

## NSF Data Management Plan

All NSF proposal requires a supplementary document of no more than two pages describing a Data Management Plan for the proposed research. As a supplementary document, the data management plan is not included in the 15-page limit for proposal bodies. Fastlane will not permit submission of a proposal that is missing the Data Management Plan. Proposers who feel that the plan cannot fit within the supplement limit of two pages may use part of the 15-page Project Description for additional data management information; the plan may not be used to circumvent the 15-page Project Description limitation. *Please note a valid Data Management Plan may include only the statement that no detailed plan is needed, as long a clear justification is provided.*

The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate. The goal is to provide clear, effective, and transparent implementation of the long-standing NSF Policy on Dissemination and Sharing of Research Results, which may be found in the Award Administration Guide, Section VI.D.4 (see: [http://www.nsf.gov/pubs/policydocs/pappguide/nsf14001/aag\\_6.jsp#VID4](http://www.nsf.gov/pubs/policydocs/pappguide/nsf14001/aag_6.jsp#VID4)). After an award is made, compliance with the data management plan will be monitored through the Annual and Final Report process and through evaluation of subsequent proposals. Data management activities must be reported in subsequent proposals by the PI and Co-PIs under "Results of prior NSF support."

This page is intended to assist researchers, principal investigators, grant administrators, support staff, and other members of the UMass Boston community who need to prepare a data management plan in compliance with the new NSF requirements.

### What Data Should I Include?

The best way to determine what data to include in your plan is to consult the guidelines offered by the appropriate NSF directorate and/or division (see: <http://www.nsf.gov/bfa/dias/policy/dmp.jsp>) as well as any special requirements laid out in the solicitation. However, the federal government does provide a baseline definition of research data which may be useful when thinking about what to include in your plan.

Research data are formally defined by the U.S. Office of Management and Budget (see: <https://www.federalregister.gov/articles/2013/12/26/2013-30465/uniform-administrative-requirements-cost-principles-and-audit-requirements-for-federal-awards>) as "the recorded factual material commonly accepted in the scientific community as necessary to validate research findings." This definition includes both analyzed data and the metadata that describe how those data were generated. "Analyzed data" include, but are not limited to, digital information that would be included in scientific publications, including digital images, published tables, and tables of the numbers used to create charts and graphs. "Necessary metadata" include, but are not limited to, descriptions or suitable citations of experiments, apparatuses, raw materials, computational codes, model parameters and input conditions. *In general, research data are anything an investigator would need to reproduce published results.*

### Contents of the Data Management Plan

The DMP should clearly articulate how the PI and co-PIs plan to manage and disseminate data generated by the project. The plan should outline the rights and obligations of all parties as to their roles and responsibilities in the management and retention of research data, and consider changes that would

occur should a PI or co-PI leave the institution or project. Any costs should be explained in the Budget Justification pages.

The DMP should describe the types of data, samples, physical collections, software, curriculum materials, or other materials to be produced in the course of the project. The plan should then describe the types of data to be retained and shared, and the plans for doing so. The DMP should cover the following, as appropriate for the project:

As stated in the Proposal and Award Policies and Procedures Guide, the Data Management Plan should include the following information:

- **Research Products:** Describe the types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project
- **Data Formats:** The standards to be used for data management and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies). If possible, identify who will create the metadata, and at what stage of the project
- **Practices and Policies for Access to Data and Data Sharing:** Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements. Describe mechanisms and formats for storing data and making them accessible to others, which may include third party facilities and repositories. Describe any factors that limit the ability to manage and share data, e.g., legal and ethical restrictions on access to human subject data. Describe the period of time the data will be retained and shared. NSF recognizes that legal and ethical requirements may preclude sharing of some kinds of data. Trade secrets and commercial information are also not subject to the data-sharing requirement
- **Policies for Re-Use, Re-Distribution, and Production of Derivatives:** Describe usage rights, licenses or other policies related to re-use and re-distribution of data
- **Archiving of Data:** Plans for archiving data, samples, and other research products, and for preservation of access to them.

Note that individual solicitations may have additional data management plan requirements. If guidance specific to the program is not available, then the requirements established in the Grant Proposal Guide apply.

### **Directorate-Level Guidance**

Some NSF directorates have issued their own guidelines for the preparation of the data management plan. These guidelines are not intended to replace the guidance given in the PAPPG; if there is a conflict, the PAPPG takes precedence. Consult the directorate you are applying to more updated information: [Dissemination and Sharing of Research Results](#).