DMP Background and Guidance for Reviewers

▸ You are being asked to review the Data Management Plan (DMP) as part of the overall proposal review

▸ DOE/SC provides a list of <u>Suggested Elements for a DMP</u> online to:

    ▸ Help researchers organize information and display it clearly in their DMP for program offices and reviewers

    ▸ Help reviewers determine if the DMP has met the <u>DMP Requirements</u>

▸ Your review should address whether the provided DMP adequately addresses the DMP Requirements

    ▸ <u>Slides 6</u>-<u>7</u> provide example feedback mapped to DMP suggested elements and may serve as a useful cross-reference between the Suggested Elements for a DMP and the DMP Requirements

    ▸ Detailed feedback will aid PIs in improving their DMP in future submissions

DOE/SC Policy for DMP Requirements *(Part 1 of 2)*

All DMPs submitted to any DOE sponsoring office should meet the following requirements:

1. DMPs should describe whether and how data generated in the course of the proposed research will be <u>shared</u> and <u>preserved</u> and, at a minimum, describe how data sharing and preservation will enable <u>validation</u> of results, or how results could be validated if data are not shared or preserved.

2. DMPs should provide a plan for making all research data displayed in publications resulting from the proposed research open, machine-readable, and digitally accessible to the public at the time of publication. This includes data that are displayed in charts, figures, images, etc. In addition, the underlying digital research data used to generate the displayed data should be made as accessible as possible to the public in accordance with the <u>Principles</u> stated above. The published article should indicate how these data can be accessed.

All DMPs submitted to any DOE sponsoring office should meet the following requirements:

3. DMPs should consult and reference available information about data management resources to be used in the course of the proposed research. In particular, DMPs that explicitly or implicitly commit data management resources at a facility beyond what is conventionally made available to approved users should be accompanied by written approval from that facility. In determining the resources available for data management at DOE Scientific User Facilities, researchers should consult the <u>published description of data management resources</u> and practices at that facility & reference it in the DMP.

4. DMPs must protect confidentiality, personal privacy, <u>Personally Identifiable Information</u>, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; avoid significant negative impact on innovation and U.S. competitiveness; and otherwise be consistent with all applicable laws, regulations, agreement terms and conditions, and DOE orders and policies.

DMP Suggested Elements

These Suggested Elements are provided to researchers to aid in developing their DMPs:

▸ **Data Used and/or Generated**
  ▸ A brief description of data that will be collected, generated, or used during the course of the proposed research

▸ **Standards**
  ▸ A description of any standards or formats to be used or considered

▸ **Related Tools, Software and/or Code**
  ▸ A description of any code or specialized tools that are needed to make use of the data

▸ **Data Sharing**
  ▸ A description of how data will be accessed and shared

▸ **Data Preservation**
  ▸ A description of plans for preserving data

▸ **Data Protection: Security and Integrity**
  ▸ A description of measures to ensure data security and integrity

▸ **Oversight of Data Management**
  ▸ How alignment with this DMP will be monitored and managed, and by whom

▸ **Rationale**
  ▸ A brief justification of the proposed data management plan or any associated costs

▸ **Data Used and/or Generated** – [A]* The DMP does not provide enough detail about the data that will be generated to understand how to best manage. [B] The applicant should consider incorporating data from repository X in their research. *(DMP Requirements 1 & 2)*

▸ **Standards** – [A] The DMP does not include the format in which the data will be saved. [B] The data format is not the standard format used by the community, consider format X instead. [C] The data format is not open, consider open format X. *(DMP Requirements 1 & 3)*

▸ **Related Tools, Software and/or Code** – [A] The project could use DOE User Facility X's analysis software on-site to process data in addition to developing data analysis software that will be made available in software repository X. [B] Recommend the DMP references assigning DOIs to software they develop. *(DMP Requirements 1, 2, & 3)*

▸ **Data Sharing** – [A] Would recommend DOIs be assigned to data produced so it can be referenced by the publication and help with validation and reuse. [B] The applicant should consider adding their data to the community database, X, to enable others to find it more easily. *(DMP Requirements 1 & 2)*

* Letters indicate separate examples

▸ **Data Preservation** – [A]* DMP lacked detail about where the data will be stored or how it will be preserved. There is a discipline specific community repository X that could be used for data storage and preservation. *(Requirements 1 & 3)*

▸ **Data Protection: Security and Integrity** – [A] Though the data generated will include proprietary information, the DMP does not address data protection mechanisms. *(DMP Requirement 4)*

▸ **Oversight of Data Management** – [A] DMP discusses management of data prior to publishing associated journal articles, but should also address if data will be managed or made available for longer-term preservation. *(DMP Requirements 2 & 3)*

▸ **Rationale** – [A] DMP discusses data transfer from the user facility, but associated costs are not included in the proposal budget. [B] DMP discusses large amount of data that will be generated, but does not detail if any or all of the data will be made publicly available for validation of research results. [C] The DMP should consider whether it would be a better use of resources to recreate the data with the shared software than share the raw data. *(DMP Requirements 1, 2, 3, & 4)*

* Letters indicate separate examples