Database Management System Procurement Guide and Template

A Resource for Weatherization Assistance Program Grantees

# Overview

The purpose of the data management system (DMS) is to connect the variety of resources that allow the Weatherization Assistance Program (WAP) to run. As the need for quality data reported in a timely manner increases, WAP implementers at all levels must be able to provide this data to their federal funders, elected officials, and program participants. Further, there are program metrics and reporting requirements that are necessary to run a Weatherization program. An effective WAP DMS will streamline the implementation of the WAP by assisting the grantee with the management of subgrantees, multiple funding sources, workflow and reporting. The DMS can also help WAP grantees, subgrantees, and stakeholders improve their efficiency, effectiveness, and accountability. The purpose of this document is to help grantees procure a DMS for their own state’s WAP.

The document is separated into five sections:

1. [**DMS Design Considerations**](#_DMS_Design_Considerations)**:** This section explains how to think about the DMS in relation to other WAP resources and systems, and how to balance the data input needs with the complexity and burden of the forms.
2. [**DMS Procurement Steps**](#_DMS_Procurement_Steps)**:** This section outlines the steps for procuring a DMS, from defining the project scope and budget, to selecting a vendor, to implementing and testing the system.
3. [**DMS Procurement Best Practices**](#_DMS_Procurement_Best)**:** This section provides some tips and recommendations for procuring a DMS.
4. [**DMS Design Details**](#_DMS_Design_Details)**:** This section describes the key features and functionalities of a DMS. It discusses three different types of DMS. These include a Basic DMS which meets minimum WAP requirements, a Modular DMS to add functionality to the Basic DMS in specific areas, and a Custom DMS which goes beyond the scope of the Basic and Modular DMS.
5. [**Basic DMS Requirements Template**](#_Basic_DMS_Requirements)**:** This section provides a template for specifying the requirements for the Basic DMS. This template, along with additional information included in the accompanying spreadsheet can be used by the grantee to create a DMS procurement.

# DMS Design Considerations

When thinking about DMS, it is important to consider how the DMS is connected to other WAP resources and systems. A helpful framework includes:

1. **Inputs:** For WAP, the main source of DMS data input is through the forms that need to be completed by clients, subgrantees, grantees, and other stakeholders. These inputs need to be captured as data fields that will be part of the DMS. The challenge with inputs is to ensure the right level of data inputs to ensure compliance and increase efficiency while not creating too much complexity and burden.
2. **Outputs:** WAP DMS data outputs generally include reports. Broadly, these reports provide funders and grantees with information about program performance and subgrantees with the tools to manage service provision to optimize program performance. Similar to data inputs, the challenge of data output is balancing compliance requirements and performance optimization while limiting DMS complexity.
3. **Connected Systems:** The WAP DMS may be connected to many systems. These systems are both internal and external to WAP. Some examples of internal systems include client application submission and review, home audits and inspections, along with retrofit and inventory management. External systems include reporting measure data to utility partners for rebates, reporting to stakeholders like state legislatures about program performance, and connecting to other low-income system databases for wholistic client support. Deciding which systems to connect to the DMS and the level of functionality of each connection is critical to providing procurement specifications for a highly functional DMS.
4. **Users:** The DMS will support a variety of users within WAP. The primary users will be the subgrantees as they interact with the DMS regularly inputting data into the system as they process applications, perform audits and inspections, and report on retrofit work completed. Grantees are the second most frequent users as they use the DMS to both manage subgrantees and report to funders and other stakeholders. Funders and other stakeholders may have system access but will most likely interact with the DMS via reports created for them by the grantee.

To reiterate, when planning your DMS procurement it is essential to balance functionality and complexity across each of these four areas. Developing effective procurement requirements will allow the grantee to include functionality which is important while excluding functionality which creates more complexity than it is worth. Determining the level of functionality and complexity mainly requires the grantee to consider how data is getting into the DMS, which internal and external systems are connected to the DMS, and how automated that connection is. The following describes the spectrum of functionality and complexity:

1. **Manual Data Entry:** Users manually input data into the database. This method is the most basic and involves typing or otherwise manually entering information into the data fields within the DMS. An example would be subgrantee staff manually entering client information into the DMS using mailed-in paper applications. This simple solution allows subgrantee staff to populate the DMS with limited complexity, however, it is slow and prone to errors.
2. **Manual Data Entry with Document Upload:** Users manually input data and also upload supplementary documents that may contain additional information or serve as evidence for the data entered. An example would be subgrantee staff entering client details into a database while also uploading scanned copies of their application forms, identification, and income documentation. This solution allows a more complete record of the client file to be created while still limiting complexity.
3. **Automated Data Entry via Document Processing:** The DMS uses technologies such as Optical Character Recognition (OCR) or other document scraping techniques to extract and enter data from uploaded documents automatically. An example would be subgrantee staff uploading a PDF of a client application form into the DMS and having the DMS automatically extract and populate the database fields with the relevant data from the application. This solution greatly reduces time and errors, however, it does increase complexity a little by relying on OCR and scraping to get the data into the DMS.
4. **Batch Import/Export:** The DMS allows the bulk import or export of data via file formats such as CSV, Excel, or XML. This method is useful for transferring large datasets between systems. An example would be subgrantee auditors downloading a CSV file for a completed audit from the audit tool to be imported into the DMS rather than entering information from each audit manually. This allows more information to be input more quickly, allowing the record to contain more information with less effort. However, complexity is increased and this does require the ability to export the correct data from the audit tool for DMS data input.
5. **Database Replication/Synchronization:** The DMS connects in real-time or scheduled replication or synchronization between the DMS and other databases. This ensures that data in multiple databases remains consistent and up-to-date. An example of this would be connecting the DMS to the LIHEAP client database to allow subgrantee staff pull WAP client information directly from the LIHEAP client database into the DMS. This limits data entry significantly and can help clients from other programs like LIHEAP to receive WAP service. However, this level of connectivity is complex and requires discussion with stakeholders like LIHEAP staff to develop the connection.
6. **Connected APIs/Web Services:** The most advanced method, involving the use of APIs (Application Programming Interfaces) or web services to automatically pull or push data between systems without the need for manual intervention. An example of this would be for subgrantee auditors to complete audits in real-time while in the field using an API connecting the DMS to the audit tool. This greatly limits the steps and time required to get data into the DMS from the field and directly connects the DMS to other systems. However, it does increase complexity as well as requires consistent data connection, additional equipment like tablets for auditors, and auditors and other staff to learn and buy into the new technology.

Again, any DMS requirement specification must balance functionality with increasing complexity. Here is a list of areas to consider where complexity increases with functionality:

1. **More Meetings with Stakeholders:** Enhanced functionality often requires more detailed and frequent meetings with stakeholders to understand their needs, gather requirements, and ensure the system aligns with their expectations. This iterative process can lead to more complex project management and coordination efforts.
2. **Additional Equipment Requirements**: Advanced DMS functionalities may necessitate the acquisition of more sophisticated hardware and software. This includes servers, storage solutions, network infrastructure, and specialized software tools, all of which add to the complexity of the system.
3. **Increased Training Needs:** As the DMS grows in functionality, users and administrators need more extensive training to effectively utilize the features. This includes not only initial training sessions but also ongoing education to keep up with updates and new capabilities.
4. **Integration with Other Systems:** Enhanced DMS functionalities often require integration with other existing systems, such as ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), and other specialized applications. Ensuring seamless integration and interoperability adds layers of complexity.
5. **Data Security and Privacy:** With increased functionality comes the need for more robust data security and privacy measures. This includes implementing advanced encryption, access controls, and compliance with regulations, which complicates the system design and maintenance.
6. **Scalability and Performance:** As functionalities expand, the DMS must handle larger volumes of data and more complex queries, requiring careful consideration of scalability and performance optimization. This involves sophisticated database tuning, load balancing, and possibly adopting distributed database technologies.
7. **Customization and Flexibility:** Users often demand custom features and flexibility to adapt the DMS to their specific needs. Accommodating these requirements leads to more intricate system architecture and development efforts.
8. **Maintenance and Support:** An advanced DMS requires more extensive maintenance and support. This includes regular updates, bug fixes, and technical support services, which increase the overall complexity of managing the system.
9. **Documentation and Compliance:** Enhanced functionalities necessitate comprehensive documentation to guide users and administrators. Additionally, ensuring compliance with various industry standards and regulations can add another layer of complexity.
10. **User Interface Design:** As functionalities grow, designing an intuitive and user-friendly interface becomes more challenging. The need to present complex features in an accessible way requires careful planning and design efforts.

# DMS Procurement Steps

1. Create a timeline with milestones and expected due dates for the following activities.
2. Communicate with all potential users and stakeholders that the grantee will be undertaking the development of the DMS. Explain why this decision was made and invite them to participate in the procurement process to the level that is appropriate.
3. Determine the expenditure limits for your state and your funders. These include both the expenditure limit for a given type of procurement vehicle (i.e. a direct bid compared to request for proposal) as well as the absolute expenditure limits based on the expenditure type and funds available. Be sure to determine whether the level of expenditure you need to effectively procure a DMS is within your state’s procurement limits and is allowable based on the funding source and cost category. Talk with your organization’s procurement team as well as project officers with your funders to ensure that you are being compliant.
4. Closely engage subgrantee staff, grantee organization leadership, grantee organization procurement staff, and grantee organization IT staff as early as possible in the process. Input from each of these groups will be critical to the timely and successful implementation of the DMS.
5. Take an inventory of inputs, outputs, systems, and users. This includes gathering all the forms that WAP uses, all the reports that are currently created to provide information about the program internally and externally, the list of connected systems to which WAP is connected, and a list of organizations that will use the DMS directly or receive reports from the DMS.
6. Analyze the system inputs. Make a comprehensive list of all data fields for which the grantee needs to collect data. Examples of fields include client name, home age, measures installed, along with many others. Using the list of data fields, make a list of functionalities required to support these fields. Many fields will not need any specific functionality for support, but some examples of support functionality are auto-calculation of client eligibility based on income or the ability to connect the DMS with the audit tool via API to transfer data back and forth between the two systems.
7. Analyze the system outputs. System outputs include DOE reports, LIHEAP reports, subgrantee invoice payments, subcontractor invoice payments, utility rebates, etc. Ensure your list of input fields and functionality fully support the list of outputs.
8. Analyze the desired level of connectivity between the DMS and existing WAP systems. Some of this connectivity may have been detailed in the functionality for DMS inputs and outputs. Revisit these functionalities to ensure that they still make sense given the analysis of the desired level of system connectivity to the DMS. Also consider future systems which are being developed or may be developed in the future. Some questions that you may ask regarding connectivity between the DMS and other systems include:
	1. How is budgeting handled?
	2. How are invoices generated?
	3. How is the procurement of subgrantees by the grantee managed?
	4. How are subcontractors being managed?
	5. How is the application being submitted?
	6. How is client scheduling managed?
	7. How is audit data captured?
	8. How is inventory managed?
	9. How is the inspection handled?
9. Schedule time to meet with all necessary subgrantee staff members for input. Subgrantees should have the opportunity to comment on the DMS design while the design is happening. This early engagement will ensure subgrantee buy-in, which is critical to every aspect of DMS rollout since the subgrantees will be the primary users of the DMS.
10. Finalize the complete list of procurement requirements.
11. Determine the required format and ancillary language required for the DMS procurement from the grantee organization. State government agencies usually have rigid policies and procedures around procurement that must be followed. Ensure that the DMS procurement is compliant with these policies and procedures. Grantee staff will likely have to work closely with procurement staff to properly release the procurement to perspective bidders.
12. Have the grantee organization IT staff review the procurement document. IT departments have very specific requirements which need to be met. They are the experts in system procurement. Grantee staff will likely have to work closely with IT staff to properly release the procurement to perspective bidders.
13. Determine a timeline for procurement.
14. Finalize the procurement document for release. Double check that your procurement is compliant with federal, state, and funder regulations.
15. Release procurement document and follow your organization’s defined procurement policies and procedures.
16. Determine the winning bidder and make an award.
17. Work with the winning bidder to develop DMS solution.
18. Test DMS solution with all stakeholders. Ensure bidder makes necessary changes to DMS to make it work.
19. Release DMS for use.

# DMS Procurement Best Practices

* Define the scope and objectives of the DMS clearly and communicate them to all stakeholders.
* Establish a realistic budget and timeline for the procurement process and the implementation phase.
* Get subgrantees involved in the process early.
* Get IT staff involved in the process early.
* Get leadership staff involved in the process early.
* If you are having trouble defining a full set of requirements, consider developing and releasing a Request for Information (RFI) based on an initial set of requirements and a general description of the project.
* The RFP process will take a significant amount of staff time and energy. Appoint a lead staff member to manage the RFP and provide them with plenty of time and resources to do so.
* Be sure to stick to the procurement timeline and policy to ensure that the procurement meets the requirements of your organization.
* Create a strong and diverse team for the RFP review and selection process, including subgrantee staff, legal advisors, and external experts.
* Monitor and manage the DMS developer performance and deliverables throughout the project and provide regular feedback and support.
* Do not over constrain the DMS developers. Allow them to come up with the best technical solution for the requirements laid out in the RFP.

# DMS Design Details

### Basic DMS

In order for grantee staff to procure a functional DMS as quickly as possible, we have developed the requirements for a turn-key Basic DMS that we feel meets the minimal requirements for a WAP DMS. Here are some of the overall features of the Basic DMS:

* Allows subgrantees to create fully electronic client files
* Minimizes complexity and connectivity to other systems
* Automates many required processes within the DMS
* Allows for future scalability and addition of functionality
* Allows grantee staff to remotely review the client file

#### Basic DMS Fields

We have provided a list of fields for the Basic DMS along with common picklist options. The fields we have included allow the Basic DMS to function as described in the workflow and have all the required fields to create the basic DOE reports and ensure WAP compliance at a basic level. Fields should not be removed unless you can ensure that their removal will not affect DMS functionality. You may decide to change field names to match your state’s terminology, which is a good idea for program consistency. You may also decide to add or remove items from the picklists based on your state’s needs.

### Modular DMS

Functionality can be added to the Basic DMS to make it easier and quicker to enter data. This involves more connectivity to other systems along with more automation of processes. Like our development of the basic DMS, we have identified easier-to-implement functionality to be added to the Basic DMS in turn-key modules. The specific functional requirements for each module are included in the accompanying spreadsheet. Some modules that can be readily added to the Basic DMS include:

* **Budgeting and invoicing:** This module will allow grantees to create a complete program year budget for WAP across all funding sources and subgrantees. It will also allow subgrantees to invoice the grantee for reimbursement based on the work performed. This will create a parallel workflow to the Basic DMS workflow to allow annual and semi-annual budgeting along with monthly invoicing.
* **Procurement of subgrantees by the grantee:** This module supports the procurement of subgrantees by the grantee. All critical aspects of the subgrantee application process are handled by this module. This functionality may or may not require a parallel workflow depending on its implementation.
* **Subcontractor procurement and management:** This module allows subgrantees (and grantees if necessary) to manage subcontractors performing WAP work. This management will span from subcontractor procurement through invoice payment. This functionality may or may not require a parallel workflow depending on its implementation.
* **Application upload to automatically populate the DMS:** This module allows subgrantees to upload scanned paper and electronic versions of client applications for automatic processing by the DMS. The processing will populate the DMS fields with the appropriate data from the application. This module will be incorporated into the application stage of the Basic DMS workflow.
* **Client scheduling:** This module assists subgrantees in managing visits to client homes. It allows for better communication and automation of typical subgrantee-client interactions within the DMS. This scheduling module will map to various stages within the Basic DMS workflow including waitlist, audit, retrofit, and inspection.
* **Upload audit data from the audit tool into the DMS:** This module allows subgrantees to upload downloaded audit reports or database files from the audit tool into the DMS. This module will be incorporated into the audit stage of the Basic DMS. For most complete integration, every audit field captured in the audit tool should be uploaded into the DMS.
* **Inspection:** This module assists subgrantee inspectors in managing the inspection process and automates inspection form completion. It also helps subgrantees identify trends from inspections to suggest areas for improvement and training. This module will be incorporated into the inspection stage of the Basic DMS.
* **Inventory management:** This module allows subgrantees to manage the materials inventory they have on hand and use during the retrofit work. The inventory management module will be integrated with the case file for each home to ensure inventory can be recorded against what has been installed. This module will be incorporated into the inventory stage of the Basic DMS. It will also be closely integrated with the invoicing module, if present.

#### Modular DMS Fields

We have not provided lists of fields for the Modular DMS as the field lists will vary significantly depending on the specific processes within your state’s WAP and how they map onto the DMS module. We have included an item in the functionality list for each module to support development of fields for each module based on its functionality.

### Custom DMS

Each grantee will have its own unique systems and requirements to contend with. The Basic DMS creates a procurement starting point and the Modular DMS provides the grantee with functional improvements in specific areas. However, many grantees will want more functionality to meet their unique needs. Use the inventory process for inputs, outputs, systems, and users to customize DMS functionality for your organization’s needs.

# Basic DMS Requirements Template

### Basic DMS Narrative

The Basic DMS provides grantees and subgrantees with the ability to manage Weatherization Assistance Program (WAP) retrofit projects from client application to project close. The DMS will allow subgrantee staff to walk through the project workflow, entering the requisite data at each stage of the workflow. By moving through the workflow, subgrantee staff will create and close WAP projects. These projects are available for grantees for WAP retrofit project inspection and monitoring. They are also available for reporting to WAP funders and other stakeholders.

### Basic DMS Process Map

This process map shows the workflow from end to end which the Basic DMS will cover. See Appendix A at the end of this document for the full process diagram.

### Basic DMS Workflow

The Basic DMS needs to have a structured workflow. The case for each WAP project within the DMS is built and progresses along the workflow path. Each transition from one workflow stage to the next represents a milestone within the case. The path is as follows:

1. **Application:** This is the initial stage of the workflow and begins with the creation of the case record when the subgrantee receives and begins inputting the application data into the DMS. Once all the required information to make a decision is entered, the workflow moves to waitlist. A project may not move to the waitlist stage if it is ineligible based on application results or is deferred based on the housing condition.
2. **Waitlist:** All eligible WAP clients are moved into the waitlist and prioritized based on the grantee’s approved prioritization score which the DMS auto-calculates. Clients are moved off the waitlist and the waitlist portion of the workflow is complete once an audit has been scheduled and the audit scheduled date entered. A project may return to the application stage if the audit scheduled date is after the application expiration date.
3. **Audit:** Once the project has been audited, the required audit information is entered into the DMS. This includes basic information about the audit along with a list of recommended measures and some measure details. Once the required audit fields have been completed, the workflow closes the audit stage and begins the retrofit stage.
4. **Retrofit:** During the retrofit stage, additional measure data is entered based on actual installation details of the retrofit. Once the required retrofit information is entered, the workflow moves onto inspection and inventory. A pre-populated, downloadable inspection template form is generated once the retrofit stage is completed.
5. **Inspection:** During the inspection stage, details from the project’s inspection are entered. Once the inspection has been completed the project moves towards being ready to be closed.
6. **Inventory:** Inventory details can be entered any time after the retrofit stage has been completed. Once all inventory details have been entered, the project can move to the closing workflow to ensure all required fields have been completed.
7. **Closed:** Projects are closed when they move complete the closing workflow. This workflow ensures that all required fields have been completed and the project meets all requirements prior to closing.

### List of Basic DMS Functional Requirements

The following is a list of minimal functional requirements for the Basic DMS:

|  |  |
| --- | --- |
| **Functionality** | **Workflow Stage/Area** |
| Addresses verified against postal database | Application Management |
| Application documents upload | Application Management |
| Application review and approval workflow | Application Management |
| Automated eligibility review, approval, disapproval | Application Management |
| Automated determination of eligibility for re-weatherization by comparing previously weatherized date field to the 15 year eligibility threshold to the current date. | Application Management |
| Automatically check for existing case file when new case is created | Application Management |
| Eligibility rules and manual adjustments | Application Management |
| Table to determine client eligibility by income, household residents, and associated thresholds | Application Management |
| Upload utility bills | Application Management |
| Ability to return to application stage of the workflow to make corrections to structure details during the audit stage of the workflow | Audit Management |
| Audit documents upload | Audit Management |
| Dynamically apply units for applicable measure fields that are different across measures (i.e. for the Quantity field within a measure it may be square feet for attic insulation, count for LED light bulbs installed, and Watts for a solar panel installation) | Audit Management |
| Pre-populated table for measures and funding sources | Audit Management |
| Ability to hide/show fields based on whether the project is a multifamily or single family project | Case Management |
| Ability to track individual units as part of larger multifamily project | Case Management |
| Ability to track measures within a multifamily building that are not specific to individual units (i.e. boilers, etc.) | Case Management |
| Autogenerate ineligible letter | Case Management |
| Autogenerate deferral letter | Case Management |
| Case status automatically updates based on point in workflow | Case Management |
| Closing case workflow | Case Management |
| Data verification for required fields will allow users to complete workflow step | Case Management |
| DMS case search functionality across common data fields (i.e. name, address, etc.) | Case Management |
| Document management | Case Management |
| Flag projects that require further SHPO review based on age of home | Case Management |
| Full process (application to close) case workflow with data entry and display for selected areas (i.e. application, eligibility, audit, retrofit, inspection, close) | Case Management |
| Historical data retention | Case Management |
| Project reverts to application stage of workflow if the audit has not occurred prior to the Application Expires Date. | Case Management |
| Provide a streamlined way to combine duplicate case files | Case Management |
| Regular, automatic checks and flagging for duplicate case files | Case Management |
| Retain non-eligible client information in database for future use if they become eligible | Case Management |
| SHPO document upload | Case Management |
| Status updates and historical tracking | Case Management |
| Subgrantee staff can create and manage cases | Case Management |
| Table for subgrantee contact info including name, address, phone numbers, email addresses, staff members, staff member roles, service territory | Case Management |
| 24 hour access with >99% uptime | DMS Functionality |
| Cloud-based database solution | DMS Functionality |
| Configurable user interface | DMS Functionality |
| Custom fields and forms | DMS Functionality |
| Data encryption at rest and in transit | DMS Functionality |
| Hide and display fields based on values of interdependent fields | DMS Functionality |
| Logic-based default selections on picklists based on most common entry or based on values entered in | DMS Functionality |
| Mobile-friendly interface | DMS Functionality |
| Regular automated backups | DMS Functionality |
| Scalable architecture | DMS Functionality |
| All data in the system will be property of the grantee | DMS Management |
| Allow grantee administrator(s) to manage database fields | DMS Management |
| Allow grantee administrator(s) to manage database users | DMS Management |
| Picklist modification of existing fields | DMS Management |
| Reminder(s) sent via email to administrator user to update income table at appropriate time based on release dates of new thresholds | DMS Management |
| Transfer existing program data into DMS | DMS Management |
| Approval workflow for completed inspections | Inspection Management |
| Inspection document upload | Inspection Management |
| Inspection form pre-population based on case file | Inspection Management |
| Inspection stage of the workflow may begin without all information from the retrofit section being completed. | Inspection Management |
| Inventory documentation upload | Inventory Management |
| Subcontractor documentation upload | Inventory Management |
| Ability to aggregate data for reports to ensure client privacy | Reporting and Compliance |
| Ability to export data and reports into a variety of file formats (i.e. xlsx, csv, pdf, etc.) | Reporting and Compliance |
| Ability to quickly and easily view and page through uploaded documents | Reporting and Compliance |
| Ability to remove PII from reports to ensure client privacy | Reporting and Compliance |
| Ability to see and edit records is based on user role and case status | Reporting and Compliance |
| Automated full PDF case file creation for review | Reporting and Compliance |
| Automatic reporting templates for all required reports (i.e. DOE Quarterly, DOE T&TA/Monitoring, SHPO, LIHEAP, etc.) | Reporting and Compliance |
| Batch download of data within the system across multiple cases | Reporting and Compliance |
| Custom dashboards accessible to users based on roles for data visualization | Reporting and Compliance |
| Customizable report generation | Reporting and Compliance |
| Ensuring compliance with governmental regulations | Reporting and Compliance |
| Export reports in various formats | Reporting and Compliance |
| Generating compliance reports | Reporting and Compliance |
| Maintaining audit trails | Reporting and Compliance |
| Pre-built templates for standard reports | Reporting and Compliance |
| Real-time analytics and dashboards | Reporting and Compliance |
| Ability to assign a unique funding sources to each measure on a project (i.e DOE, DOE BIL, LIHEAP, etc.) | Retrofit Management |
| Ability to assign a measure type to each measure (i.e. EC, H&S, IRM, WRF) | Retrofit Management |
| Workorder upload | Retrofit Management |
| Add and remove users | User Management |
| Role-based access control | User Management |
| User activity logging and auditing | User Management |
| User authentication and authorization | User Management |
| Automated scoring of eligible clients for prioritization | Waitlist Management |
| Prioritization rules and manual adjustments | Waitlist Management |
| Support client scoring criteria for automation | Waitlist Management |

### List of Basic DMS Fields

The following is a list of fields for the Basic DMS (see the accompanying spreadsheet for details about the fields along with a list of suggested field picklist items):

|  |  |  |
| --- | --- | --- |
| **Field** | **Workflow Stage** | **Field Type** |
| Air Conditioner Type | Application Management | Picklist |
| Annual Electric Utility Cost | Application Management | Currency |
| Annual Electric Utility Usage | Application Management | Integer |
| Annual Gas Utility Cost | Application Management | Currency |
| Annual Gas Utility Usage | Application Management | Integer |
| Annual Household Income | Application Management | Currency |
| Annual Other Heating Provider Cost | Application Management | Currency |
| Application Expires Date | Application Management | Auto-calculated |
| Application Processed Date | Application Management | Auto-calculated |
| Application Received Date | Application Management | Date |
| Application Upload | Application Management | Upload |
| Children Resident Count | Application Management | Integer |
| Client Email | Application Management | Email Address |
| Client First Name | Application Management | Text |
| Client Last Name | Application Management | Text |
| Client Middle Name | Application Management | Text |
| Client Phone Number | Application Management | Phone Number |
| Client Type | Application Management | Picklist |
| Disabled Resident Count | Application Management | Integer |
| Elderly Resident Count | Application Management | Integer |
| Electric Utility Account Number | Application Management | Text |
| Electric Utility Name | Application Management | Lookup |
| Electric Utility Premise Number | Application Management | Text |
| Eligible for Re-weatherization | Application Management | Auto-calculated |
| Gas Utility Account Number | Application Management | Text |
| Gas Utility Name | Application Management | Lookup |
| Gas Utility Premise Number | Application Management | Text |
| High Energy Burden | Application Management | Auto-calculated/Lookup |
| High Energy Use | Application Management | Auto-calculated/Lookup |
| Household Resident Count | Application Management | Integer |
| Income Qualified | Application Management | Auto-calculated |
| Ineligible | Application Management | Checkbox |
| Ineligible Date | Application Management | Auto-calculated |
| Landlord Agreement Upload | Application Management | Upload |
| Multifamily Eligibility Percentage | Application Management | Decimal |
| Native American Resident Count | Application Management | Integer |
| Non-income Qualification | Application Management | Picklist |
| Non-income Qualification ID | Application Management | Text |
| Other Heating Provider Account Number | Application Management | Text |
| Other Heating Provider Name | Application Management | Lookup |
| Part of Multifamily Project | Application Management | Checkbox |
| Previously Weatherized | Application Management | Checkbox |
| Previously Weatherized Date | Application Management | Date |
| Primary Heating Equipment Type | Application Management | Picklist |
| Primary Heating Fuel Type | Application Management | Picklist |
| Program Year | Application Management | Picklist |
| Project Address 1 | Application Management | Text |
| Project Address 2 | Application Management | Text |
| Project City | Application Management | Text |
| Project County | Application Management | Text |
| Project Number | Application Management | Text |
| Project State | Application Management | Text |
| Project Zip Code | Application Management | Zip |
| Proof of Ownership Upload | Application Management | Upload |
| Proof of Residence | Application Management | Upload |
| Property Owner Address 1 | Application Management | Text |
| Property Owner Address 2 | Application Management | Text |
| Property Owner City | Application Management | Text |
| Property Owner Email | Application Management | Email Address |
| Property Owner First Name | Application Management | Text |
| Property Owner Last Name | Application Management | Text |
| Property Owner Middle Name | Application Management | Text |
| Property Owner Phone Number | Application Management | Phone Number |
| Property Owner State | Application Management | Text |
| Property Owner Zip Code | Application Management | Zip |
| Residency Status | Application Management | Picklist |
| Secondary Heating Equipment Type | Application Management | Picklist |
| Secondary Heating Fuel Type | Application Management | Picklist |
| Structure Type | Application Management | Picklist |
| Structure Year Built | Application Management | Year |
| Time at Residence | Application Management | Integer |
| Utility Bills Upload | Application Management | Upload |
| Water Heater Fuel Type | Application Management | Picklist |
| Audit Date | Audit Management | Date |
| Auditor Name | Audit Management | Lookup |
| Blower Door Pre | Audit Management | Integer |
| Measure Name | Audit Management | Picklist (with fillable Other) |
| Measure Pre | Audit Management | Decimal |
| Measure Quantity | Audit Management | Decimal |
| Measure SIR | Audit Management | Decimal |
| Measure Table | Audit Management | Sub-table |
| Measure Type | Audit Management | Picklist/Lookup (with fillable Other and ability to select an alternate value) |
| SHPO Exempt | Audit Management | Checkbox |
| Age of Structure | Case Closing Management | Auto-calculated, Integer |
| Closed Date | Case Closing Management | Auto-calculated |
| Contribution Amount | Case Closing Management | Currency |
| Contribution Table | Case Closing Management | Sub-table |
| Contribution Type | Case Closing Management | Picklist (with fillable Other) |
| SHPO Document Upload | Case Closing Management | Upload |
| Waiver Document Upload | Case Closing Management | Upload |
| Deferral Date | Case Management | Auto-calculated |
| Deferral Letter | Case Management | Auto-generated |
| Deferral Letter Sent Date | Case Management | Date |
| Deferral Tracking & Reporting | Case Management | Picklist (with fillable Other) |
| Ineligible letter | Case Management | Auto-generated |
| Ineligible Letter Sent Date | Case Management | Date |
| Project Status | Case Management | Picklist/Lookup (with ability to select an alternate value) |
| Subgrantee Name | Case Management | Lookup |
| Grantee QCI Date | Grantee Case Management | Date |
| Grantee QCI Name | Grantee Case Management | Lookup |
| Grantee QCI Project | Grantee Case Management | Checkbox |
| Grantee QCI Report Upload | Grantee Case Management | Checkbox |
| Blower Door Post | Inspection Management | Integer |
| Blower Door Reduction | Inspection Management | Auto-calculated |
| Inspection Documents Upload | Inspection Management | Upload |
| Inspection Form Template | Inspection Management | Auto-generated |
| Inspection Pass Date | Inspection Management | Date |
| Inspector Name | Inspection Management | Lookup |
| Measure Passed Inspection Date | Inspection Management | Date |
| Inventory Documents Upload | Inventory Management | Upload |
| Measure Contractor Cost | Inventory Management | Currency |
| Measure Funding Source | Inventory Management | Picklist/Lookup (with ability to select an alternate value) |
| Measure Labor Cost | Inventory Management | Currency |
| Measure Materials Cost | Inventory Management | Currency |
| Other Cost Amount | Inventory Management | Currency |
| Other Cost Description | Inventory Management | Text |
| Other Cost Table | Inventory Management | Sub-table |
| Other Cost Type | Inventory Management | Picklist (with fillable Other) |
| Retrofit Invoice Upload | Inventory Management | Upload |
| Measure Installed | Retrofit Management | Checkbox |
| Measure Notes | Retrofit Management | Text |
| Measure Post | Retrofit Management | Decimal |
| Permits Document Upload | Retrofit Management | Upload |
| Post-Audit Measure Added | Retrofit Management | Auto-calculated, True/False |
| Retrofit End Date | Retrofit Management | Date |
| Retrofit Start Date | Retrofit Management | Date |
| User Name | User Management | Lookup |
| User Organization | User Management | Lookup |
| User Role | User Management | Lookup |
| Audit scheduled date | Waitlist Management | Date |
| Priority Score | Waitlist Management | Auto-calculated |

### List of DMS Bidder Requirements

The following is a list of minimum requirements for all DMS bidders:

|  |  |
| --- | --- |
| **Bidders Requirements** | **Bidder Response** |
| Ability to successfully plan for and migrate all pertinent legacy program data into new database |  |
| Provide DMS training for all users |  |
| Provide user role-specific training |  |
| Have previous experience providing user training |  |
| Provide complete documentation of DMS |  |
| Have previous development experience within the proposed solution software |  |
| Provide training, support, and maintenance for database and its users for five years |  |
| Provide up-front, transparent cost for all training, support, and maintenance activities |  |
| Have experience developing projects with the include the listed functionality |  |
| Have experience transferring legacy data into newly developed databases |  |
| Ability to successfully plan for and execute user testing. This includes making any modifications to the DMS based on testing results. |  |
| Ability to provide a complete DMS solution with all the functionality listed |  |
| Ability to identify and fill gaps in the listed functionality to make DMS fully operable |  |

### Basic DMS Support Tables

Support tables provide lookups for the Basic DMS to limit unnecessary data entry and errors. These tables also provide filters to automatically select lookup field values or hide and show items within the lookup picklists. These are the Basic DMS support tables:

* **Income Eligibility Table:** Includes lookup data to support determining the income eligibility of clients based on the grantee’s income eligibility criteria. This will include Household Income Limits, Household Resident Count, and Threshold Type (i.e. FPL, SMI, AMI, etc.)
* **Priority Scoring Table:** Includes lookup data to support the scoring of service priority based on Elderly Resident Count, Disabled Resident Count, Children Resident Count, Energy Burden, and High Energy Use.
* **Measure Info Table:** Includes lookup data for each Measure Name for fields like Measure Funding Source and Measure Type. It will also define the units for each measure for fields share across measures such as Measure Pre, Measure Post, and Measure Quantity.
* **Subgrantee Table:** Includes lookup data for Subgrantee Name, Auditor Name, and Inspector Name. It also provide information about subgrantee service territory, address, phone numbers, email addresses, etc.
* **Utility Table:** Includes lookup data for Heating Utility Name, Electric Utility Name, Other Heating Provider Name. It also provide information about utility service territory, address, phone numbers, email addresses, etc.

### Basic DMS Scoring Rubric

This is an example of a scoring rubric for DMS procurement. You may want to include additional areas depending on your organization’s requirements. A version of this rubric which auto calculates the Weighted and Total Scores based on Scoring Weight and Raw Score is included in the accompanying spreadsheet.

|  |  |  |  |
| --- | --- | --- | --- |
| **Scoring Area** | **Scoring Weight** | **Raw Score (1 to 10)** | **Weighted Score** |
| Ability for bidder to deliver DMS functional requirements | 2.0 | 10 | 1.1 |
| Ability for bidder to meet training requirements | 2.0 | 6 | 0.7 |
| Ability for bidder to meet ongoing support requirements | 2.0 | 8 | 0.9 |
| Ability for bidder to test, troubleshoot, and correct DMS prior to launch | 2.0 | 7 | 0.8 |
| Previous bidder experience in designing databases with similar functional requirements | 2.0 | 5 | 0.6 |
| Previous bidder experience with training DMS users | 2.0 | 5 | 0.6 |
| Previous bidder experience with documenting DMS | 2.0 | 4 | 0.4 |
| DMS cost | 4.0 | 6 | 1.3 |
|  |  |  |  |
|  |  | **Total Score** | **6.3** |
|  |  |  | out of |
|  |  |  | 10.0 |

### Additional Documents to Provide for Procurement

The following documents provide additional information for DMS design and procurement.

* DMS Requirements spreadsheet provided as part of this template
* All grantee forms used by within your state’s WAP within the scope of the DMS
* All subgrantee forms used within your state’s WAP within the scope of the DMS
* Requirements documents provided by your organization’s IT department

# Appendix A – Process Diagram

