



Federal Mandate for Research Data Management Plan & Possible Solutions

David L Shealy, Ph.D.
Professor & Chair, Physics Department
Director of IT Research Computing
dls@uab.edu

NSF Data Management Plan

- ▶ NSF Requirement: Proposals submitted or due on or after **January 18, 2011**, must include a supplementary document of no more than two pages labeled “Data Management Plan”.
- ▶ NSF: “...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...”

NSF DMP & FAQ's

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

- ▶ “...This may include, but is not limited to: data, publications, samples, physical collections, software and models...”
- ▶ “...What constitutes reasonable data management and access will be **determined by the community of interest through the process of peer review and program management...**”
- ▶ “...Data maintenance and achieving by an institution is one avenue by which data preservation and access can be achieved...”
However, **the data access plan must address the institutional strategy for providing access to relevant data and supporting materials.**



NIH Statement on Sharing Research Data:

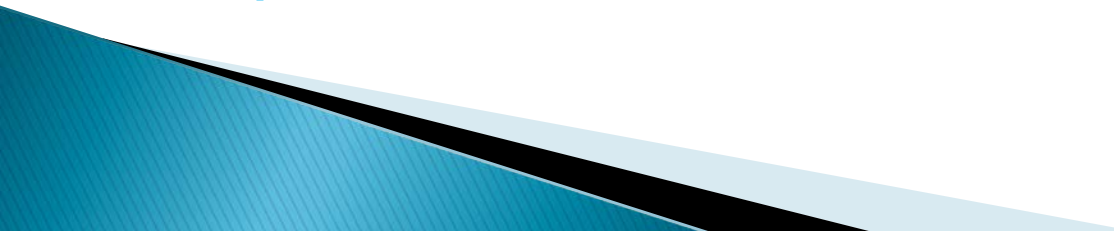
<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-03-032.html>

- ▶ NIH: “...Data sharing is essential for expedited translation of research results into knowledge, products and procedures to improve human health...”
- ▶ 2/16/2004 FAQ:
http://grants.nih.gov/grants/policy/data_sharing/data_sharing_faqs.htm

This chart is designed as a quick guide only for the purpose of identifying various data sharing regulation/policy/guidance documents applicable to NIH funding. The information provided in the chart is not to be used without referring to the entirety of the source documents. Therefore, links are provided to the source documents for all references noted below:

Regulation/Policy/Guidance	Applicable To:	Applied How?
<p>OMB Circular A-110 http://www.whitehouse.gov/omb/circulars/a110/a110.html</p>	<ul style="list-style-type: none"> Uniform Administrative Requirements for Grants and (Cooperative) Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations Does not apply to data collected by commercial organizations Does not apply to most data collected by State and Local Governments 	<ul style="list-style-type: none"> This Circular sets forth standards for obtaining consistency and uniformity among Federal agencies in the administration of grants and cooperative agreements. Federal Government has the right to obtain, reproduce, publish, or otherwise use data first produced under a grant. Federal Government has the right to authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes.
<p>The following Regulation/Policy/Guidance applies to all organizations COVERED by OMB Circular A-110</p>		
<ul style="list-style-type: none"> Amendment (Provision of Public Law 105-277 – Interim Final Rule effective April 17, 2000) http://grants.nih.gov/grants/policy/a110_fed_reg_20000316.pdf 	<ul style="list-style-type: none"> Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations that receive grants and other financial assistance provided by Federal agencies Amends OMB Circular A-110 and applies only to data that is: <ol style="list-style-type: none"> First produced in a project that is supported in whole or in part with Federal funds, and Cited publicly and officially by a Federal agency in support of an action that has the force and effect of the law (i.e. Regulations and Administrative Orders). Amendment applies only to data first produced under a new or competing award issued after the effective date. 	<ul style="list-style-type: none"> Amendment codified in OMB Circular A-110, Section 36 to require Federal awarding agencies to ensure that all data produced under an award will be made available to the public through the procedures established under the Freedom of Information Act (FOIA) - http://www.nih.gov/icd/od/foia/ Permits Federal Agency to impose a user fee on the requestor.
<ul style="list-style-type: none"> NIH Data Sharing Policy http://grants.nih.gov/grants/guide/notice-files/NOT-OD-03-032.html 	<ul style="list-style-type: none"> Application seeking \$500K or more in direct costs in any single year of the project period, or As a special requirement of a Funding Opportunity Announcement (FOA) Applies to the sharing of Final Research Data for applications submitted on or after October 1, 2003 	<ul style="list-style-type: none"> Data sharing plan expected and included in application NIH acceptance of the grantee's submitted or negotiated sharing plan is incorporated as a term and condition of the award.
<p>NIH Statement: Access to Research Data http://grants.nih.gov/grants/policy/nih_gps_2010/</p>	<ul style="list-style-type: none"> Any application Not a special requirement of a Funding Opportunity Announcement 	<ul style="list-style-type: none"> NIH will communicate its expectations with respect to data sharing and facilitate and encourage communication among the parties involved to promote sharing.

NIH and NSF Expectations

- **Data sharing plan expected and included in all applications**
 - NIH & NSF acceptance of the grantee's submitted or negotiated sharing plan is incorporated as a term and condition of the award.
 - ▶ How are some Research Universities working to help funded PI's share their data?
- 

SURA Research Data Management Initiative

April 4, 2013 Update


- ▶ SURA IT facilitates bi-weekly conference calls to explore multi-institutional projects targeted at improving the way members manage institutional research data.
- ▶ Focus is on development of a multi-institutional pilot implementation of Dataverse Network (DVM), which is an open source application that facilitates the ability to publish, share, reference, extract and analyze research data.
- ▶ Participating SURA Members: FL Inst. Tech.; Georgia Tech.; George Mason; NCSU; UA; UF; SURA.

SURA/ASERL RDM Collaboration¹

- ▶ In [1999 OMB Circular A-110](#) was amended to require Federal awarding agencies to ensure that all data produced under an award will be made available to the public through the procedures established under the Freedom of Information Act (FOIA).
- ▶ NSF required all new proposals submitted in Jan 2011 and after to contain a Data Management Plan (DMP).
- ▶ NSF DMP should describe how proposal meets NSF policy on sharing research results.

1. Submitted Feb. 20, 2013 to the NSF sponsored Research Data Management Implementation Workshop.

Objectives of SURA/ASERL RDM

- ▶ Address new funding agency requirements;
 - ▶ Effective management of increasing size of research data;
 - ▶ Ensure research integrity, replication and accuracy and reliability of data and records;
 - ▶ Enhance data security and minimize risk of data loss;
 - ▶ Prevent duplication of effort by enabling others to use data;
 - ▶ Comply with practices used by industry and commerce.
- 

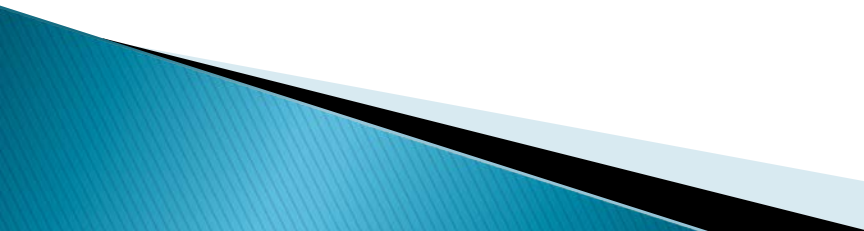
SURA RDM Group Outcomes:

- ▶ Step-by-Step Guide to Data Management:
<http://sura.org/news/docs/RDMStepGuide101512.pdf>
- ▶ Discipline Specific Metadata Scheme Directory to Assist Researchers in Finding Metadata Models for their Research Data;
- ▶ Co-Sponsor a **RDM Policy paper**: “Model Language for Research Data Management Policy”:
<http://www.lib.ua.edu/wiki/sura/> .

Summary of Step-by-Step Guide to Preparing DMP

- ▶ **Step 1: Assemble Data Management toolkit;**
 - DMPTool: <https://dmp.cdlib.org/>
 - DataONE: <http://www.dataone.org/>
 - DataONE: <http://databib.org/>
- ▶ **Step 2: Plan;**
- ▶ **Step 3: Collect and Check your Data;**
- ▶ **Step 4: Describe and Document your Data;**
- ▶ **Step 5: Select a Repository for your Data;**
- ▶ **Step 6: Store and Preserve your Data.**

SURA/ASERL RDM Group 2013 Activities

- ▶ Pilot project of 6 months with 5-6 SURA institutions was planned for 2013;
 - ▶ **Reports and outcomes** can be expected in Q4 of 2013;
 - ▶ **SURA RDM 2013 pilot would seem to be a good pilot project to evaluate for a possible UAB RDM pilot project in 2014.**
- 

Community-based & Commercial Digital Preservations Networks/Services

- ▶ [Amazon Simple Storage Service \(S3\)](#)
- ▶ [Amazon Glacier](#)
- ▶ [SDSC Chronoplis](#)
- ▶ [Dura Cloud](#)
- ▶ [The MetaArchive Cooperative](#)
- ▶ [University of California UC3Merritt](#)

- ▶ **Other DMP Resources:**
 - [Georgia State Univeristy](#)
 - [Tulane University](#)