



# New Requirements and Strategies for Management of Research Data

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# NSF Data Management Plan Requirement

- As of January 18, 2011, all NSF funding proposals require a "Data Management Plan" (DMP) of up to two pages in length
- DMP is a formal document that outlines what the PI will do with data during and after completion of a funded research project

## Is a Data Management Plan Always Required?

- Yes. However, a valid Data Management Plan may include only the statement that no detailed plan is needed, as long as the statement is accompanied by a clear justification.

## Why This New Requirement?

- Ensure the preservation of important research data
- Allow for the use of grant funded data by other researchers to validate and potentially extend the value of the data
- Improve accountability for use of public revenue to support research
- Provide for the reasonable access to research data to be consistent with the Freedom of Information Act

Other funders, such as NIH, have or are developing similar policies that to provide access to research data so that future research can build on earlier work.

## Benefits of Good Data Management Planning

- Improved competitiveness for grant programs; a clear and complete Data Management Plan will support the project's evaluation plan
- Enhanced PI efficiency with a structured plan for managing research data throughout the life of the project and beyond
- Long-term protection and preservation of RU research data
- Avoidance of this kind of headline:  
<http://www.news9.com/global/story.asp?s=13833909>

## The NSF DMP May Include (per NSF Guidance)

- [*data model*] The types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project;
- [*metadata*] 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);
- [*policy*] Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements, including the right to embargo data for a specified time period to allow first publication and thorough use of the data;
- [*policy*] Policies and provisions for fair re-use, re-distribution, and the production of derivatives; and
- [*preservation*] Plans for archiving data, samples, and other research products, and for preservation of access to them.

# Developing a Data Management Plan

*Preparation is key to developing a sound DMP, and should be part of the project's development from outset:*

1. Review specific guidelines from NSF Grant Proposal Guide, NSF directorate, division, that may apply.
2. Determine software tools to be used.
3. Identify data storage resources for all stages of the project.  
Consider:
  - *Where will raw data be stored? How backed up? How will successive versions be preserved intact?*
  - *Where will analyzed (derived) data be stored? How backed up?*
  - *Where will derived data be archived to allow for eventual access and possible reuse?*

## Developing a Data Management Plan con't

4. Consider any subject identification / privacy issues that might affect the project data:
  - *Does data need to be embargoed from public or peer access due to licensing, privacy, time for exclusive use, or other restrictions?*
  - *Will data require de-identification before it can be archived for citation and possible re-use? Consult university's IRB officer with questions.*
  - *Is it advisable to include details about possible re-use and data sharing in subject consent forms?*
5. Identify departmental, disciplinary, or institutional data storage resources available at the various stages of research project to allow for the maintenance of three copies (live plus two backups) of your data is maintained throughout the life of your project.

# Data Storage Repositories

OVPR is working with other campus units to identify and develop viable campus repositories for research data archives. These include:

- RUresearch (<http://rucore.libraries.rutgers.edu/research/>) is the new research data portal of the Rutgers University Community Repository, developed by the RU Libraries, which allows for more comprehensive archiving and maintenance of dataset files;
- OVPR “minimalist” data archive, which allows for researchers to upload a basic set of files including data and simple metadata, is currently available at <http://data.rutgers.edu>.
- The OVPR is in the process of identifying existing repositories, including local Rutgers and external disciplinary or academic data storage repositories. Please forward info about possible resources to Aletia Morgan in OVPR ([ahmorgan@vpr.rutgers.edu](mailto:ahmorgan@vpr.rutgers.edu)).



# NSF Data Management Plan Documentation

- The NSF's expectation regarding sharing of research data is described in the NSF Award & Administration Guide:  
[http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/aag\\_6.jsp#VID4](http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/aag_6.jsp#VID4)
- A detailed description of the requirements for Data Management Plans is shown in the NSF Grant Proposal Guide:  
[http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg\\_2.jsp#dmp](http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg_2.jsp#dmp)
- NSF Data Management & Sharing Frequently Asked Questions (FAQ):  
<http://www.nsf.gov/bfa/dias/policy/dmpfaqs.jsp>
- Data Management requirements by directorate, office, division, program, or other NSF unit are available at <http://www.nsf.gov/bfa/dias/policy/dmp.jsp>.  
*If guidance specific to a program is not provided, then the requirements established in the Grant Proposal Guide (above) apply.*

## Rutgers DMP Resources

- Research Data Management site, <http://data.rutgers.edu>, developed by the Rutgers Office of the VP for Research
  - Checklist for developing a Data Management Plan
  - Information about Rutgers resources
  - Links to agency resources and data management content from external peer institutions
- RU Library Data Management Guide at <http://libguides.rutgers.edu/datamanagement>

## What's Next?

The Rutgers Library is sponsoring presentations describing the issue of Research Data Management and developing Data Management Plans. Upcoming dates are:

- Wednesday, March 9 , 1-2 pm and repeating at 2:30-3:30 pm  
Busch Campus Center Room 122AB
- Tuesday, March 29 , 1-2 pm and repeating at 2:30-3:30 pm  
Cook Campus Center Room 202A
- Meetings at Newark and Camden will be scheduled later in the spring. Time and place TBA.

### *What do you need?*

- Faculty / graduate student training?
- Additional site documentation?
- Directorate-specific guidelines?