

Data Management Plans at NSF




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TO THE PRESIDENT AND CONGRESS



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NSF to Ask Every Grant Applicant for Data Management Plan

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Scientists seeking funding from the National Science Foundation (NSF) will soon need to spell out how they plan to manage the data they hope to collect. It's part of a broader move by NSF and other federal agencies to

NSF to Mandate Data Management Plans

May 14, 2010 · [Leave a Comment](#)

[The National Science Foundation](#) is announcing that it will soon begin requiring a data management plan with each grant. From the announcement:

"This is the first step in what will be a more comprehensive approach to data policy," added Cora Marrett, NSF acting deputy director. "It will address the need for data from publicly-funded research to be made public."

Press Release 10-077

Scientists Seeking NSF Funding Will Soon Be Required to Submit Data Management Plans

Government-wide emphasis on community access to data supports substantive push toward more open sharing of research data

May 10, 2010

During the May 5th meeting of the [National Science Board](#), National Science Foundation (NSF) officials announced a change in the implementation of the existing policy on sharing research data. In particular, on or around October, 2010, NSF is planning to require that all proposals include a data management plan in the form of a two-page supplementary document. The research community will be informed of the specifics of the anticipated changes and the agency's expectations for the data management plans.

The changes are designed to address trends and needs in the modern era of data-driven science.

"Science is becoming data-intensive and collaborative," noted Ed Seidel, acting assistant director for NSF's Mathematical and Physical Sciences directorate. "Researchers from numerous disciplines need to work together to attack complex problems; openly sharing data will pave the way for researchers to communicate and collaborate more effectively."

2010 Project: Solicitation NSF 09-514

- Biology Directorate (To determine functions of all genes in *Arabidopsis thaliana* by 2010)
- <http://www.nsf.gov/pubs/2009/nsf09514/nsf09514.htm>
- **Data Management Plan** (max. 1 page): Development & adherence to community-wide standards for collection & presentation of data are highly encouraged. Large-scale datasets must be made available in a format that **enables rapid comparison & effective utilization of reproducible information**. All proposals must incl. a detailed data management plan if project is expected to generate significant **digital data for preservation**. Contents of plan should incl.:
 - Types of data to be produced
 - Standards that would be applied for format, metadata content, etc.
 - Provisions for archiving & preservation
 - Access policies & provisions
 - Plans for eventual transition or termination of the data collection after the NSF funding period

Directorate: Computer and Information Sciences & Engineering (CISE)	Information and Data Management (IDM)							
	<p>CONTACTS</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Email</th> <th>Phone</th> <th>Room</th> </tr> </thead> <tbody> <tr> <td>Maria Zemankova</td> <td>mzemanko@nsf.gov</td> <td>(703) 292-7348</td> <td>1125 S</td> </tr> </tbody> </table> <p>PROGRAM GUIDELINES</p> <p>Announcement 04-500</p> <p>Please be advised that the NSF Proposal & Award Policies & Procedures Guide (PAPPG) includes revised guidelines to implement the mentoring provisions of the America COMPETES Act (ACA) (Pub. L. No. 110-69, Aug. 9, 2007.) As specified in the ACA, each proposal that requests funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals. Proposals that do not comply with this requirement will be returned without review (see the PAPP Guide Part I: Grant Proposal Guide Chapter II for further information about the implementation of this new requirement).</p> <p>DUE DATES</p> <p>Archived</p> <p>SYNOPSIS</p> <p>The Information and Data Management (IDM) Program supports research and education activities fundamental to the design, implementation, development, management, and use of databases, information retrieval, and knowledge-based systems. Topics include design methodologies, data, metadata, information, knowledge and process/event modeling, information access and interaction, information integration, knowledge discovery and visualization, and systems architecture and implementation. Research areas span web-based systems, novel data types, scientific and engineering databases, and other intelligent information systems, efficient data gathering and storage/archival, information and data organization and management, including security/privacy issues, information flow, dynamic/evolutionary systems, change maintenance, and information life-cycle management, interoperability in heterogeneous systems, highly scalable, data-intensive, and distributed/mobile information systems, and performance and quality of service issues.</p>	Name	Email	Phone	Room	Maria Zemankova	mzemanko@nsf.gov	(703) 292-7348
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Division of Information & Intelligent Systems								

Science Trends & Need for Data Policy

- Science is now both data-intensive & collaborative
- Interdisciplinary: Numerous disciplines needed to attack complex problems
- People communicate & collaborate in a number of ways:
 - Sharing data
 - Sharing software
 - Dissemination incl. publications

NSF Data Policy

- **Before:** "Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the primary data ... created or gathered in the course of work under NSF grants." (Proposal & Award Policies & Procedures Guide)
- **Now:** Data Management Plan (DMP) part of proposal submission
 - Implementation and type of responses varies across fields
 - Distribution may wait until after publication by investigators
 - International collaborations: formal data protocols in S&T agreements
- **Future?:** Refinement and Possible Expansion
 - Adjustments and development to data policy
 - Examine Open and electronic access to publications & associated data for publically funded research

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Goals

- The ultimate goal is to make data available for future generations of researchers. We recognize that very-long-term solutions to data storage and access have not yet been developed. What constitute reasonable procedures at this time will be determined by the community of interest through the process of peer review. These standards are likely to evolve as new technology and resources become available.

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<http://www.nsf.gov/bfa/dias/policy/dmp.jsp>

The screenshot shows the NSF website interface. At the top, the NSF logo and tagline "WHERE DISCOVERIES BEGIN" are visible. A navigation menu includes links for Home, Funding, Awards, Discoveries, News, Publications, Statistics, About, and FastLane. The main content area is titled "Dissemination and Sharing of Research Results" and contains two sections: "NSF Data Sharing Policy" and "NSF Data Management Plan Requirements". The "NSF Data Management Plan Requirements" section states that proposals submitted on or after January 18, 2011, must include a supplementary document of no more than two pages labeled "Data Management Plan". A sidebar on the left provides navigation for the Office of Budget, Finance and Award Management (BFA) and includes a search function for DIAS staff.

Data Management Plan Requirements (DMR)

- No more than 2 pages
- Promptly submit results for publication
- Then, share with other researchers (primary data, samples, physical collections, etc.)
- Share software & inventions
- Include aspects of data retention & sharing that would allow them to respond to a question about a published result