentiality be protected?
6. **Access and sharing**: How will you provide access to the data by other researchers? How will others discover the data?
7. **Archiving and providing access**: What are your plans for preserving the data and providing access after the project (or funding) has concluded. When will the data be deleted?
8. **Roles and plan oversight**: Who will be responsible for aspects of data management throughout the project, and what resources are required for implementation?

**National Science Foundation (NSF)**

Principal Investigators are expected to share with other researchers, at no more than incremental cost, and within a reasonable time, the primary data, samples, physical collections, and other supporting materials created or gathered in the course of work under NSF grants.

* A two-page Data Management and Sharing Plan (DMSP) is required with the grant proposal.
* Dataset(s) supporting funded research should be deposited in an appropriate data repository as described in the DMSP.
* The DMSP documents the decision process for preserving data for potential reuse and the cost of recreating the data.
* The DMSP will be reviewed as part of the proposal evaluation process, considered under the Intellectual Merit or Broader Impacts section (or both).

A DMSP for the NSF typically includes the following components.

1. The types of data, samples, physical **collections**, software, curriculum materials, and other materials to be produced in the course of the project;
2. The standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies);
3. Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;
4. Policies and provisions for re-use, re-distribution, and the production of derivatives; and
5. Plans for archiving data, samples, and other research products, and for preservation of access to them.

The DMSP may also include documentation of IRB/IACUC review and approval of the project, if applicable.

Some NSF Directorates, Offices, Divisions, Programs, or solicitations may provide more specific guidance. Researchers should review available information while preparing the DMSP for a specific NSF-funded project.

Once the grant is awarded and work has begun, researchers should periodically revisit the DMSP to ensure that it still fits the needs of the project. The DMSP can and should be revised as needed to maintain relevancy, accuracy, and completeness. Maintaining a DMSP helps ensure that NSF commitments are met and showcases the researcher’s ability to manage data appropriately, strengthening future grant applications.

**National Institutes of Health (NIH)**

Beginning in 2023, all new and competing grant applications or renewals that generate scientific data must include a robust and detailed plan for how the PI/PD will manage and share data during the entire funded period.

* This information must be provided in a data management and sharing plan (DMSP).
* The term scientific data is defined as "*The recorded factual material commonly accepted in the scientific community as of sufficient quality to validate and replicate research findings, regardless of whether the data are used to support scholarly publications."*
* The DMSP is required to include information on data storage, access policies/procedures, preservation, metadata standards, distribution approaches, and more.
* The DMSP will be assessed by NIH Program Officers (though peer reviewers of the grant application will comment on the proposed data management budget). The Institute, Center, or Office (ICO)-approved plan becomes a Term and Condition of the Notice of Award.

**Developing a DSMP**

1. **Determine a personal timeline.** If you are planning to submit an NIH proposal, developing a DMSP should be a high priority, especially if you are working with external collaborators as it may take time to set up appropriate data procedures or agreements.
2. **Discuss the new requirements with colleagues**. It helps to help shape expectations within your scientific field around data management and sharing.
3. **Read through the NIH webpage** to familiarize yourself with the changes and the policy (including the supplements).
4. **Designate a lab data manager** who will develop expertise in data management workflows. Assess your own project and data management practices relative to the policy, especially around documenting existing practices and developing new ones to address the emphasis on data sharing and administrative oversight.
5. **Review campus data services** and assess whether they will meet your needs. Identify specific tools or resources that would facilitate data management and data sharing for the project.

The Plan is recommended not to exceed two pages and must include:

* 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

For a sample NIH format, see: <https://grants.nih.gov/grants/forms/all-forms-and-formats/data-management-and-sharing-plan-format-page>

See [Supplemental Information to the NIH Policy for Data Management and Sharing: Elements of an NIH Data Management and Sharing Plan](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-014.html) for a detailed description of these elements.

See also <https://sharing.nih.gov/data-management-and-sharing-policy/planning-and-budgeting-for-data-management-and-sharing/writing-a-data-management-and-sharing-plan#after>