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## Guide to Data Management Plans

### Purpose

This document is a guide for current and future grantees who are conducting research with the GusNIP Nutrition Incentive Program Training, Technical Assistance, Evaluation and Information Center (NTAE) about the process of writing a data management plan.

### About Data Management Plans

Many grant-funded projects, especially those that are federally funded, collect data to evaluate successes and challenges and, therefore, require a data management plan. A data management plan is a document that describes how data will be handled during and after a project is completed.

### Directions

United States Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) GusNIP 2021 Request for Applications (RFA; also a requirement in the 2019 and [2020 RFAs](#)) requires a Data Management Plan (DMP) and provides specific directions (page 38; <https://nifa.usda.gov/sites/default/files/rfa/FY21-GusNIP-MOD-RFA-508.pdf>), quoted:

*k.) Data Management Plan. A DMP is required for this program. Applicants should clearly articulate how the project director (PD) and co-PDs plan to manage and disseminate the data generated by the project. A DMP of no more than two pages should be included as an appendix and uploaded as an Other Attachment, Field 12. The DMP will be considered during the merit review process (see Part V § B of this RFA, Part III § 3.1 of the Application Guide and NIFA's Data Management Plan).*

The specific guidance about the content of the DMP is included on [NIFA's Data Management Plan resource page](#), which includes details about the [DMP Contents](#).

### General Guidelines

- The DMP is limited to 2 pages and does not count toward the page limits for the project narrative.
- If no data is being collected during the project, create a DMP that states “No data will be produced.” with clear explanation.

- The DMP covers all the data involved in the grant, even if there are several firms that will be involved. Do not create separate DMPs for different firms within the same GusNIP grant proposal.
- Describe how the PD and will manage and share data that is generated by your project.
- Use publicly available platforms, catalogues, and workspaces provided by USDA when possible (e.g., the Ag Data Commons).
- Include funds in the budget to support data management and submission fees as required by the platforms, catalogs, etc.
- Successful projects should monitor the implementation of the DMP throughout the life of the project and after, as appropriate.
- Include all required components, described below.

### Required Components

The required components for your DMP are described below and are derived using NIFA's guidance on [DMP Management Plan for NIFA-Funded Research, Education, and Extension Projects](#).

1. Expected data type: Describe the type of data (e.g., digital, non-digital), how it will be generated, and whether the data are primary or metadata. An example of data includes a survey.
2. Data format: For data to be readily accessible and usable, it is critical to use appropriate community recognized standard and machine-readable formats when they exist. If the data will be managed in domain-specific workspaces or submitted to public databases, indicate that their required formats will be followed. Regardless of the format used, the dataset must contain enough information to allow independent use (understanding, validation, and analysis) of the data.
3. Data storage and preservation: Data must be stored in a safe environment with adequate measures taken for its long-term preservation. Applicants must describe plans for storing and preserving their data during and after the project and specify the data repositories, if they exist. Databases or data repositories for long-term preservation may be the same that are used to provide Data Sharing and Public Access. Estimate how much data will be preserved and state the planned retention period. Include any strategies, tools, and contingency plans that will be used to avoid data loss, degradation, or damage.
4. Data sharing, protection, and public access: Describe your data access and sharing procedures during and after the grant. Name specific repositories and catalogues as appropriate. Include a statement, when applicable, of plans to protect confidentiality, personal privacy, proprietary interests, business

confidential information, and intellectual property rights. Outline any restrictions, such as copyright, confidentiality, patent, appropriate credit, disclaimers, or conditions for use of the data by other parties.

5. Roles and responsibilities: Who will ensure DMP implementation? This is particularly important for multi-investigator and multi-institutional projects. Provide a contingency plan in case key personnel leave the project. Also, what resources will be needed for the DMP? If funds are needed, have they been added to the budget request and budget narrative? Projects must budget sufficient resources to develop and implement the proposed DMP.

## EXAMPLE Data Management Plan

*There will be variations in proposed projects, but this is an example of a common Data Management Plan for use of a participant survey. If you are collecting clinical data, ensure you discuss and describe the processes and protocols with the partner institution. You may use other platforms to enter your participant-level data, but we recommend Qualtrics.*

### Data Management Plan

1. **Expected data types:** Two main types of data will be collected: (1) Institutional- and firm-level data, to be collected monthly or quarterly via online forms from grantees and participating GusNIP firms (e.g., farmers markets, grocery stores, etc.); and (2) Participant-level data, to be collected annually (for Nutrition Incentive Grants) or by cohort (for Produce Prescription Grants) via survey (paper and pencil, online, by phone, or mailed). All data will be de-identified and coded to ensure anonymity of firms and individuals. The main variables for firm-level and individual-level are listed below. The project director (PD) will send project coordinators at firms a Smartsheet link via e-mail to complete the online form for their site, as well as a Qualtrics survey link to collect individual program participant data. The data will be collected on or offline, as necessary, and then uploaded when connected to the internet. Institutions will enter firm-level data on a digital device (e.g., computer, tablet). Individuals will enter survey data on digital device or paper / pencil. Paper forms will be entered into Qualtrics.
  - a. Firm-level variables: # of redemption sites (e.g., farmers markets, grocery stores), expenses associated with the program, months/days/hours of operation of redemption sites, financial instrument used for incentives, other nutrition assistance program benefits offered at sites, nutrition education components, fruit and vegetable products eligible for incentives, incentive delivery mechanism, # of eligible participants per site, # of SNAP transactions per site, \$ value of SNAP purchases per site, \$ value of

incentives issues and redeemed per site, # of unique participants per site, and average incentive value redeemed per recipient.

- b. Individual-level variables: SNAP Use, SNAP Incentive Program Use, Fruit and Vegetable Intake, Food Security, COVID-19, Health, Sociodemographics, and Household Characteristics
2. **Data format:** Qualtrics data will be exported to an Excel file and stored on the PD's and/or project manager's locked computer and/or secure server. Excel is a community-recognized standard. A data dictionary will include information to allow understanding, validation, and analysis of data. Data will also be stored at the GusNIP NTAE Center at the offices of the Gretchen Swanson Center for Nutrition in a password-protected computer, in a locked office. Paper data will be stored in a locked filing cabinet.
3. **Data storage and preservation:** Data will be stored on the PDs password-protected computer in a locked office location and on the password-protected computers of designated personnel at the GusNIP NTAE Center. Backups will be completed monthly. The PD's computer data is stored on an encrypted, secure server of [insert name of institution where data will be stored], through their data repository system. Data will be cleaned, coded, and corrected with a data dictionary on Excel before storage. Monthly quality control will be performed by the study team, with direction from the PD and Co-PD using [insert statistical platform; e.g., SAS, SPSS, R] to identify missing, outlying, illogical, and inconsistent data. Data will be available on the [State University] server for six years. All collected data will be referenced in publications or made available as supplemental tables in publications. This will protect the long-term storage and easy accessibility and interpretation of data that is collected during the proposal. All of these measures will assure avoidance of data loss, damage, and degradation.
4. **Data sharing, protection, and public access:** Data will be shared through an encryption process to ensure security. This project will undergo Institutional Review Board (IRB) evaluation at [insert name of institution where data will be stored]. After completion of the project, all data collected belongs to [State University] and will be shared with GusNIP NTAE Center. For this reason, data will be stored at [State University] and the GusNIP NTAE Center. Either the grantee or the GusNIP NTAE Center may be contacted directly for requests to use data for subsequent analysis after the end of the project. These measures preserve the long-term safety and accessibility of collected data. All data will be deidentified before the sharing process. Because all data will be de-identified, there will be minimal risk of breach of confidentiality or privacy. Nonetheless, only the PD, Co-PDs, and staff will have access to data, and they will adhere strictly to data security and management protocols. Business confidential information

and intellectual property rights will be addressed by establishing MOUs with participating firms, ensuring that stores agree to share required data and also ensuring that confidential information regarding firms and their consumers will be protected. There are no restrictions such as copyright, confidentiality, patent, appropriate credit, disclaimers, or conditions for use of the data by other parties.

- 5. Roles and responsibilities:** The GusNIP NTAE Center Program Advisor and GusNIP grantee PD will work together to manage and disseminate data generated by the project. Both parties will have primary oversight of data management, including regular contact with firms. Both parties will oversee project execution at appropriate levels, while the GusNIP grantee PD will work closely with the GusNIP NTAE Center Program Advisor to ensure timely, accurate, and ethical data collection, quality control, analysis and dissemination. The GusNIP NTAE Center Program Advisor will supervise the evaluation team and work closely with the statistician. The GusNIP grantee PD will be the point of contact with the GusNIP NTAE Center. If there is turnover of key personnel before or after the project, the outgoing key personnel shall transfer authority to the incoming Grantee PD in the organization and provide adequate training prior to the turnover to ensure oversight. The funder will be notified if key personnel turnover is anticipated or occurs. We will also ensure community oversight by meeting regularly with firms, who will provide input and feedback to ensure that program evaluation results are relevant for the community, contribute to quality improvement, and are communicated to policy makers. Coalition involvement will also provide additional oversight if there is turnover of key personnel. We have allocated resources to carry out the DMP, including salary allocation for the evaluation team. Other resources have already been procured and will be available for use in this project.

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