

Contact Ami Gaspar at [ami.gaspar@maine.edu](mailto:ami.gaspar@maine.edu) (207)561-3578 OR Chris Wilson [chris.wilson@maine.edu](mailto:chris.wilson@maine.edu) (207)561-6579 for DMP guidance assistance.

## DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

### NSF Data Management Plan Template

#### NSF Data Management Plan Requirement Overview

- Proposals submitted after January 18, 2011 must include a Data Management Plan (DMP)
- DMP should be a supplementary document of no more than two pages
- DMP must describe how the researcher will adhere to the NSF policy on sharing of results<sup>1</sup>
- See [Grant Proposal Guide \(GPG\) Chapter II.C.2.j](#) for full policy implementation ([http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg\\_2.jsp#dmp](http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg_2.jsp#dmp))
- Each directorate may have specific guidelines for DMP – look at your main directorate and/or division or program website for additional policies

#### Help with Your Data Management Plan

In order to ensure that all NSF proposals coming out of the University of Maine System meet the data management plan requirements, researchers are encouraged to consult with staff at the Advanced Computing Group at the University of Maine (ACG@UMaine). Contact Ami Gaspar at [ami.gaspar@maine.edu](mailto:ami.gaspar@maine.edu) (207)561-3578 OR Chris Wilson [chris.wilson@maine.edu](mailto:chris.wilson@maine.edu) (207)561-6579 for DMP guidance assistance.

#### Checklist for using the DMP template:

- Consult with the Data Management Specialist at ACG for guidance.
- Identify the five different sections in the template
- Read the “NSF Guideline” and “ACG@UMaine Tip” for each section
- Answer the questions<sup>2 3</sup> that are numbered in the boxes beneath each section description
- Remove the questions, leaving just the answers
- Modify the answers into prose that makes sense as a paragraph
- Create your DMP using the bold section headings and the corresponding paragraphs

Your complete DMP will have the section headers followed by the paragraphs that detail those points.

**DISCLAIMER:** The consulting advice provided by the Advanced Computing Group at the University of Maine

<sup>1</sup> **Data Sharing Policy:** 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. Grantees are expected to encourage and facilitate such sharing. See [Award & Administration Guide \(AAG\) Chapter VI.D.4](#) ([http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/aag\\_6.jsp#VID4](http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/aag_6.jsp#VID4)).

<sup>2</sup> The questions are adapted from the Digital Curation Centre's [Checklist for a Data Management Plan](#) (v2.2) - URL: <http://www.dcc.ac.uk/resources/data-management-plans>.

<sup>3</sup> The questions are adapted from the Rector and Visitors of the University of Virginia (v3.0)-URL: [http://dmconsult.library.virginia.edu/SciDaC/files/2013/03/NSF\\_DMP\\_Template\\_UVaGuidance.doc](http://dmconsult.library.virginia.edu/SciDaC/files/2013/03/NSF_DMP_Template_UVaGuidance.doc)

Contact Ami Gaspar at [ami.gaspar@maine.edu](mailto:ami.gaspar@maine.edu) (207)561-3578 OR Chris Wilson [chris.wilson@maine.edu](mailto:chris.wilson@maine.edu) (207)561-6579 for DMP guidance assistance.

## DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

(ACG@UMaine) is to be considered only as advice based on experience working with researchers on data management planning, and is to be used with the understanding that the ACG@UMaine is not rendering legal or compliance advice on specific matters. If you have specific questions or concerns, ACG@UMaine recommends that you consult with the Office of Research and Sponsored Programs with regard to your individual situation.

### Data Management Plan

#### I. Types of Data

NSF Guideline: *Samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project.*

ACG@UMaine Tip: Give a short description of the data, including amount (if known) and content. If the project will be collecting data of a sensitive nature, note here and reflect upon it in subsequent sections. Data types could include text, spreadsheets, images, 3D models, software, audio files, video files, reports, surveys, patient records, etc.

1. What data will be generated in the research?
2. What data types will you be creating or capturing?
3. How will you capture or create the data?
4. If you will be using existing data, state that fact and include where you got it. What is the relationship between the data you are collecting and the existing data?

#### II. Data and Metadata Standards

NSF Guideline: *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).*

ACG@UMaine Tip: Describe the format of your data and how it will be “documented.” Think about what details (metadata) someone else would need to be able to use these files. When discussing metadata, it is best to use terms such as “coverage” or “type” from an accepted metadata standard such as Dublin Core or FGDC. Please note that the primary data repository for this project is Dataverse. If you are unsure about

Contact Ami Gaspar at [ami.gaspar@maine.edu](mailto:ami.gaspar@maine.edu) (207)561-3578 OR Chris Wilson [chris.wilson@maine.edu](mailto:chris.wilson@maine.edu) (207)561-6579 for DMP guidance assistance.

## **DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT**

which metadata terms apply, please see the metadata reference chart at <need a link>

1. Which file formats will you use for your data, and why?
2. What form will the metadata describing/documenting your data take?
3. How will you create or capture these details?
4. Which metadata standards will you use and why have you chosen them? (e.g. accepted domain-local standards, widespread usage)
5. What contextual details (metadata) are needed to make the data you capture or collect meaningful?

### **III. Policies for Access and Sharing and Provisions for Appropriate Protection/Privacy**

*NSF Guideline: Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirement.*

**ACG@UMaine Tip: This section is very important.** The main reason a Data Management Plan is required, is for you to think about how you prepare (manage) your data for sharing and describe how you will actively share your data with non-group members after the project is completed. You should explain how and when the data will become available. Will data be accessible on a web page, by email request, via open-access repository etc.? If there is an embargo period for sharing the data, make sure you provide details explaining this delay (e.g. publisher, political, commercial, patent reasons). And if the data is of a sensitive nature – human subject concerns, potential patentability, species/ecological endangerment concerns – that public access is inappropriate, address here the means by which granular control and access will be achieved (e.g. formal consent agreements; anonymization of data; restricted access, only available within a secure network).

Contact Ami Gaspar at [ami.gaspar@maine.edu](mailto:ami.gaspar@maine.edu) (207)561-3578 OR Chris Wilson [chris.wilson@maine.edu](mailto:chris.wilson@maine.edu) (207)561-6579 for DMP guidance assistance.

## **DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT**

1. How and when will you make the data available? (Include resources needed to make the data available: equipment, systems, expertise, etc.)
2. What is the process for gaining access to the data?
3. How long will the original data collector/creator/principal investigator retain the right to use data before opening it up to wider use?
4. Explain details of any embargo periods for political/commercial/patent reasons?
5. Explain details of any embargo periods for political/commercial/patent reasons?
6. Who will hold the intellectual property rights to the data and how might this affect data access?

### **IV. Policies and Provisions for Re-Use, Re-Distribution**

NSF Guideline: *Policies and provisions for re-use, re-distribution and production of derivatives.*

ACG@UMaine Tip: Explain how the policies you outline above can be applied to the re-use and re-distribution of your data. In other words, you need to identify who will be allowed to use your data, how they will be allowed to use your data and whether or not they will be allowed to disseminate your data. If you are planning on restricting access, use or dissemination of the data, you must explain in this section how you will codify and communicate these restrictions.

1. Will any permission restrictions need to be placed on the data?
2. Which bodies/groups are likely to be interested in the data?
3. What and who are the intended or foreseeable uses / users of the data?

### **V. Plans for Archiving and Preservation of Access**

NSF Guideline: *Plans for archiving data, samples, and other research products, and preservation of access to them.*

ACG@UMaine Tip: This portion of the Data Management Plan asks the researcher to provide a long-term strategy for archiving and preserving the data from the research described in the proposal. The Advanced Computing Group is developing an institutional repository, which will serve as an ideal long-term storage facility for digital

Contact Ami Gaspar at [ami.gaspar@maine.edu](mailto:ami.gaspar@maine.edu) (207)561-3578 OR Chris Wilson [chris.wilson@maine.edu](mailto:chris.wilson@maine.edu) (207)561-6579 for DMP guidance assistance.

## DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

research data. **If you will be producing digital data but are not planning on submitting your data to a community-specific repository that provides indefinite storage and “discipline-specific” access, then please consider adapting the generic response below to complete this section.** After answering the repository/archive questions or using the ACG@UMaine generic response, don't forget to answer the last 4 questions about the data and related documents you anticipate preserving.

Generic Response (for digital data):

As advised by Advanced Computing Group at the University of Maine staff members, I plan to deposit my research data in the ACG Dataverse repository. I will submit the necessary metadata and other resources to make my data accessible for future users. In accordance with the Advanced Computing Group's policy the data will be preserved indefinitely upon completion of the project. The Advanced Computing Group's backup plan provides for data redundancy including off-site storage.

\*If you will be using a repository other than or in addition to the Advanced Computing Group's Dataverse repository to archive your data or if you have non-digital data, then make sure your response in this section answers questions 1- 4:

1. What is the long-term strategy for maintaining, curating and archiving the data?
2. Which archive/repository/database have you identified as a place to deposit data?
3. What procedures does your intended long-term data storage facility have in place for preservation and backup?
4. How long will/should data be kept beyond the life of the project?

Regardless of the archive/repository, please answer questions 5 – 8 about the data and associated information that will be deposited:

5. What data will be preserved for the long-term?
6. What transformations (to more shareable formats) will be necessary to prepare data for preservation / data sharing?

Contact Ami Gaspar at [ami.gaspar@maine.edu](mailto:ami.gaspar@maine.edu) (207)561-3578 OR Chris Wilson [chris.wilson@maine.edu](mailto:chris.wilson@maine.edu) (207)561-6579 for DMP guidance assistance.

## **DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT**

7. What metadata/ documentation will be submitted alongside the data or created on deposit/ transformation in order to make the data reusable?
  
8. What related information will be deposited?