

# Data Management Plan for NIFA-Funded Research Projects

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On February 22, 2013, the Office of Science and Technology Policy (OSTP) at the Executive Office of the President issued a memorandum to all agencies to develop guidelines to increase access to the results of publicly-funded scientific research:

[http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp\\_public\\_access\\_memo\\_2013.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf). As a result, the Department of Agriculture recently posted its plan to implement the directives called for in the memorandum: <http://www.usda.gov/documents/USDA-Public-Access-Implementation-Plan.pdf>. One implementation milestone is to pilot required Data Management Plans (DMPs) as a part of many of its competitive research and integrated programs. This document informs potential applicants of proposal submission requirements associated with of these pilot programs in 2015.

NIFA's mission is to *Invest in and advance agricultural research, education, and extension to solve societal challenges*. To achieve its goal, NIFA provides scientific leadership and funding to various partners. Increased access to scientific research results (e.g., scholarly publications, digital data sets) from NIFA-funded projects is critical to achieving NIFA's vision to *catalyze transformative discoveries, education, and engagement to address agricultural challenges*. Therefore, an appropriate data management plan (DMP) should be a core component of research planning for proposals submitted to NIFA.

The DMP should be compliant with the *Research Terms and Conditions* that govern NIFA-funded projects [http://www.nsf.gov/pubs/policydocs/rtc/agencyspecifics/nifa\\_1113.pdf](http://www.nsf.gov/pubs/policydocs/rtc/agencyspecifics/nifa_1113.pdf). The DMP is not intended to be a replacement for other grant reporting requirements.

## KEY CONCEPTS FOR NIFA DMP

- Data (digital and non-digital) are the ultimate outputs of most research investments from NIFA.
- Appropriate data management is critical to all research enterprises and helps preserve outcomes and outputs of public and private investment.
- Access and sharing of digital and non-digital data helps increase the scope and outcomes of scientific discoveries, sometimes beyond the initial boundaries of the research.
- A DMP should be a core component of a research planning process and should contain adequate information for successful implementation.
- The type of data that needs to be stored, preserved, and shared depend on the type of research, the scientific discipline, and financial implications.
- Adequate resources must be available to implement the DMP.

## AWARD THRESHOLD AND LIMITATIONS

- Maximum of two pages. The DMP does not count toward the page limits for the project and should not be used to circumvent the project page limit.
- If a project does not lead to data collection (e.g., a meeting with no proceedings), the DMP document could be limited to the following statement, "No data will be produced."
- Regardless of the number of subawards, only one DMP should be submitted by the project and should cover data collected by all collaborators.
- Some programs may have different standards for DMPs and those will be outlined in the specific request for applications.
- DMPs should clearly articulate any justifiable limitations on project data sharing due to confidentiality, privacy, proprietary interests, business confidential information, and intellectual

property rights and avoid significant negative impact on intellectual property rights, innovation, and U.S. competitiveness.

## **ESSENTIAL ELEMENTS OF DMPs**

The DMP should clearly articulate how the project director (PD) and co-PDs plan to manage and disseminate data generated by the project. NIFA and reviewers will consider the DMP during the merit review process. NIFA is aware of the need to provide flexibility in assessing DMPs. The DMP must not exceed the two-page limit and should contain the following components depending on the type of research being conducted.

### **1. Expected Data Type**

Describe the type of data (e.g. digital, non-digital) and how they will be generated (lab work, field work, surveys, etc.). Are these primary or metadata?

### **2. Data Format**

For scientific data to be readily accessible and usable it is critical to use an appropriate community-recognized standard and machine readable formats when they exist. The data should preferentially be stored in recognized public databases appropriate for the type of research conducted. Regardless of the format used (notebook, samples, images, spreadsheet, etc.), that data set should contain enough information to allow independent investigators to understand, validate, and use the data.

### **3. Data storage and preservation**

Scientific data should be stored in a safe environment with adequate measures taken for its long-term preservation. Applicants should describe plans for storing and preserving their data during and after the project and specify the data repositories, if they exist. They should outline strategies, tools, and contingency plans that will be used to avoid data loss, degradation, or damage.

### **4. Data sharing and public access**

Describe your data access and sharing procedures during and after the grant. Provide any restrictions such as copyright, confidentiality, patent, appropriate credit, disclaimers, or conditions for use of the data by other parties.

### **5. Roles and responsibilities**

Who will ensure DMP implementation? This is particularly important for multi-investigator and multi-institutional projects. Provide a contingency plan in case key personnel leave the project. Also, what resources will be needed for the DMP? If funds are needed, have they been added to the budget request and budget narrative? Projects must budget sufficient resources to develop and implement the proposed DMP.

### **6. Monitoring and reporting**

Successful projects should monitor the implementation of the DMP throughout the life of the project and after, as appropriate. Implementation of the DMP should be a component of annual and final reports to NIFA (REEport) and include progress in data sharing (publications, database, software, etc.). The final report should also describe the data that was produced during the award period and the components that will be stored and preserved (including the expected duration) after the award ends.