**Data Management Plan (DMP) Sufficiency Checklist**

**Purpose**

The **Data Management Plan (DMP) Sufficiency Checklist** is designed to serve as an aid in assessing a data management plan (DMP) required of research projects funded by USDOT. The National Transportation Library (NTL) has created guidance documentation on creating DMPs for researchers, available at <https://doi.org/10.21949/1520562>.

After completing this checklist, you should be able to determine whether researchers have thought through all facets of data management planning.

**Instructions**

1. Use this form to help evaluate the DMP associated with the research proposal you are evaluating.
2. When you finish, please attach a copy of the DMP you evaluated to this form.
3. Send a copy of the completed checklist to [public.access@dot.gov](mailto:ntldatacurator@dot.gov), along with any questions or feedback about the process or form. Your input will allow us to refine this tool for your future use. Thank you.

**Format of DMPs**

NTL has produced general guidance on writing DMPs (<https://doi.org/10.21949/1520562>) for USDOT. As a result, the DMP you are evaluating should have been written as a narrative and contain six sections:

1. *Dataset and Contact Information*;
2. *Data Description*;
3. *Standards Employed*;
4. *Access Policies*;
5. *Re-Use, Redistribution, and Derivative Products Policies*; and,
6. *Archiving and Preservation Plans*.

**Organization of this Checklist**

You will find an explanation of each DMP section at the top of each page. These sections in turn provide prompts for the type of information you should find in the DMP you are evaluating. Please click or mark the checkbox that best rates the completeness of the response to each prompt in the DMP.

NOTE: Some statements may not apply to all projects. Other answers may be more or less complete.

If you feel that the researcher should supply more detailed information for a prompt, you may make a note in section **6. Notes and Questions**.

After you have completed evaluating a section, total up the number of boxes you have checked in each column. If, after subtracting the “Not Applicable” boxes, a majority of responses do not rate “Explained Fully,” it may be necessary to ask the proposer to revise their DMP.

For your math reference:

* **Section 1:** 11 checks
* **Section 2:** 9 checks
* **Section 3:** 11 checks
* **Section 4:** 5 checks
* **Section 5:** 9 checks
* **Total:** 45 checks

A majority of “Explained Fully” checks would be 23 or more, depending on the number of “Not Applicable” subtracted. There is a table below to record your scoring and to aid decision making. While you will still need to make a subjective assessment of a submitted DMP, the checklist should support your decision making by providing a quantitative measure of the DMP.

**Getting Assistance**

If you would like personal assistance, the National Transportation Library is available to provide training for using this form, and for evaluating data management plans. Please contact the NTL Public Access staff at [public.access@dot.gov](mailto:ntldatacurator@dot.gov).

**Definitions**

*Scientific research*: “Scientific research” means activities comprising creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture, and society. Research includes:

* ***Basic research*** (research without specific application),
* ***Applied research*** (research for a specific need), and
* ***Developmental research*** (design, development, and improvements of prototypes and processes, including demonstration projects and other related activities associated with research and development activities).

*Data*: Data are the digitally recorded factual materials resulting from research that is necessary to validate research findings. For the Public Access Plan, the DOT is interested in the final datasets used to draw research conclusions, rather than the raw data.

*Data management plan*: Very simply, a data management plan (DMP) is a knowledge management document for the data lifecycle. A “proposal DMP” can be created and submitted for approval as part of the research proposal process or in planning to collect statistical information. It can describe the proposed plan for protecting, sharing, and preserving the final dataset generated from research project or statistical inquiry. As a living document, a DMP might also be updated in the middle of project, to reflect changes in the project plan, the data collection methods or tools, or changes in project personnel. A “preservation DMP” can also be written at the end of project to focus on the preservation and sharing of data in the future. A preservation DMP would be an appropriate way to plan for the preservation and sharing of data that has already been collected and finalized (what we call “legacy data”), but has not been shared yet.

**A. Your Information**

A.01 Grant Manager/Evaluator: Click here to enter your name.

A.02 ORCID or other identifier: Click here to enter your ORCID or other identifier, if applicable.

A.03 Contact information: Click here to enter your email and phone number here.

A.04 Mode: Click here to enter your office.

A.05 Date of review: Click here to choose a date.

A.06 Sufficiency evaluation totals

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sufficiency Checklist Section Totals** | Explained Fully | Partially Explained | No Information | Not Applicable |
| **1** | Data Description (out of 11) |  |  |  |  |
| **2** | Standards Employed (out of 9) |  |  |  |  |
| **3** | Access Policies (out of 11) |  |  |  |  |
| **4** | Re-Use, Redistribution, and Derivative Products Policies (out of 5) |  |  |  |  |
| **5** | Archiving and Preservation Plans (out of 9) |  |  |  |  |
|  | **Totals of checked boxes for each column, out of 45 possible:** |  |  |  |  |

A. 07 After review, the evaluator found the submitted data management plan to be:

**Sufficient**: No further action is required by the researcher.

**Not sufficient**: The data creator must revise the DMP in the areas indicated in **Section 6**.

A.08.01 This is an  initial Sufficiency Checklist or a  revised Sufficiency Checklist.

A.08.02 If this is a revised Sufficiency Checklist, please note the changes made or the information gathered from the researcher:

**Research Proposal Information**

**0. Researcher & Project Information**

0.01 Lead researcher, PI, or lead staff name: Click here to enter researcher name.

0.02 Lead researcher contact information: Click here to enter contact information here.

0.03 Organization: Click here to enter the home organization of the lead listed above.

0.04 Title of Research Proposal/Project: Click here to enter the title of proposal or project.

0.05 Grant or Contract number: Click here to enter the grant or contract number, if applicable.

0.06 Date of reviewed DMP

0.07 This is an  initial DMP or a  revised DMP.

**1. Data Description:**

The **Data Description** section should:

* Include a description of the data that will be gathered during the project;
* Address the nature, scope, and scale of the data to be collected;
* Describe the characteristics of the data, their relationship to other data, and provide sufficient detail so that reviewers will understand any disclosure risks that may apply; and,
* Discuss value of the data over the long-term.

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| --- | --- | --- | --- | --- | --- |
|  | **Data Description Narrative Evaluation Prompts** | Explained Fully | Partially Explained | No Information | Not Applicable |
| 1.01 | The DMP names the data, data collection project, or program. |  |  |  |  |
| 1.02 | The DMP describes the purpose of the research or data collection. |  |  |  |  |
| 1.03 | The DMP describes the data generated in terms of nature and scale (e.g., numerical data, image data, text sequences, video, audio, database, modeling data, source code, etc.). |  |  |  |  |
| 1.04 | The DMP describe methods for creating the data (e.g., simulated; observed; experimental; software; physical collections; sensors; satellite; enforcement activities; researcher-generated databases, tables, and/or spreadsheets; digital imagery). |  |  |  |  |
| 1.05 | The DMP discusses the period of time for which data will be collected and frequency of update. |  |  |  |  |
| 1.06 | The DMP describes the relationship between the new data collected for this effort and any existing data also used. |  |  |  |  |
| 1.07 | The DMP lists potential users of the data. |  |  |  |  |
| 1.08 | The DMP discusses the potential value the data have over the long-term, not only for USDOT, but also for the public. |  |  |  |  |
| 1.09 | If the DMP contains a request to not make the data publicly accessible, it explains the rationale for lack of public access. |  |  |  |  |
| 1.10 | The DMP indicates the party responsible for managing the data. |  |  |  |  |
| 1.11 | The DMP describes how project leads will check for adherence to this data management plan. |  |  |  |  |
|  | Total of checked boxes for each column, out of 11: |  |  |  |  |

**Evaluation questions:**

* *Did a majority of the prompts rate “Explained Fully”?*
* *Do you have a complete picture of: What data will be gathered; How much data to expect; Who is responsible for managing data; and, How the data will be managed?*

If not, this section may not be sufficiently detailed.

Please note any outstanding questions you have about how the data is described, in Section 6**. Notes and Questions**.

**2. Standards Employed:**

In the **Standards Employed** section, the researcher should describe the formats and types of data to be generated, as well as the metadata standards to be used. In keeping with open data requirements, researchers should be using platform-independent and non-proprietary formats to ensure maximum utility of the data in the future. The DMP you are evaluating should:

* Describe the anticipated formats that your data and related files will use;
* Name platform-independent and non-proprietary formats for data collection to ensure maximum utility of the data in the future;
* Specify any platform-dependent and proprietary standards and formats that will be used, as well as the rationale for using those standards and formats; and,
* Identify the metadata standards used to describe the data.

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|  | **Standards Employed Narrative Evaluation Prompts** | Explained Fully | Partially Explained | No Information | Not Applicable |
| 2.01 | The DMP lists the format(s) in which the data will be collected, and indicates if they are open or proprietary. |  |  |  |  |
| 2.02 | The DMP includes a rationale for using proprietary data formats, if applicable. |  |  |  |  |
| 2.03 | The DMP describes how versions of data will be controlled, including version file naming conventions. |  |  |  |  |
| 2.04 | The DMP describes how the researchers will document non-standard file formats, if applicable. |  |  |  |  |
| 2.05 | The DMP lists the documentation (or metadata) that will be created in order to make the data understandable by other researchers. |  |  |  |  |
| 2.06 | The DMP indicates which metadata schema will be used to describe the data. If the metadata schema is not one standard for this field, the DMP discusses the rationale for using that schema. |  |  |  |  |
| 2.07 | The DMP describes how will the metadata be managed and stored. |  |  |  |  |
| 2.08 | The DMP indicate what tools or software is required to read or view the data. |  |  |  |  |
| 2.09 | The DMP describes quality control measures employed. |  |  |  |  |
|  | Total of checked boxes for each column, out of 9: |  |  |  |  |

**Evaluation questions:**

* *Did a majority of the prompts rate “Explained Fully”?*
* *Do you have a complete picture of: Which data formats will be generated; The fact that data will be available in open formats; and, Which metadata standards are to be employed?*

If not, this section may not be sufficiently detailed.

Please note any outstanding questions you have about which standards are being used, in Section 6**. Notes and Questions**.

**3. Access Policies:**

In the **Access Policies** section, the researcher should describe how they would comply with DOT public access requirements, while also protecting any personal and confidential information. The DMP you are evaluating should:

* List research team data management roles;
* State whether data will be publicly accessible, and explain if it will not be publicly accessible;
* State whether the data will contain personal or business confidential information; and,
* Explain how confidential data will be anonymized.

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|  | **Access Policies Narrative Evaluation Prompts** | Explained Fully | Partially Explained | No Information | Not Applicable |
| 3.01 | The DMP lists the roles data-creation team members have in data management, including any limitations on team member access due to the presence of personal or confidential information. |  |  |  |  |
| 3.02 | The DMP states whether the data can be shared with the public. |  |  |  |  |
| 3.03 | The DMP describes what data will be shared, how data files will be shared, and how others will access them. |  |  |  |  |
| 3.04 | The DMP indicate whether the data contain private or confidential information. |  |  |  |  |
| 3.05 | The DMP discusses how researchers will guard against disclosure of identities and/or sensitive information, if applicable. |  |  |  |  |
| 3.06 | The DMP list what processes the researchers will follow to provide informed consent to participants, if applicable. |  |  |  |  |
| 3.07 | The DMP state the party(ies) responsible for protecting the data. |  |  |  |  |
| 3.08 | The DMP describes what, if any, privacy, ethical, or confidentiality concerns are raised due to data sharing. |  |  |  |  |
| 3.09 | If applicable, the DMP describes how data will be deidentified before sharing. |  |  |  |  |
| 3.10 | The DMP identifies what restrictions on access and use you will place on the data, if applicable. |  |  |  |  |
| 3.11 | If applicable, the DMP discusses additional steps, if any, needed to protect privacy and confidentiality. |  |  |  |  |
|  | Total of checked boxes for each column, out of 11: |  |  |  |  |

**Evaluation questions:**

* *Did a majority of the prompts rate “Explained Fully”?*
* *Do you have a complete picture of: Research team members’ roles in data management; Whether the data will be publicly accessible; and Whether the data might contain personally identifiable or business confidential information?*

If not, this section may not be sufficiently detailed.

Please note any outstanding questions you have about any access policies, in Section 6**. Notes and Questions**.

**4. Re-Use, Redistribution, and Derivative Products Policies:**

In the **Re-Use, Redistribution, and Derivative Products Policies** section, the researcher should discuss intellectual property and licensing issues. The DMP you are evaluating should:

* Describe who will hold the intellectual property rights for project data;
* Describe whether IP rights will be transferred to a data archive;
* Identify whether any copyrights apply to the data;
* List terms of use or a requirement for data citation licenses; and,
* Describe any other legal requirements.

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|  | **Re-Use, Redistribution, and Derivative Products Policies Narrative Evaluation Prompts** | Explained Fully | Partially Explained | No Information | Not Applicable |
| 4.01 | The DMP names the party who has the right to manage the data. |  |  |  |  |
| 4.02 | The DMP indicates who holds the intellectual property rights to the data. |  |  |  |  |
| 4.03 | The DMP lists any copyrights to the data, and indicates who owns them, if applicable. |  |  |  |  |
| 4.04 | The DMP discusses any rights be transferred to a data archive. |  |  |  |  |
| 4.05 | The DMP describes how the data will be licensed for reuse |  |  |  |  |
|  | Total of checked boxes for each column, out of 5: |  |  |  |  |

**Evaluation questions:**

* *Did a majority of the prompts rate “Explained Fully”?*
* *Do you have a complete picture of: Intellectual property rights and licensing issues related to this data?* If not, this section may not be sufficiently detailed.

Please note any outstanding questions you have about re-use, redistribution, and derivative products policies, in Section 6**. Notes and Questions**.

**5. Archiving and Preservation Plans:**

In the **Archiving and Preservation Plans** section, the researcher should indicate which data archive will be employed, and why. Researchers have several archive options, including:

* Use of an institutional repository
* Use of an archive or other community-accepted data storage facility
* Self-dissemination

However, whichever option is chosen, that archive must:

* Support the capture and provision of the U.S. Federal Government "[Project Open Data Metadata Schema](https://resources.data.gov/resources/dcat-us/)" (known as DCAT-US), and outlined in the link in 5.09;
* Support the creation and maintenance of persistent identifiers (e.g., DOIs, handles, etc.) and must provide for maintenance of those identifiers throughout the preservation lifecycle of the data.

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| --- | --- | --- | --- | --- | --- |
|  | **Archiving and Preservation Plans Narrative Evaluation Prompts** | Explained Fully | Partially Explained | No Information | Not Applicable |
| 5.01 | The DMP discusses how& where the data will be archived. |  |  |  |  |
| 5.02 | The DMP indicates the approximate time period between data collection and submission to the archive. |  |  |  |  |
| 5.03 | The DMP identifies where data will be stored prior to archiving. |  |  |  |  |
| 5.04 | The DMP describes how back up, disaster recovery, off-site data storage, and other redundant storage strategies will be used to ensure the data's security and integrity. |  |  |  |  |
| 5.05 | The DMP describe how data will be protected from accidental or malicious modification or deletion prior to receipt by the archive. |  |  |  |  |
| 5.06 | The DMP discusses the chosen data archive's policies and practices for back up, disaster recovery, off-site data storage, and other redundant storage strategies to ensure the data's security and integrity for the long-term. |  |  |  |  |
| 5.07 | The DMP indicates how long the chosen archive will retain data. |  |  |  |  |
| 5.08 | The DMP indicates if the chosen archive employs, or allows for the recording of, persistent identifiers linked to the data. |  |  |  |  |
| 5.09 | The DMP discusses how the chosen data repository meets the criteria outlined on the [Guidelines for Evaluating Repositories for Conformance with the DOT Public Access Plan](https://doi.org/10.21949/1520563) page. |  |  |  |  |
|  | Total of checked boxes for each column, out of 9: |  |  |  |  |

**Evaluation questions:**

* *Did a majority of the prompts rate “Explained Fully”?*
* *Do you have a complete picture of: Which archive the data will be stored in; Whether back up and disaster recovery strategies are being utilized; How long the data will be retained; and, Whether the chosen archive meets the guidelines for conformant repositories?*

If not, this section may not be sufficiently detailed. Please note any outstanding questions you have about archiving and preservation plans, in Section 6**. Notes and Questions**

**6. Notes and Questions:**

(Please preface notes and questions with the appropriate statement number from above.)

Section 1: Please tell us about …..