

Data Management Plans

Data Management for Biologists – ENT5920

Why write a data management plan?

- Required by funding agencies

Department of Defense

Department of Energy

Department of Education, Department of Education, Health and Human Services (HHS)

NASA

NOAA

NSF

Smithsonian

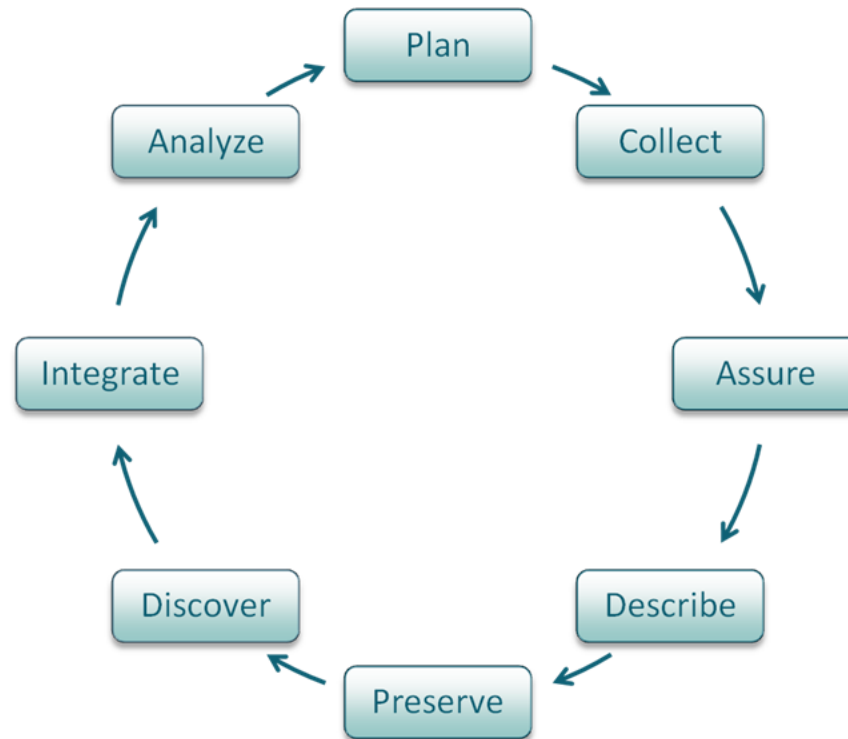
United States Department of Agriculture (USDA),

USGS

Veterans Affairs

Why write a data management plan?

- Valuable for outlining steps in the data life cycle



What goes into a *DMP*?

NSF and USDA-NIFA: Two pages max
(do not count against proposal page #s)

Have to report past DMPs in new proposals

Expected data type

Pictures from camera traps, counts of fish in restored streams recorded to species, surveys from classrooms

Physical specimens are data! Insect specimens, seeds, plant vouchers, etc.

Data format and metadata

CSV files, Excel, MySQL, image files, microfilm, XML

Physical specimens are data!

Eg. Voucher plants pressed on herbarium paper

Describe metadata format and where it will be stored

Data storage and preservation

Interim storage (while data is being collected) and post publication

Physical specimens are data!

Voucher plants will be deposited in the University of Minnesota Herbarium

Data sharing, protection, and public access

What data will be available to the public?

If so...when?

How will these data be made available?

- Dryad, DataOne, FigShare, DRUM

Are there restrictions and do the data need to be protected?

Roles and responsibilities

Who should be contacted for questions about the data?

Responsible parties may differ among data sets.

Who will be responsible if the original party is not able to be responsible?

Budget

Can factor in costs of data management plans into budget.

- Dryad and other services cost money
- Purchase space for accessioning insect specimens

lib.umn.edu/datamanagement/DMP

MANAGING YOUR DATA

Home

1. Before Your Research

Copyright and Ethics

Funding Agency Guidelines

Data Management Plans

IRB Considerations

2. During Your Research

3. After Your Research Ends

Training and Workshops

About Us

CREATING A DATA MANAGEMENT PLAN

Before starting a new research project, it is critical to develop a data management plan (DMP) that outlines your practices for collecting, organizing, backing up, and storing the data you will be generating. To help you begin writing a DMP, we provide a general template that includes questions to address; however, funding agencies like the [National Science Foundation](#) have specific guidelines on what information to include in your DMP that should take precedence.

Action Plan

1. Review your [funding agency guidelines](#) for data sharing and determine requirements that need to be addressed
2. Get help writing your DMP:
 - **Online:** Use our tools to create a first draft of your DMP
 1. [U of M DMP Template \(Google Doc\)](#)
 2. [DMPTool](#): Free web services with UMN x500 login
 3. [Online Workshop: Creating a Data Management Plan](#)
 - **In Person:** Once you have a draft, [consult with a data curation librarian](#) to review your plan and give you feedback within one business day
3. Implement your plan by using [tools and resources](#) found across campus

Points to address in your DMP

1. What types of [data](#) will be produced in terms of format, file size, and classification (e.g., quantitative, qualitative, or sensitive)?
2. What metadata standards do you need to follow for documentation?
3. Do any considerations need to be made to protect sensitive information, including study participant confidentiality and intellectual property protection?
4. What policies do you need to follow with respect to data sharing and reuse?
5. How will you ensure archiving and preservation of the data you will produce?

Resources and Examples

The Libraries have organized the following resources that may be useful for you as you write your DMP:

- [UMN DMP template \(google doc\): a template you can use to begin writing your DMP](#)
- [Data Management Checklist](#) (two page pdf)
- Boilerplate text that you can use in your DMP and project proposal:

Need help?

[Contact Us](#) with your questions and we will consult with you or point you to the right person, resource, or service on campus.

[Download a Brochure of our Services](#)

Assignment

Write a Data Management Plan for your data.

- 1 page plan in an outline format.
- Two pages is the max.
- Include information on the following:
 - Expected data types
 - Data formats
 - Data storage and preservation
 - Data sharing, protection, and public access
 - Roles and responsibilities