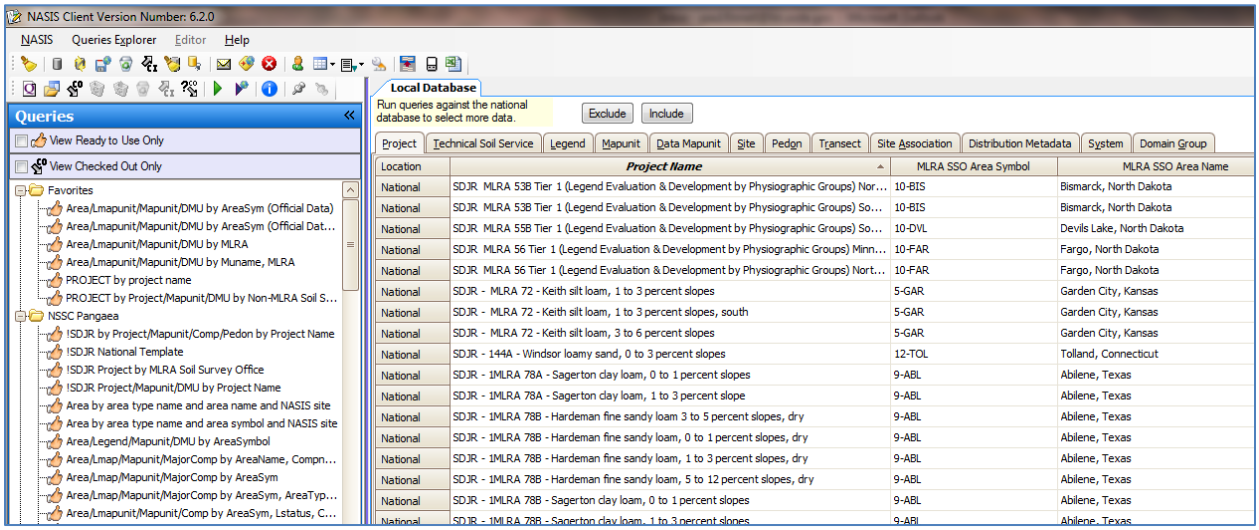
Chapter 14: Project Management

Contents



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The Project Object is used to manage survey inventory operations. The Project Object contains the fields previously located in the Legend object, commonly referred to as the Soil Survey Schedule fields.

Both traditional and update inventory operations are now managed within the Project Object. Traditional soil surveys are managed in the Project Object as discussed in Chapter 8 "Examining the Project Object". Chapter 14 will focus on the development of the Project Plan for update soil and ecological site surveys. This chapter will discuss how the Project Object is populated and managed.

The soil survey office staff evaluates the map units within their territory. From that evaluation, projects are prioritized. Proposed project plans are then populated in NASIS (with minimal population). These are available for concurrence and approval. Approved projects are to be fully populated. The following concepts are considered for update project planning.

Update Project plans:

1. are intended to "improve" the original product;
2. assist in the goal of developing a seamless national soil survey product;
3. will follow a national naming convention
    a. Field projects: prefix "MLRA XX – project name",
    b. Harmonization project: prefix "SDJR – MLRA XX – project name",
    c. Ecological site projects: prefix "ES – MLRA XX – project name";
4. are defined using map units;
5. will collect sufficient information to fully populate the NASIS database;
6. have acreage goals based on the total acres of map units within the project
    a. Field projects: 100 percent of map unit acres
    b. Harmonization projects: 20 percent of map unit acres;
    c. Ecological site projects: The sum of the acres of soil components correlated to the ESD being developed in the project.
7. are completed on an annual basis:
    a. Field projects: potential multi-year projects are divided into annual reportable items
    b. Field projects: milestones should be clearly identified to document status
    c. Harmonization projects: days to weeks in completion
    d. Harmonization projects: set list of SDJR milestones
    e. Ecological site projects: multi-year projects are divided into annual reportable items
    f. Ecological site projects: set list of ES milestones;
8. are reported using acres or sites
    a. Field projects: when spatial and/or tabular data are submitted to the Soil Data Mart,
    b. Harmonization projects: after Quality Assurance review of tabular data is completed
    c. Ecological site projects: claim acres for soil components correlated to ESD after Ecological Site reaches approved status (reference Ecological Site Handbook and NB 430-13-08). After final QA and ESD reaches correlated status report number of ecological sites developed by populating completion dates for milestone 17 (ES – Perform Final Quality Assurance Review and Certification) ;
9. will focus on the defined project and defined completion date. Any "scope creep" will be developed as a future project.

The map units from the traditional published soil surveys will be the foundation of the project. The project will be used to manage the correlation of the survey map units into MLRA map unit(s). The correlation process will follow existing correlation protocol of map unit status: "provisional" to "approved" to "correlated" and, as necessary, to "additional".

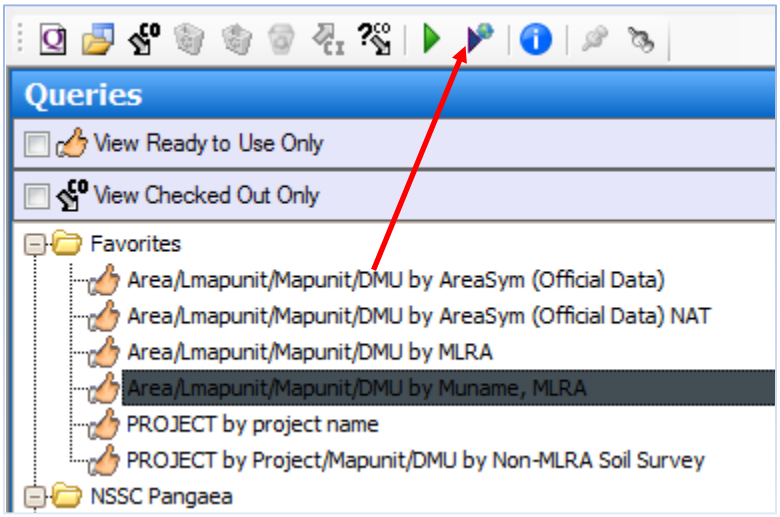
Populate the Local Database

Data must be loaded into the NASIS local database before entering data in the Project Object. Clear the selected set and local database. Then populate the local database with the official data (legends, map units and data mapunits) for the MLRA or the official data for the project.

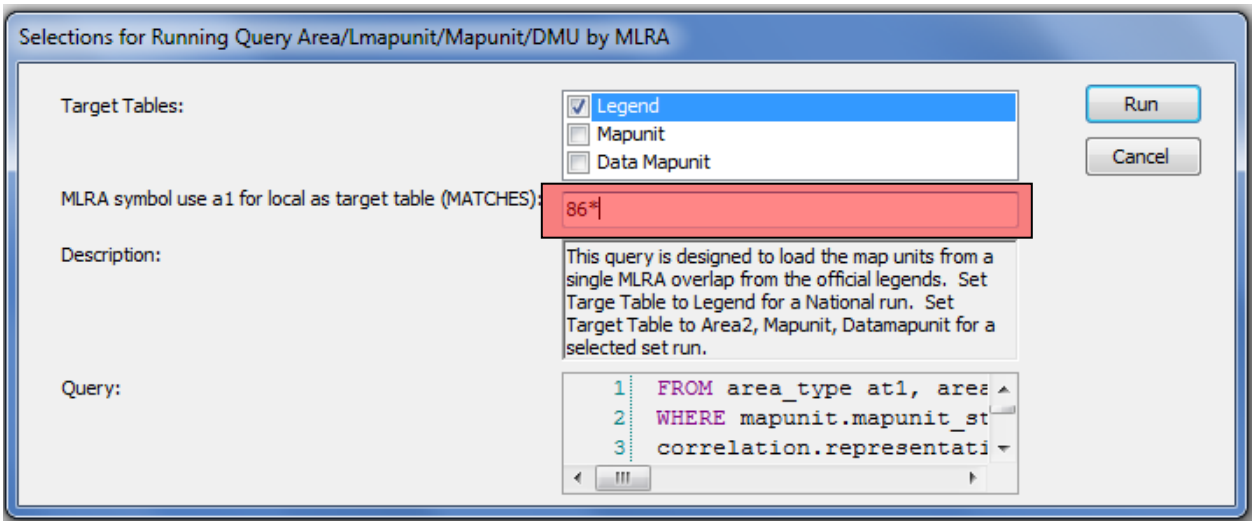
1. On the **NASIS** menu, select **Clear Local Database**. This function clears the entire local database.

2. Click the **Queries Explorer tab**, and highlight the NSSC Pangaea query "***Area/Lmapunit/Mapunit/DMU by MLRA***", right click and add this to the Favorites. This query is designed to load map units populated in the Legend Mapunit Overlap table for the given MLRA.

3. Right-click on the query and choose "*Run Against National Database*" or use the toolbar icon.

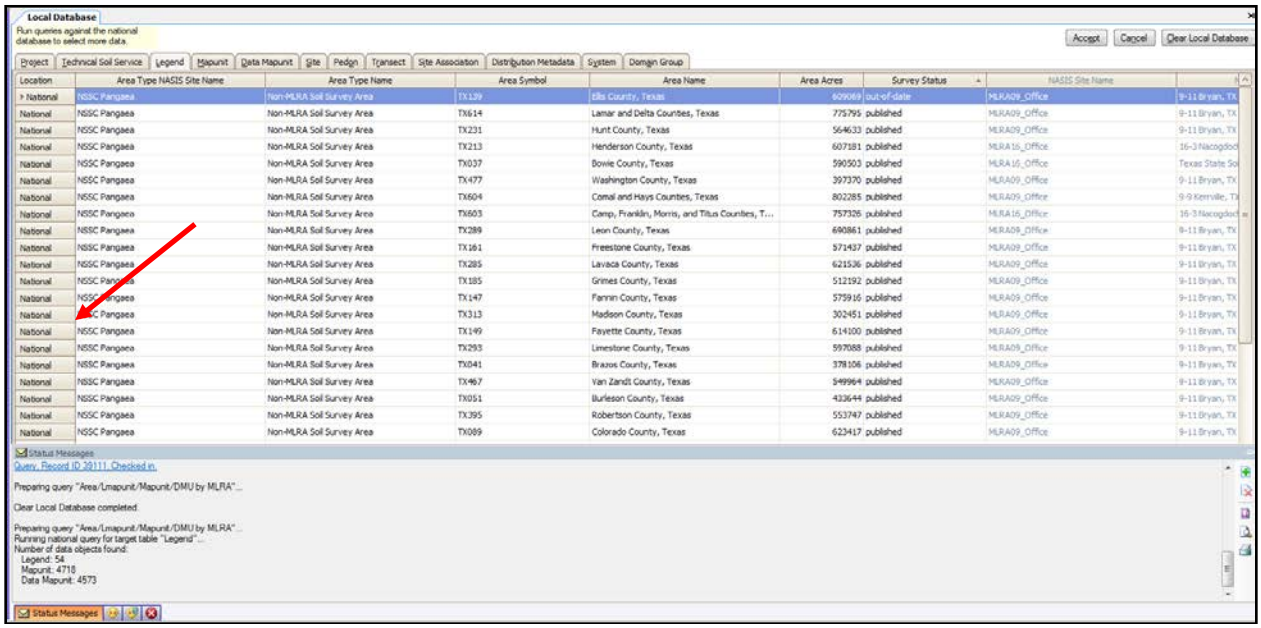


Choose **Legend** as target table. For a query run '*Against the National Database*' the highest available table in the database is the preferred choice. Enter the MLRA of choice.

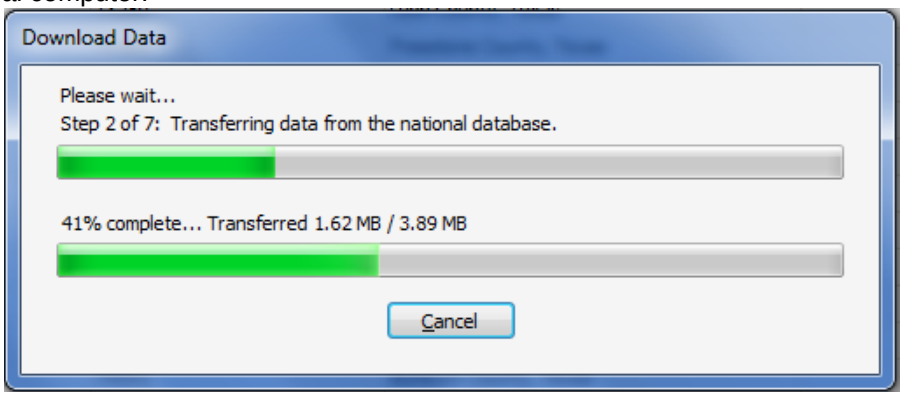


Use a wildcard if necessary to select the MLRA. This scenario will load all Legend, Mapunit, Data Mapunit, linked Pedon and linked Site data from those legends in which MLRA 86, 86A or 86B are populated in the overlap tables.

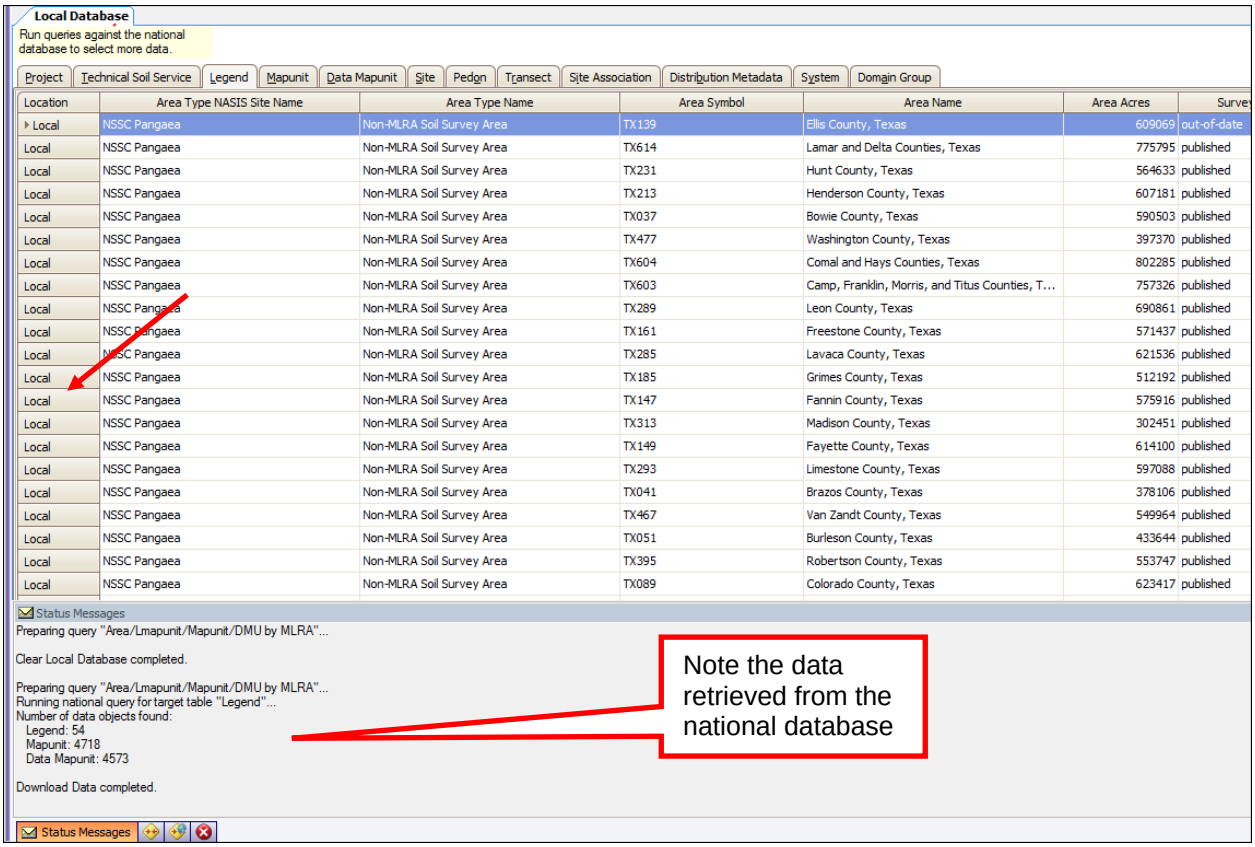
The results appear in the "Local Database Setup" tab. The 'Location' identifies the data available in the National database that can be downloaded.



4. Choose "Accept" to retrieve the data and populate the local database. The required time is dependent upon the speed of the network, the PC processor speed and the amount of RAM on the local computer.



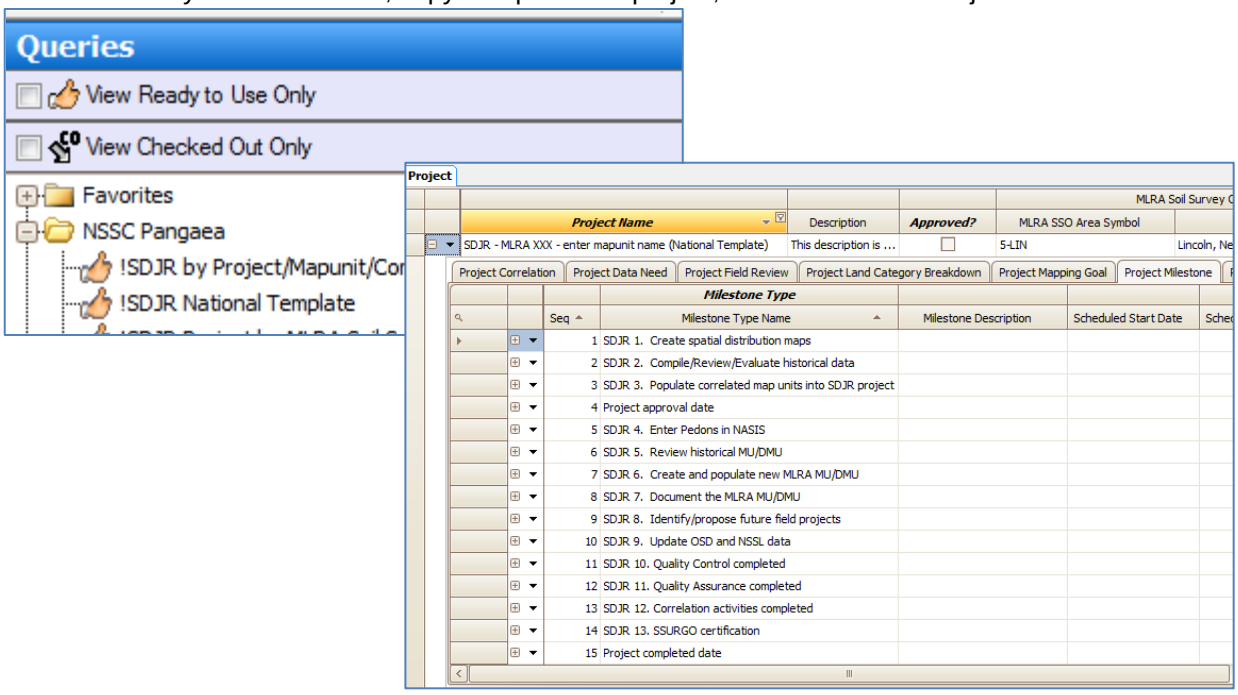
5. When completed, the local database setup will appear. It now identifies the data populated into the Local Database. This process is not expected to be repeated unless the local database is cleared.


Local Database
Run queries against the national database to select more data.
Project
Technical Soil Service
Legend
Mapunit
Data Mapunit
Site
Pedon
Transect
Site Association
Distribution Metadata
System
Domain Group
Location
Area Type NASIS Site Name
Area Type Name
Area Symbol
Area Name
Area Acres
Survey
Local NSSC Pangaea Non-MLRA Soil Survey Area TX139 Ellis County, Texas 609069 out-of-date
Local NSSC Pangaea Non-MLRA Soil Survey Area TX614 Lamar and Delta Counties, Texas 775795 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX231 Hunt County, Texas 564633 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX213 Henderson County, Texas 607181 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX037 Bowie County, Texas 590503 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX477 Washington County, Texas 397370 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX604 Comal and Hays Counties, Texas 802285 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX603 Camp, Franklin, Morris, and Titus Counties, T... 757326 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX289 Leon County, Texas 690861 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX161 Freestone County, Texas 571437 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX285 Lavaca County, Texas 621536 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX185 Grimes County, Texas 512192 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX147 Fannin County, Texas 575916 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX313 Madison County, Texas 302451 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX149 Fayette County, Texas 614100 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX293 Limestone County, Texas 597088 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX041 Brazos County, Texas 378106 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX467 Van Zandt County, Texas 549964 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX051 Burleson County, Texas 433644 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX395 Robertson County, Texas 553747 published
Local NSSC Pangaea Non-MLRA Soil Survey Area TX089 Colorado County, Texas 623417 published
Status Messages
Preparing query "Area/Lmapunit/Mapunit/DMU by MLRA"...
Clear Local Database completed.
Preparing query "Area/Lmapunit/Mapunit/DMU by MLRA"...
Running national query for target table "Legend"...
Number of data objects found:
Legend: 54
Mapunit: 4718
Data Mapunit: 4573
Download Data completed.
Status Messages
Note the data retrieved from the national database

Populate the Project Object

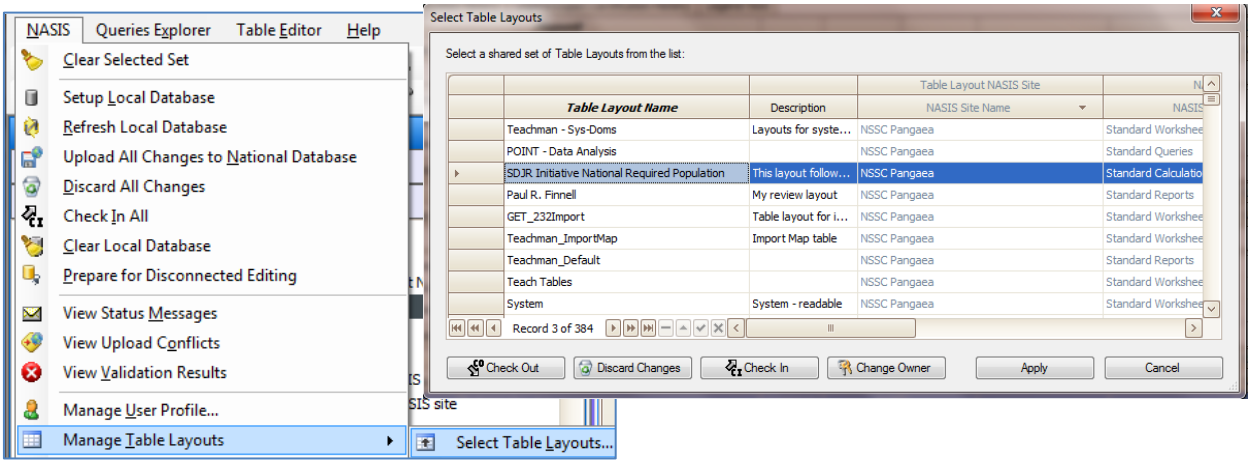
Step 1 - Load the SDJR Project template

Use the NSSC Pangaea query named '!SDJR National Template' to retrieve the national project for SDJR. Once in your selected set, copy and paste the project, then rename the Project.



Step 2 – Set the SDJR Table layout

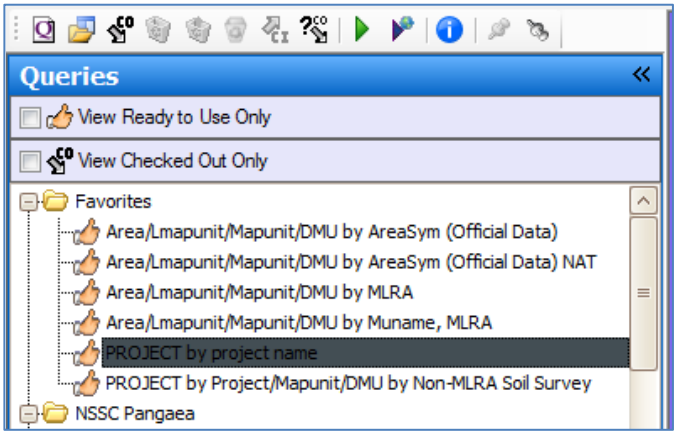
The following screen shots will be using the Pangaea SDJR Initiative table Layout:

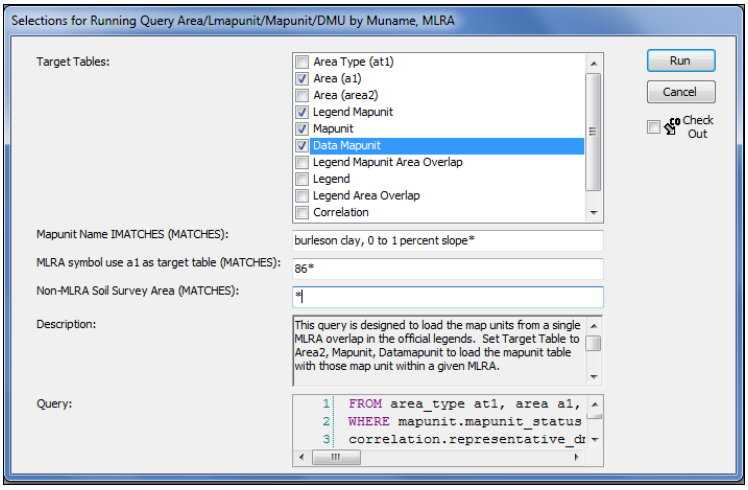


(At the time of this writing, a known bug was found in the Table Layout that will updated in the next NASIS release. The columns in the component and horizon tables do not stay in the fixed position they were assigned.)

Step 3 – Load the map units for analysis

1. Find the query named, '*Area/Lmapunit/Mapunit/DMU by Muname, MLRA f*rom the Queries Explorer panel and add this to the Favorites. This query will be run 'Against the Local Database' (green triangle) to populate the map units into the Selected Set.
2. The Local Database contains all the Legends, Mapunits, and Data Mapunits for MLRA 86*.
3. The Selected Set is empty, therefore a query is run against the Local Database to populate the selected set with the data to be analyzed. The queries are the first method of 'filtering' the data to populate the selected set. This particular query will filter the Local Database to find those map units within a specific MLRA by a specific map unit name.

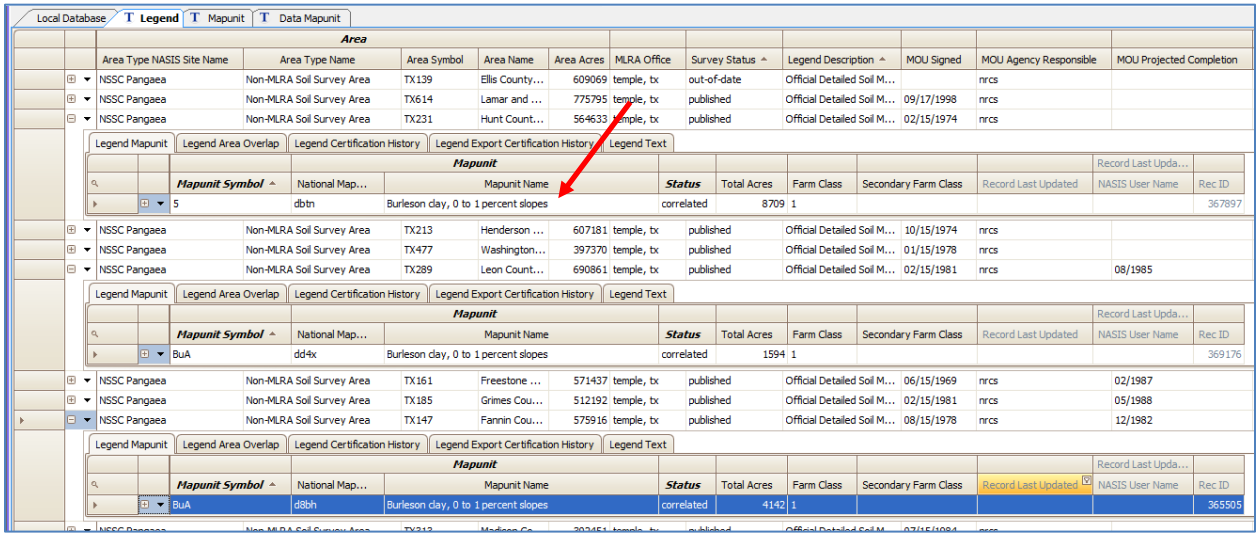




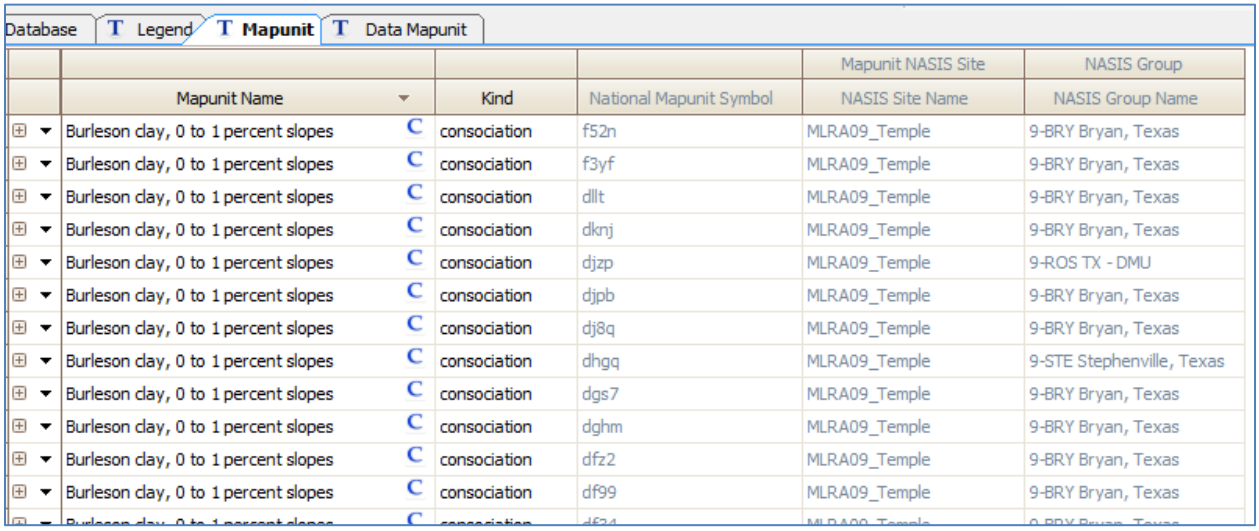
4. The query parameter box will appear. Choose the target tables identified in the query name. Then enter the map unit name, MLRA, and soil survey areas in the appropriate parameter boxes.

In this example, the 'Burleson clay, 0 to 1 percent slopes' map units in MLRA 86 will be brought into the selected set. Run the query as many times as necessary to obtain all similarly named map unit names that will be used in the project.

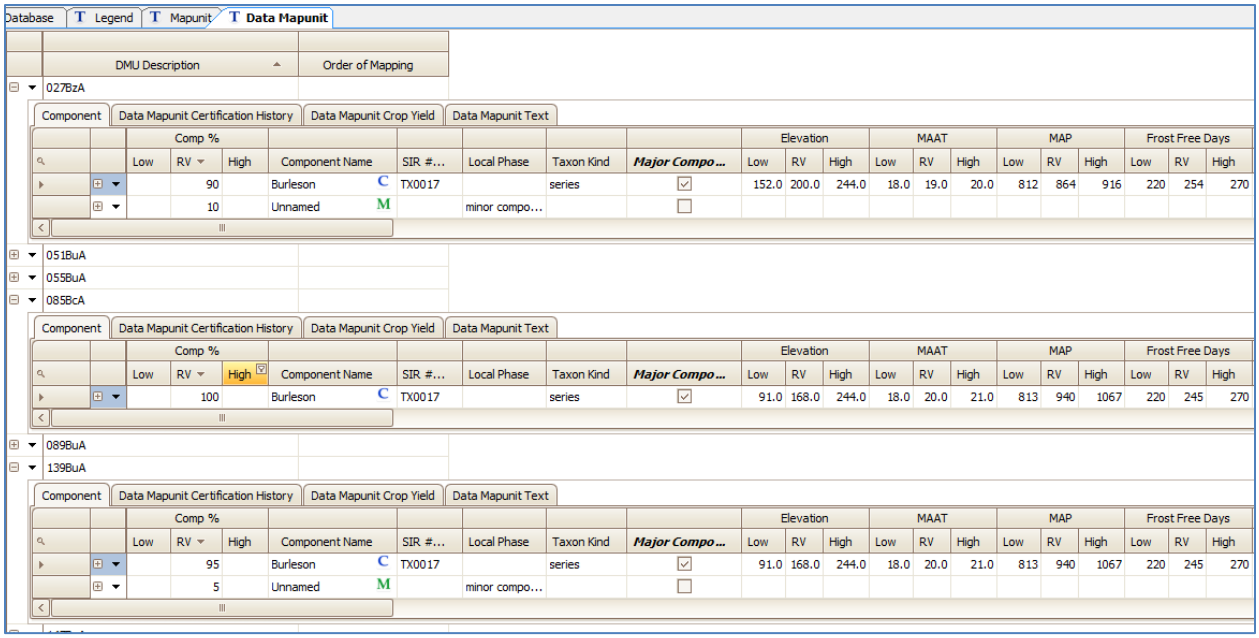
5. The 'selected set' contains the soil survey Legends in MLRA 86 that have Burleson clay, 0 to 1 percent slopes map unit. 'Tables' is chosen in the Explorer panel and the Legend, Mapunit and Data Mapunit tables are opened. In the image below, the Legends are reviewed. The Legend Mapunit table is opened to ensure that only the Burleson map unit appears in the table.



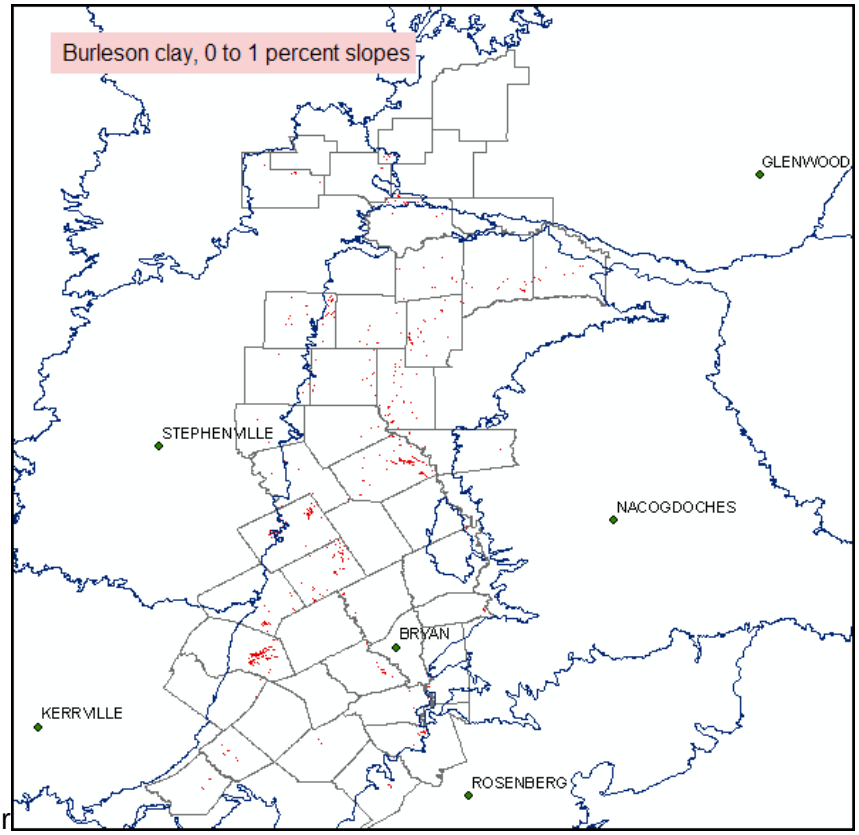
6. The Burleson map units within MLRA 86 can be viewed by choosing the Mapunit table. The 'selected set' contains all the information necessary to analyze the Burleson clay, 0 to 1 percent slopes. Notice the variety of National Mapunit Symbols which are indicative of individual map units linked to individual Legends.



7. These map units can be analyzed using the Editor grid or reports.

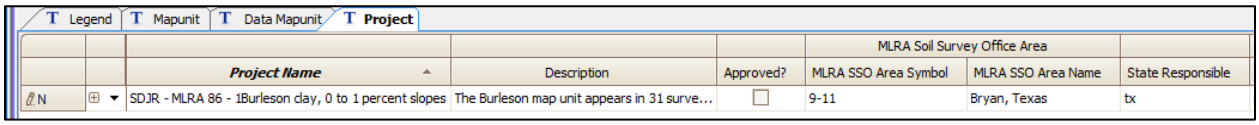


8. There are a variety of GIS tools that create a map unit geographical distribution for analysis. This image identifies the locations (red dots) of the Burleson map unit polygons within the various MLRA boundaries.



Step 4 – Develop the proposed project(s)

The next step will require populating the Project table. From the Tables Explorer panel, open the Project table and insert a new row:



The Project Name is a required field for this table.

The User Project ID is a required field and is designated for the MLRA SSO Leader to prioritize or track projects within the soil survey office. It can be populated as just a number to list projects in order of priority for the fiscal year (i.e. 1-10) or otherwise. For example:

Four digit year – MLRA SSO responsible for the project – priority number for project (for example, the number one priority project in the 1-RED Oregon MLRA SSO Office in FY 2014, the ID could be 2014RED001). Office priorities may change after the Management Team reviews and assigns the final priority.

1. **SDJR Project**

The Soil Data Join Recorrelation has specific naming convention. Notice the name begins with the acronym 'SDJR'. It is followed by a space, dash, space and the MLRA; in this case 'MLRA 86'. This is followed by a space and a dash before ending with a project name.

2. **MLRA Field Project**

A 'field' project requires field or spatial work outside of the Soil Data Join Recorrelation (Harmonization) initiative. These projects will maintain a similar naming convention however, the acronym 'SDJR' is not used. For example, the above Project Name would be "MLRA 86 –Burleson clay, 0 to 1 percent slopes. The MLRA symbol is followed by a space, dash, space before the project name.

3. **Ecological Site Project**

An "Ecological Site" project is the inventory of vegetative species to define a single ecological site (ES). These Projects are managed on map units based with similar physiographic and soil properties that support similar plant communities and similar responses from management actions and natural factors (such as drought or other drivers). These projects will develop the Ecological Site concept, correlate vegetation to soil map unit components, and a prototype Ecological Site Description. The Project Name would be "ES – MLRA 83 – R083CY479 Sandy Flat 22-35" PZ". The ES signifies the project as an Ecological Site, this is followed by a space, dash, space, the MLRA followed by a space, a dash, and a space, then the name of the project.

The **Description** is an 'executive summary' that provides sufficient documentation to explain the need for the project. The description should be written to include sufficient information to explain to someone 10 - 15 years in the future the reasoning why the project was included in NASIS.

The **Approved** column is checked meaning 'approved' and unchecked meaning 'not approved'. This field is checked once a project has been approved by the Management Team and Soil Survey Regional Office.

The **MLRA Soil Survey Office** banner is a choice list. Choose the office assigned to this project from the list that appears.

The **State Responsible** is a choice list field and identifies the state in which the Responsible Soil Survey Regional Office is located.

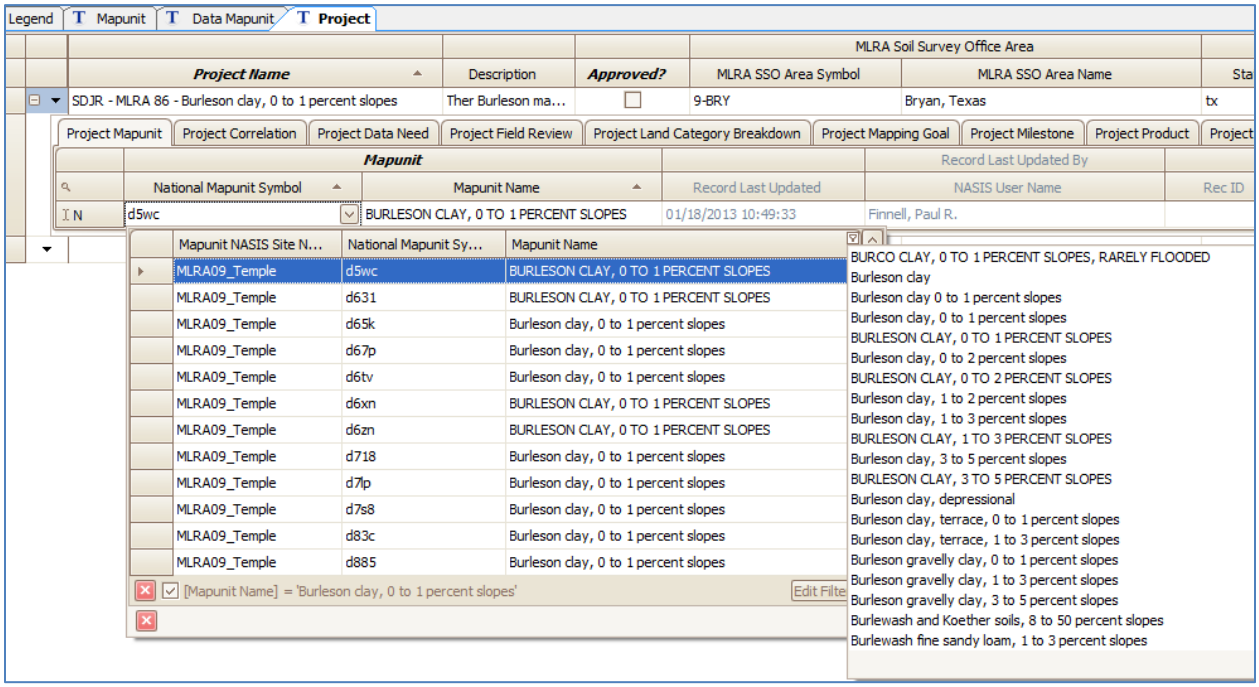
For 'proposed' projects, the Project table columns and the Project mapunit table are populated. For 'approved' projects, the Project child tables are populated.

Step 5 – Populate the Project Mapunit table (proposed projects)

Method 1: Populating the Project Mapunit table using the choice list

1. Open the child tables using the plus sign, to the left of the row, or use the child table choice list. The first "child" table to populate is the Project Mapunit table. The Project map units are identified based on the inventory and assessment completed prior to creating the Project.

2. Insert a new row (green plus sign) into the Project Mapunit table. The map unit can be chosen from either the National Mapunit Symbol or the Mapunit Name. This choice list is built from the map units contained in the Mapunit table within the Local Database. The choice list does not identify the survey area nor the publication map unit symbol that most are familiar with using. This is the reason why the first step in this process was to populate the Local Database with data from the MLRA (assuming the map units are properly assigned in the Legend Mapunit Overlap tables) or from the identified project. For this method, the user must be familiar with the National Mapunit Symbols and the surveys where they exist before populating project map units using the choice list.



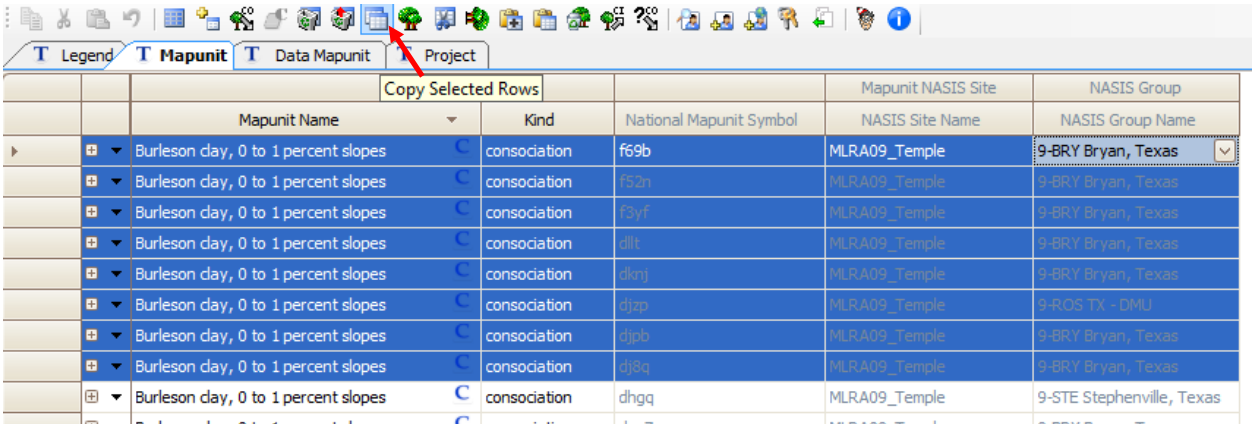
Using the filter on the 'Mapunit Name' column, you can review the list of similarly named map units in the MLRA. Notice in the filter list the variety of Burleson map units. The decision must be made on which map units will be included in the Project.

3. Choosing the map units directly associated with the project may be difficult without a spatial reference. The Inventory and Assessment (or evaluation process) done prior to project development is necessary in order to identify the proper map units assigned to the project. The decision, for example, could be to include those similarly named map units (Burleson clay, 0 to 2 percent slopes) into the specific project. This is critical since the map unit status appears in the Legend Mapunit table and is not available in these choice lists. Only 'CORRELATED' map units are used in SDJR Projects. Verify the national mapunit symbol for the correlated Project map units.

Method 2: Copy and Paste from the Mapunit table

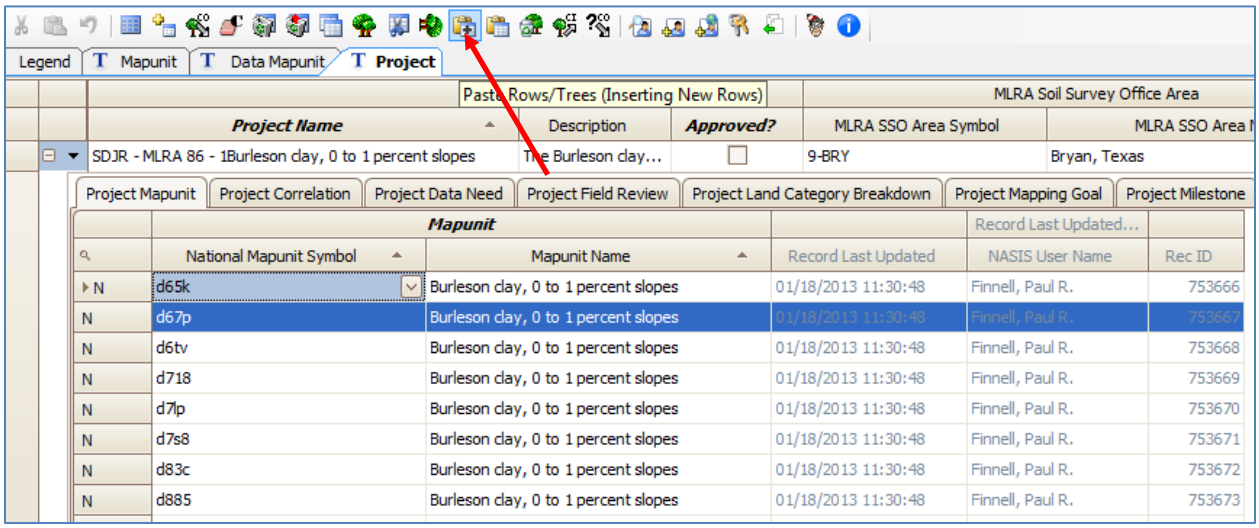
The preferred method of populating the Project Mapunit table is to copy the map units from the Mapunit table and paste into the Project Mapunit table. Understand that the Project Mapunit table does not actually contain the map units. The map units are 'linked' to the Project via the Project Mapunit table. If the Local Database contains hundreds of map units, it is best to query the map unit(s) into the selected set, copy and paste into the Project Mapunit table.

1. In this example, the selected set contains the 'Burleson clay, 0 to 1 percent slopes' map units. Open the Mapunit table:



2. Highlight and copy the map units
   a. (using Ctrl+A for all or Ctrl+click for individual) to copy
   b. choose 'Copy Selected Rows' from the Table Editor menu or toolbar (red arrow above).
   c. Using the query found in Step 1, item #2 (at the beginning of this chapter), the selected set has been filtered to include only those 'correlated' map units for the specific project.

3. Paste map units into the Project Mapunit table. Open and 'Paste Rows/Trees, Inserting New Rows'.

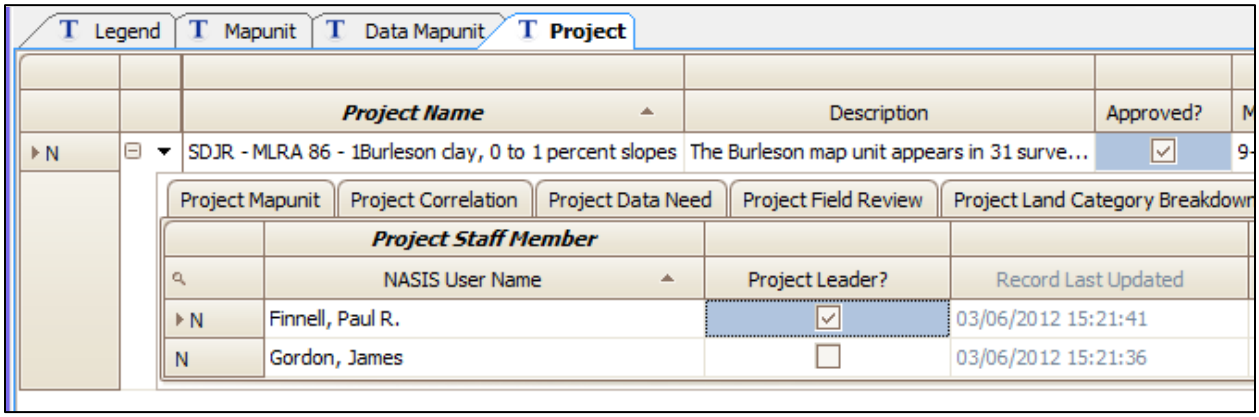


The Project is now populated with the correlated map units that will be analyzed under the Burleson SDJR project.

Step 6 – Populate the remaining child tables (approved projects)

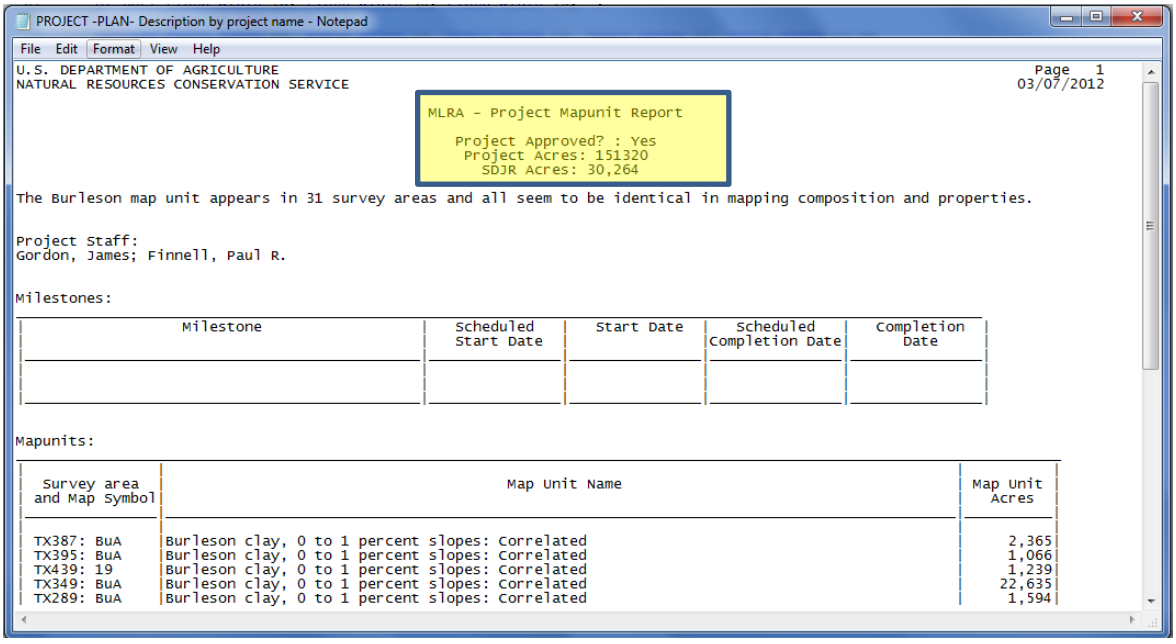
Project Staff

The Project Staff is the first table to populate. The staff is built using the choice list. NASIS 6 has "type ahead" functionality allowing the user to begin typing the last name, narrowing the choices, until staff can be chosen. Populate all the names in which the person's time or resources will be required during the project. This list includes local staff as well as the NSSL Liaison, SDQS, ES Specialist, SSS, etc. The person in charge of the project is identified as the 'Project Leader'.



Project Mapping Goal

The Project Mapping Goal table is populated with summed map unit acres. However, for SDJR projects, the goaled acres are 20 percent of the total acres. To assist users in the population of goals, the national report named "***PROJECT -PLAN- Description by project name***" is available to rapidly identify the goaled acres. This figure is then transferred to the Project Mapping Goal table. This report requires the local database to be populated with the legends and map units.



Goals are assigned to personnel. The acres can be split and assigned to various personnel as needed.

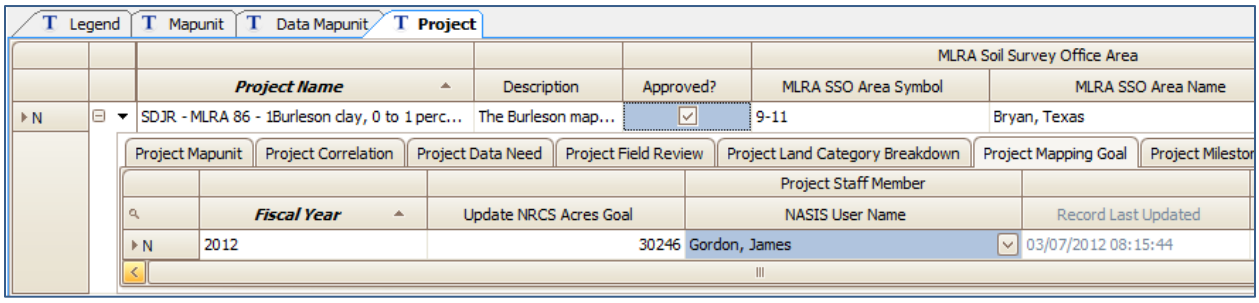
The SDJR projects are goaled acres equal to 20% of the summed map unit acres.

The MLRA field update projects are goaled acres equal to 100% of the summed acres.

The ES projects are goaled as the sum of acres of soil components correlated to the ESD in the project.

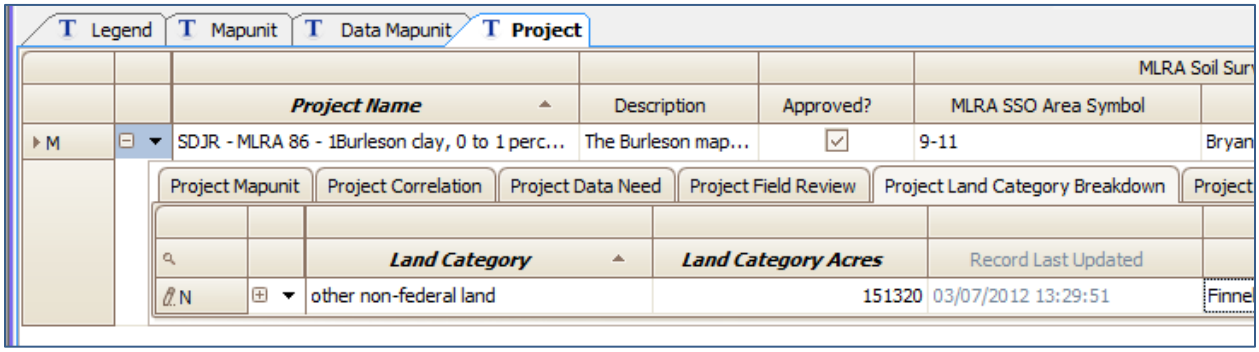
Assign the appropriate acres in the 'Update NRCS Acres Goal' or the 'Update Cooperator Acres Goal'.

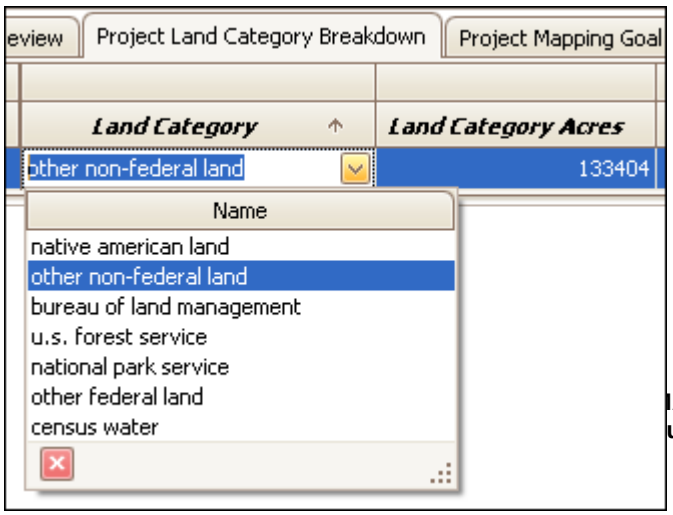
For ES projects, goals for new ESDs that have not been previously correlated to any components would be populated under Initial NRCS Acres goals. For an ESD that is being updated, the goal would be populated as Update NRCS Acres Goal.



Project Land Category Breakdown

Using the "*PROJECT -PLAN- Description by project name*" report, the summed map unit acres, 'Project Acres', should be used to populate the Project Legend Category Breakdown acres. The project acres are populated using the appropriate category:



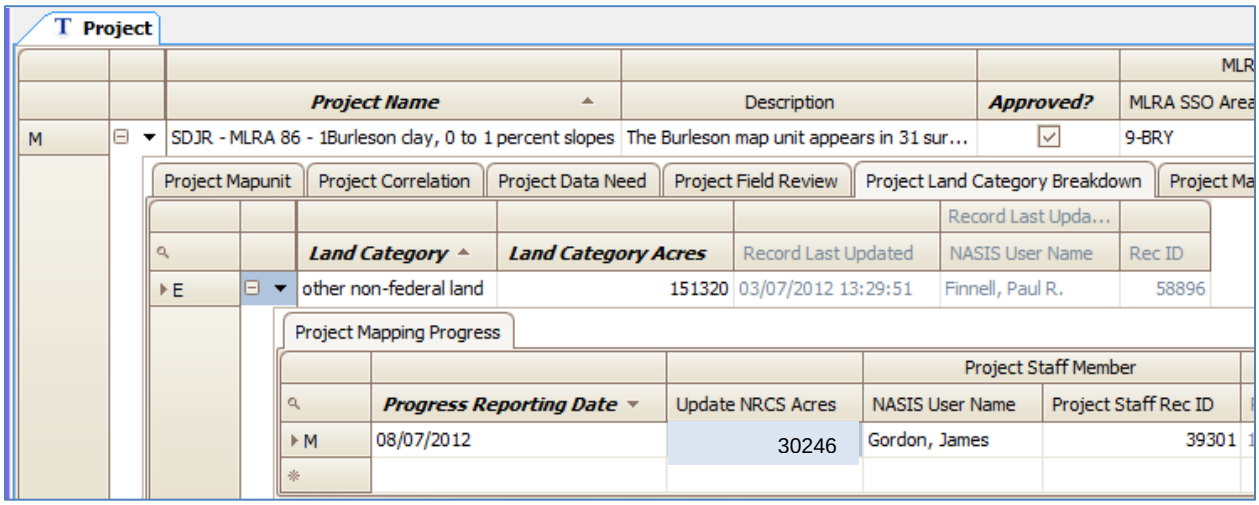


The "Land Category" choice list provides the various categories. The category is dependent upon the location of the specific map unit and the category in which the map unit is located.

Project Mapping Progress

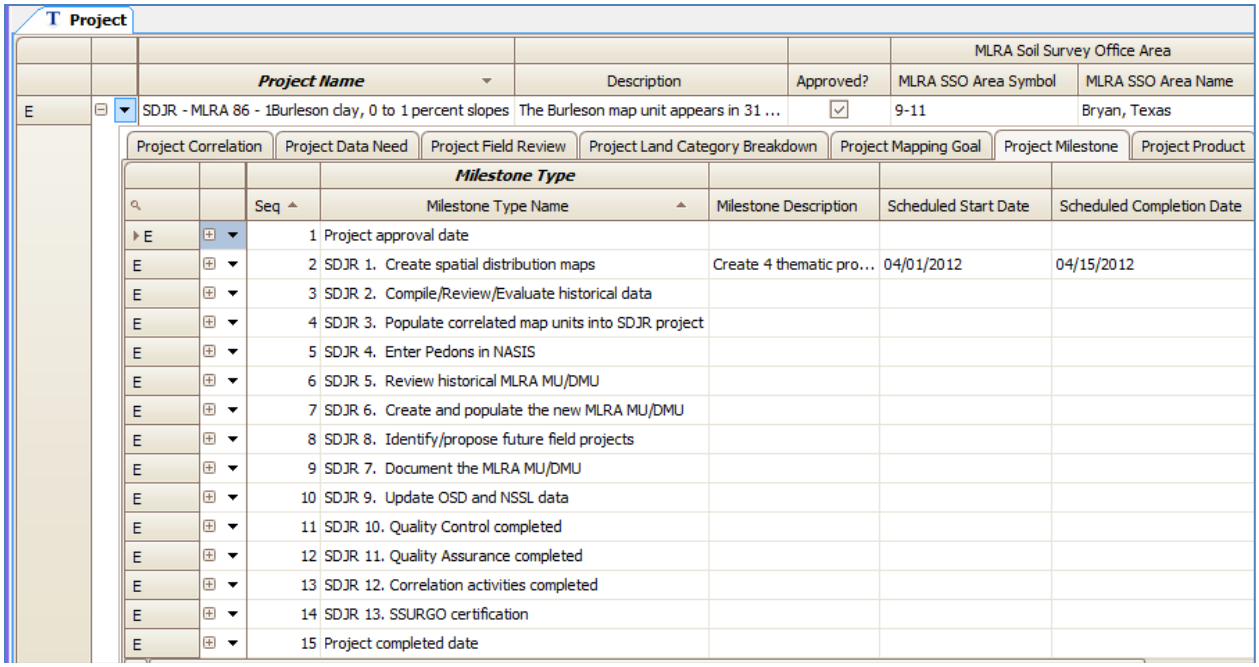
Record the acres in the “Project Mapping Progress” child table of the Project Land Category Breakdown.

1. For the SDJR project, the acres are reported **AFTER** the *quality assurance review* is completed for the project.
2. For MLRA field update projects, the acres are reported **AFTER** the SSS submits the surveys to the Soil Data Mart.
3. For ES projects the acres are reported AFTER the ESD reaches approved status. When the ESD reaches Correlated status, the proper milestones should be recorded as complete.



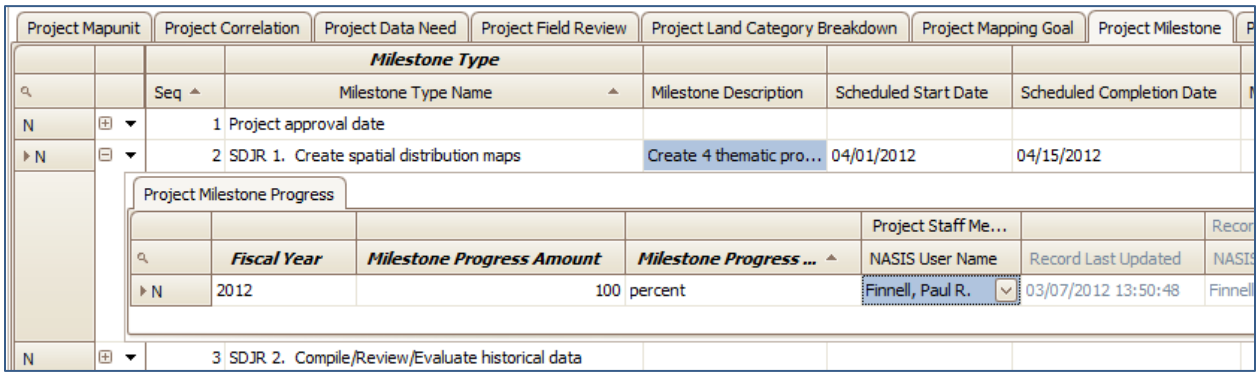
Project Milestone

The Project Milestone table documents specific tasks of the Project. It is used to identify and document completion of the project. The national SDJR template has the specific list of Milestones that are assigned to each project. These milestones are identified with the SDJR prefix. The 15 milestones identified in the image below are required for all SDJR projects. The sequence column can be used to assign proper sequence. Scheduled and Actual dates are to be populated for each milestone. ES projects also have a list of specific Milestones (see NASIS choice list or NESH).



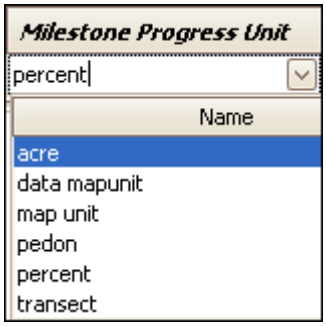
Project Milestone Progress

The Project Milestone Progress records the progress of each Milestone. Progress is recorded for each Milestone Type, by year, amount, units and staff member. This is an SDJR example being used to show how progress is recorded for a project.



SDJR Projects will use the Milestone 'Actual Completion Date' to identify progress. There are other projects that could use the Milestone Project Progress table such as ES or MLRA field projects and this is only an example showing the use of this table.

The Milestone Progress has a 'Unit Choice List' that provides the user various methods of progress reporting.



Project Product

It is not necessary to populate this table for MLRA update projects, however 'web publication' can be populated to identify a method of publication.

Project Field Review

It is not necessary to populate this table for SDJR projects, however it may be used in the MLRA field projects and ES projects to record field reviews.

Project Correlation

This table is used to record the correlation of projects.

Project Data Need

It is not necessary to populate this table for MLRA update projects.

Project Text

The Project Text table is used to record any plans or documentation for the project.

Proposed Projects
SDJR Projects will identify update needs that require field work or spatial work to complete the correlation. When an SDJR project identifies new udates needs, these are recorded as a new record in the Project table as an MLRA update project with the Milestone of "Future Project from SDJR" assigned to the project. Also populate map units in the Project Mapunit Table that need to be part of the future project.

Step 7 – Create the new MLRA map unit

The vast majority of the SDJR projects will deal with consolidating published (correlated) map units into MLRA map units to create a seamless MLRA coverage. Specific correlation steps must be followed to insure the validity of the new map unit and to insure the historical record is maintained. The update process should help to document trends and preserve historical records for future analysis. This section of Project Management identifies the steps necessary to meet the needs of the update process.

To this point,

1. The Local Database is populated with MLRA data from the National database
2. A project is created in the Project table
3. The Project Mapunit table is populated via
    a. choice lists, OR
    b. copy and paste from the Mapunit table
4. The Project child tables are populated *(refer to previous sections for details)*.
    a. Project Staff *(specific staff members assigned to the project)*
    b. Project Mapping Goal
    c. Project Land Category Breakdown *(acres assigned to land category)*
    d. Project Milestone *(milestones for the project)*
    e. Project Text *(full investigation plan, full project plan, etc.)*
    f. Remaining tables as needed
5. Upload project plan to the National Database
6. Project has now been created and is ready to manage.

The Project "SDJR - *MLRA 86 – Burleson clay, 0 to 1 percent slopes*" has been created. During the course of the Project, data will be gathered, decisions will be made, composition will be identified, and soil properties will be populated. The SDJR project will use historical documentation to make decisions. The MLRA Field projects will collect additional data in the field to make decisions. Regardless, the update project is designed to improve the quality of the product.

The intent of the inventory and assessment is to identify the state of the soil survey information at the time of the project. Capturing the data in a specific date and time will allow for identification of trends. To capture trends, it is necessary to create a new map unit and its data mapunit during update projects.

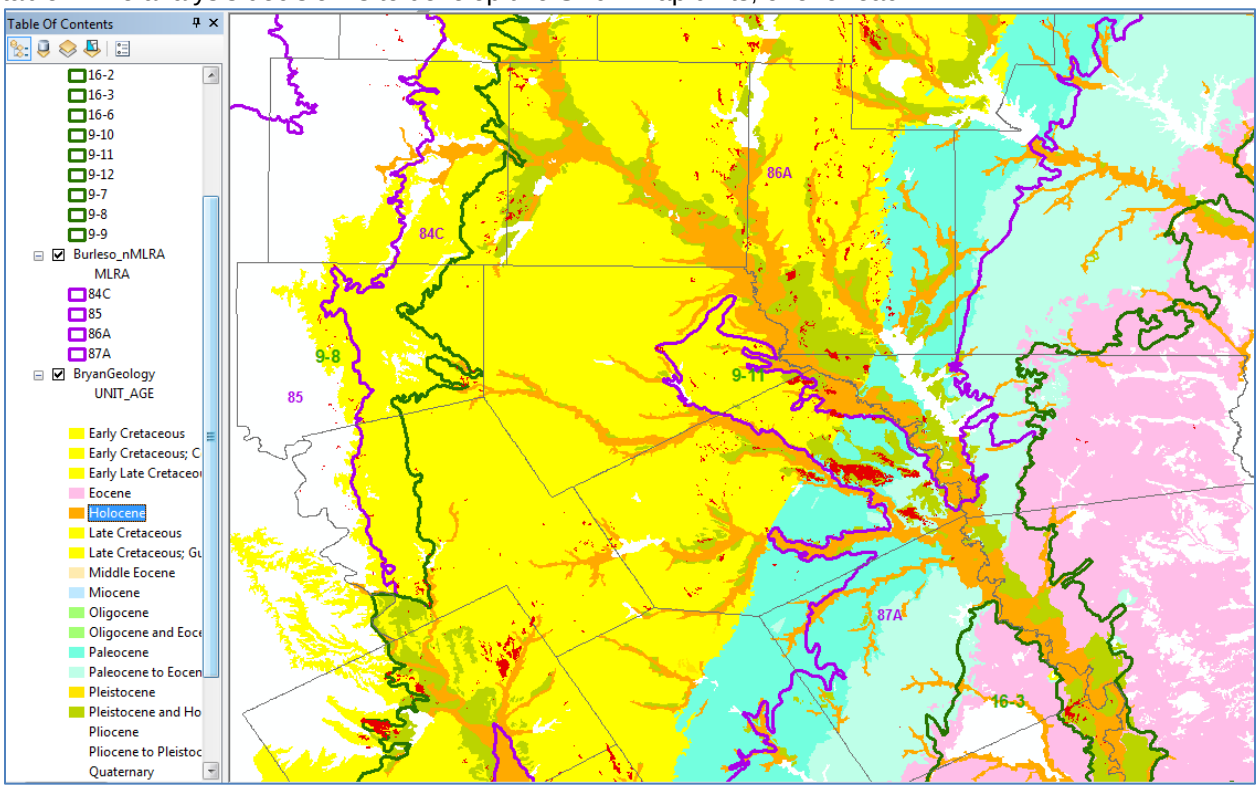
There will be significant analysis prior to development of the MLRA map unit, whether an SDJR project reviewing historical data or as a field MLRA update project collecting additional field data. Manuscripts, correlation documents, pedon descriptions, lab data, etc. will all be analyzed and used to make decisions.

In this example, the analysis will be geological based. Notice the image on the next page:

1. The MLRA boundaries are thick purple lines.
2. The Burleson polygons are in red
3. The various shaded polygons are the geological formations ranging from yellow Cretaceous to blue Paleocene to green Pleistocene.

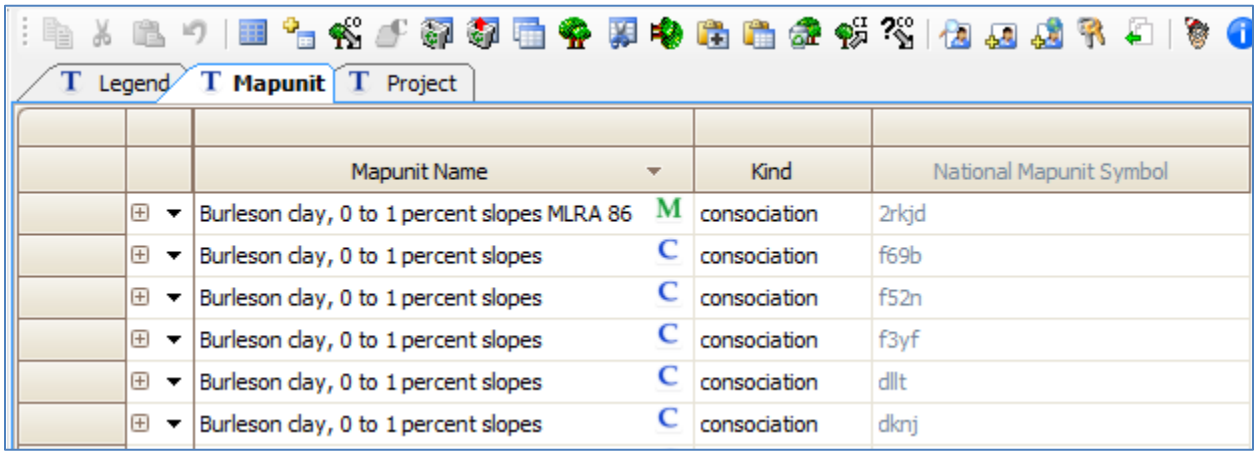
The image identifies the 'Burleson clay, 0 to 1 percent slopes' map unit mapped in MLRA 86 and MLRA 87 with islands in MLRA 84. Based on the difference in scales between the MRLA line and the SSURGO line, it will be assumed the Burleson in MLRA 84 could in fact be MLRA 86 islands and will be associated with MLRA 86. Burleson is typically mapped on Cretaceous materials however it's also mapped on the Pleistocene materials in some areas in MLRA 87.

Immediate questions arise on the validity of the MLRA 86/87 line in the center of the image which is outside of the SDJR project. Should this be developed as a proposed field project in the NASIS Project table? The analysis decision is to develop two SDJR map units, one for each MLRA.



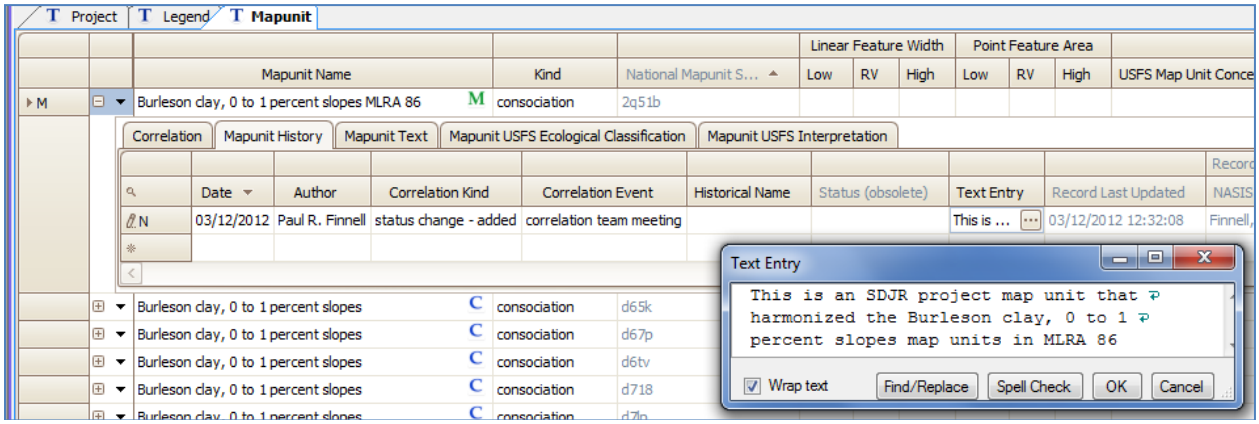
Process Steps

1. Return to the Mapunit table and insert a new row and create the MLRA map unit. Two map units are created as provisional units. *The "MLRA 86" was added for the sake of this exercise* to differentiate the correlated map units vs. the new map unit. Follow NSSH guidelines on phasing map unit names.

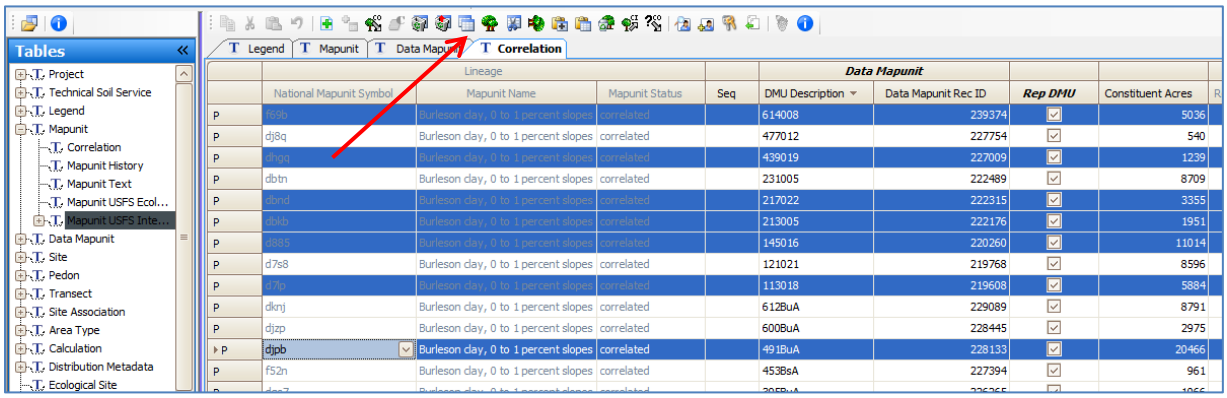


Notice the new map unit is distinguished using the MLRA 86 designation. This temporary phase is added for ease of identification since map unit 'status' is not in the Mapunit table.

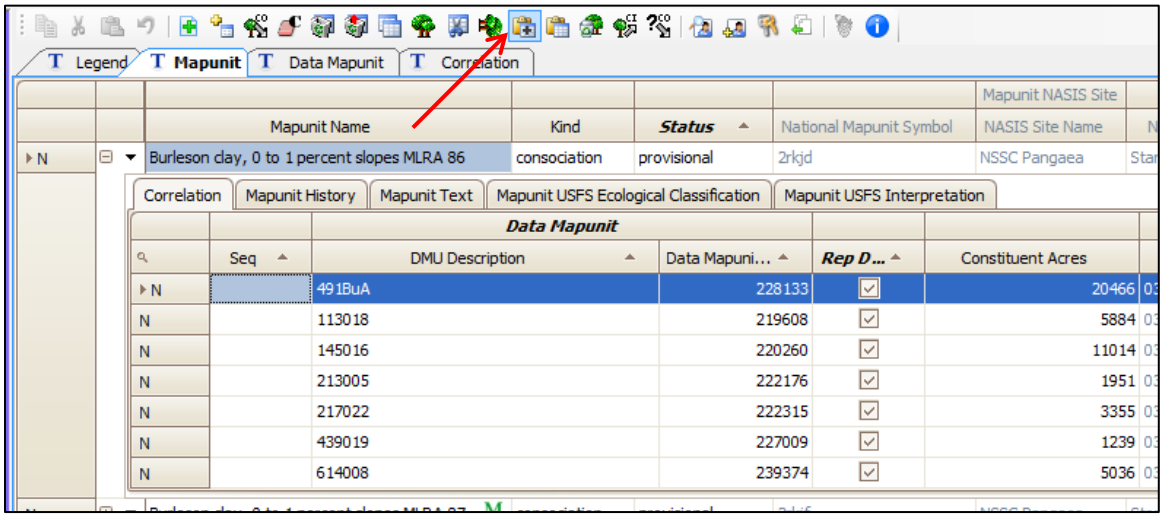
2. The Mapunit History table is opened and all fields are populated. Notice that the first entry for the mapunit has the historical name blank as this is a new mapunit and had no previous name. Each mapunit history entry after the first, will have Historical Name populated.



3. Open the "Correlation" table in the Explorer panel,. This table opens in the Editor panel. It contains all the correlation records for the map units in the selected set. Using the Ctrl+click, choose the correlation records for the map units within the area that will be recorrelated as MLRA 86. Then choose the 'copy selected rows' from the Editor menu or Editor toolbar.



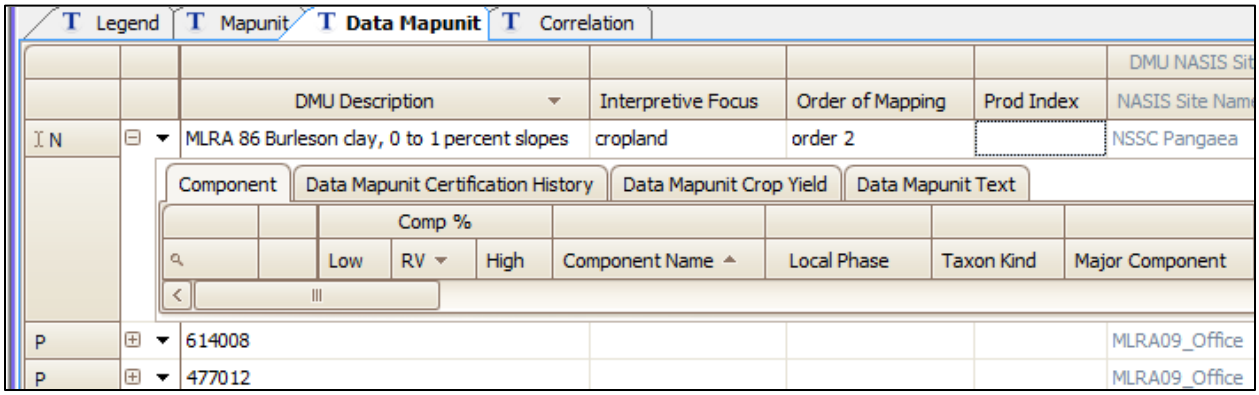
4. Return to the Mapunit table and select the new map unit and highlight the Correlation tab. Choose the icon “Paste Rows/Trees (Inserting New Rows).



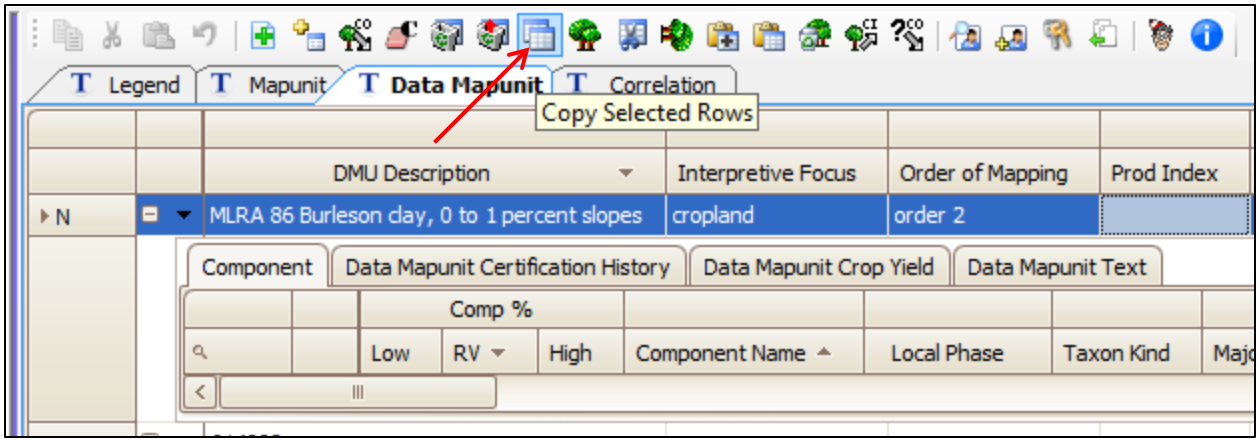
The resulting paste links all the correlated map unit records into the new MLRA mapunit. This process links the old publication map units to the new MLRA map unit. The new MLRA map unit is now linked to the original traditional survey map units. This step is required in order to record the conversion of the old map units to the new map unit.

Notice all the check marks in the ‘RepDMU’ column. These check marks will all be removed once the new MLRA data mapunit record is created.

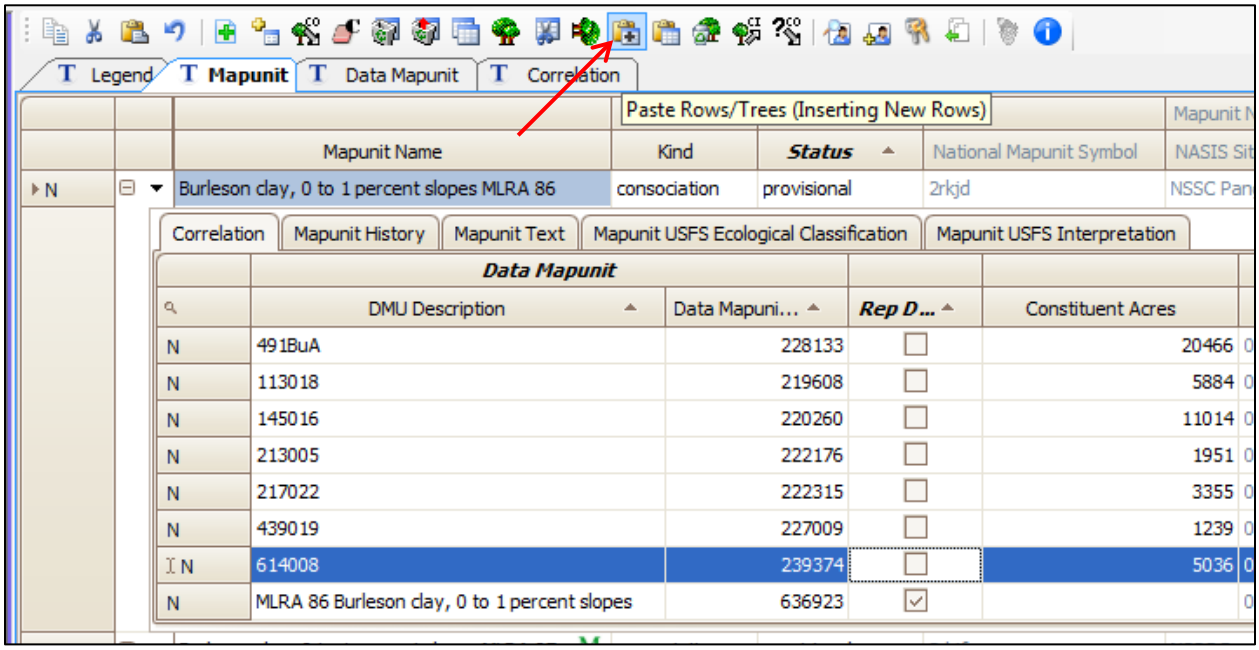
5. Return to the Data Mapunit table and create a new record populating the ‘DMU Description’, ‘Interpretive Focus’ and ‘Order of Mapping’. (The Interpretive Focus is optional but is used to identify the land use used for the population of soil properties. In this example, the soil properties will be derived from cropland situations.) This new record will build the new map unit concept moving from the ‘county by county’ to the ‘MLRA’ map unit concept.



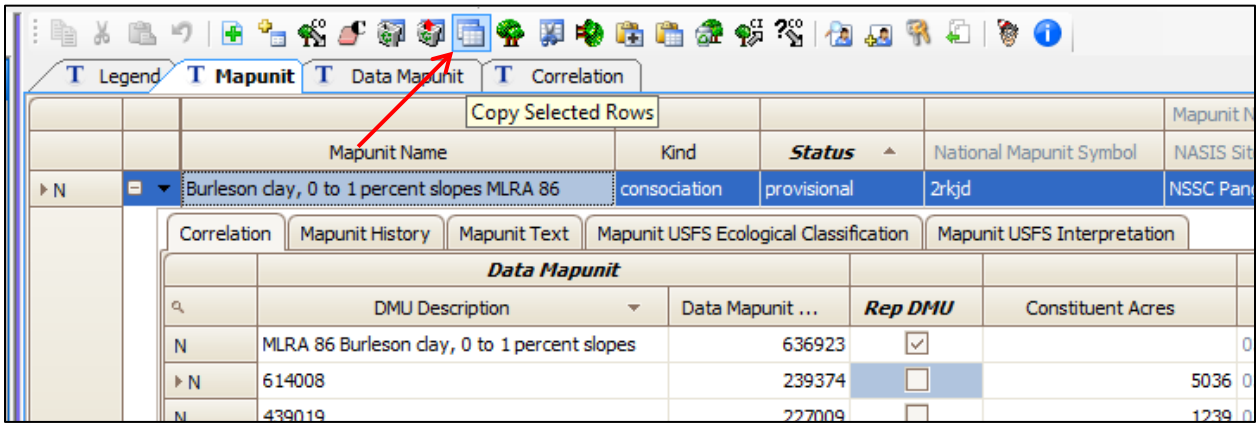
6. The new DMU needs to be linked to the new Mapunit. Highlight the new DMU record and choose ‘Copy Selected Rows’ from either the Editor menu or Editor toolbar.



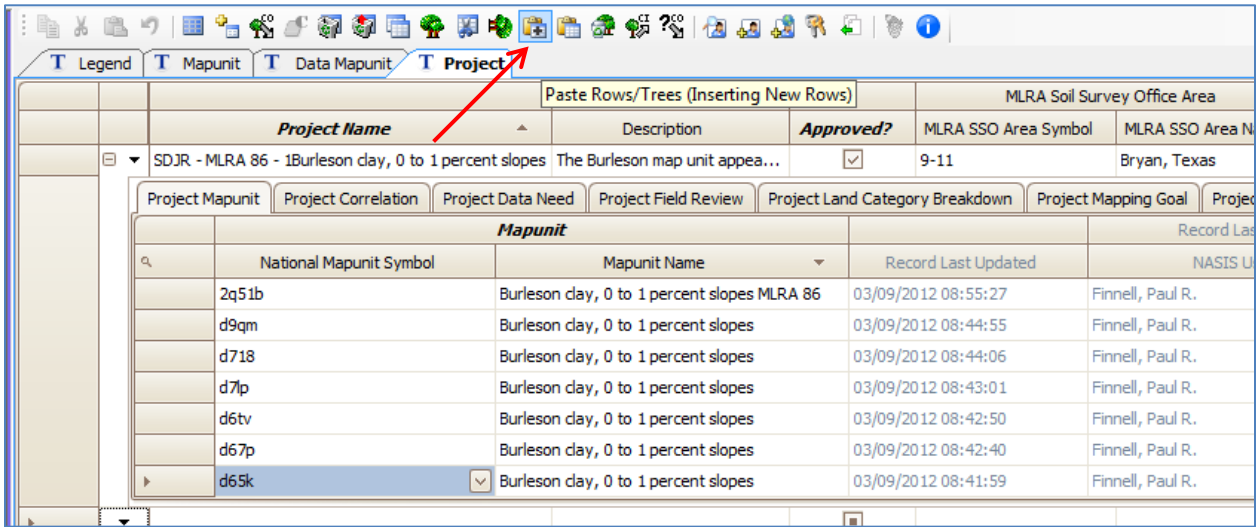
7. Then paste the new record into the Correlation table for the new MLRA 86 Mapunit. Assign the new DMU as the 'RepDMU' and remove the check marks from all other records as seen in the image.



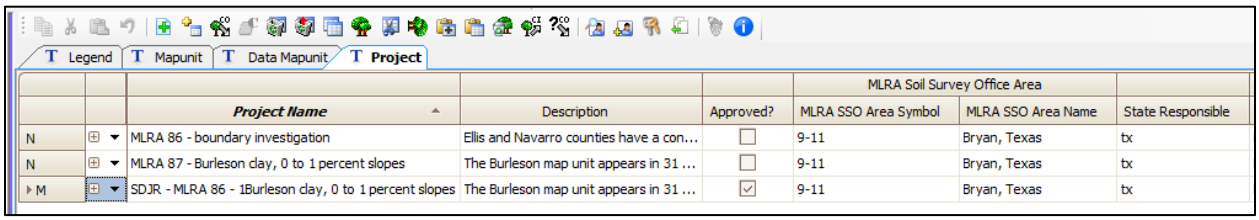
8. The MLRA map unit is now linked to the original map units and is ready to be added to the Project Mapunit table. Highlight the map unit record for the MLRA map unit and choose ‘Copy Selected Rows’.



9. Return to the Project Mapunit table and choose ‘Paste Rows/Trees, Inserting New Rows’ to add the new map unit.



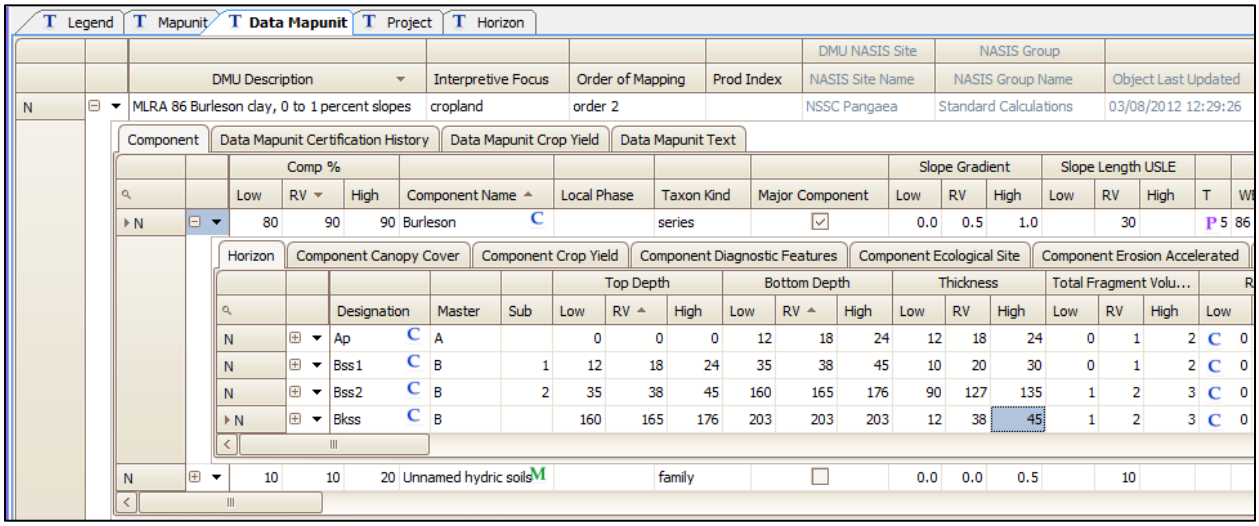
10. You can now understand why the ‘MLRA 86’ was added to the map unit name. It reduces confusion by clearly identifying the MLRA map unit. The project is now fully developed in the Project table and work will begin. It includes all the correlated map units and the provisional MLRA map unit. The process now begins by analyzing all the data and populating the components and their properties for the new Data Mapunit based on the analysis. New proposed projects have already been identified in the image below and populated based on early findings:



To this point,

1. The Local Database was populated with MLRA data from the National database
2. A project was created in the Project table
3. The Project Mapunit table is populated via
    a. choice lists, OR
    b. copy and paste from the Mapunit table
4. The Project child tables are populated *(refer to previous sections for details)*.
    a. Project Staff *(specific staff members assigned to the project)*
    b. Project Mapping Goal *(refer to previous sections)*
    c. Project Land Category Breakdown *(acres assigned to land category)*
    d. Project Milestone *(milestones for the project)*
    e. Project Text *(full investigation plan, full project plan, etc.)*
    f. Remaining tables as needed
5. The Project was uploaded to the National Database
6. The new Project is ready to manage.
7. A new MLRA Mapunit was created so that all project work would be completed on the new map unit. This step prevents tampering with the official survey data until the project correlation is complete.
8. The correlation records of the existing map units were copied from the Correlation table and pasted into the Correlation table of the new MLRA map unit. These records in the correlation table link the new MLRA map unit to the original survey map units. A new MLRA map unit is created to preserve the historical nature of the original subset map units.
9. A new Data Mapunit was created for the MLRA map unit – once again, the original DMUs are preserved for historical purposes and this allows the user to create new data without impacting the official soil survey data until the correlation is completed. This particular DMU was created using a new record. The DMU is then updated with information collected from the field. This data is used to aggregate the individual "county subset" map units into a new "MLRA mapunit".
10. The new MLRA DMU record is now copied and pasted into the MLRA Mapunit correlation table. The new DMU is set as the representative DMU and the others are set to no (the check mark is removed)

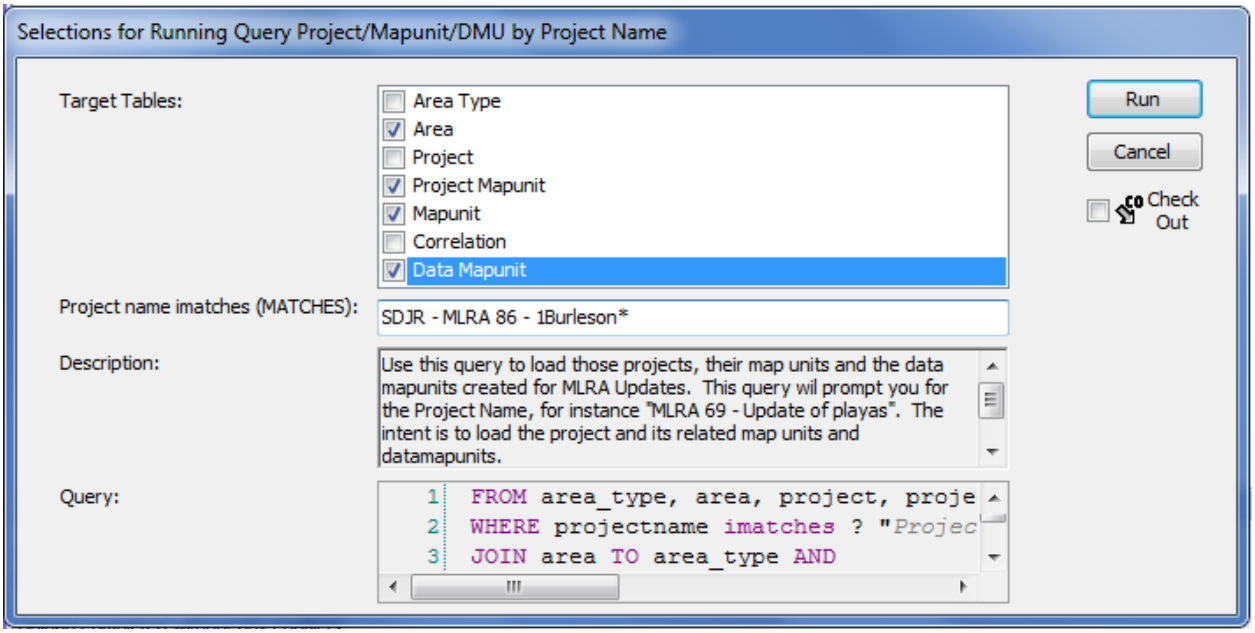
By following this procedure, the new MLRA map unit is linked to the map units used in the survey subsets and the historical nature of the map units and their data are preserved. It is now time to begin the population of the MLRA DMU to identify the new map unit concept.

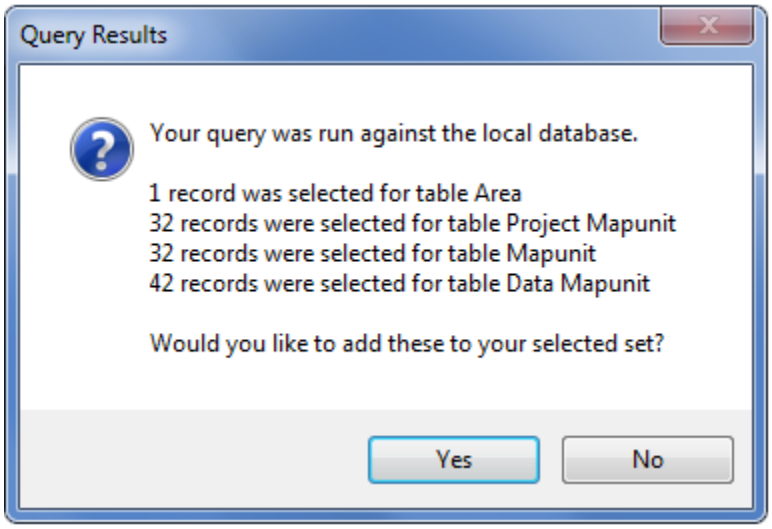


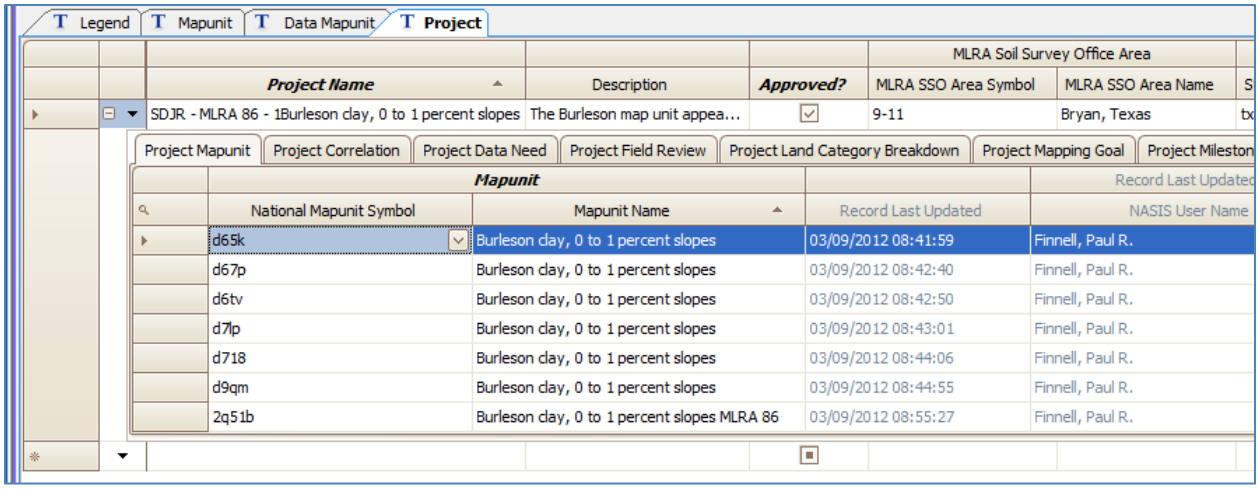
Step 8 – Link the new MLRA map unit to the survey legends

This step assumes the Project is complete. The project has passed Quality Control and was sent to the SDQS. The SDQS has completed the Quality Assurance. The data is now ready to be added into the legends, certified, and the legends submitted to the Soil Data Warehouse.

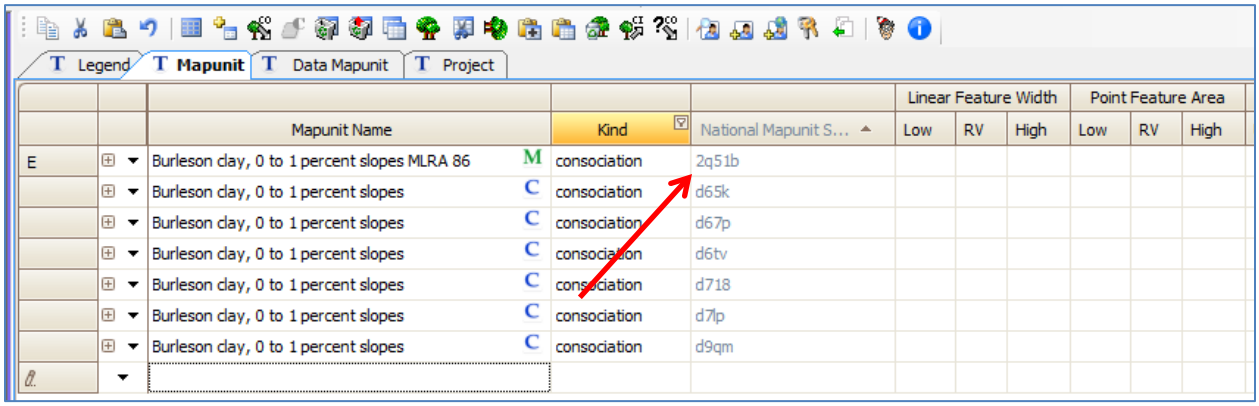
1. Empty the Selected Set.
2. Open the Project Table,
3. Load the Project into the selected set using the National query name "*Project/Mapunit/DMU by Project Name*". This query loads the project, the map units, and their data mapunits; but not the Legends.





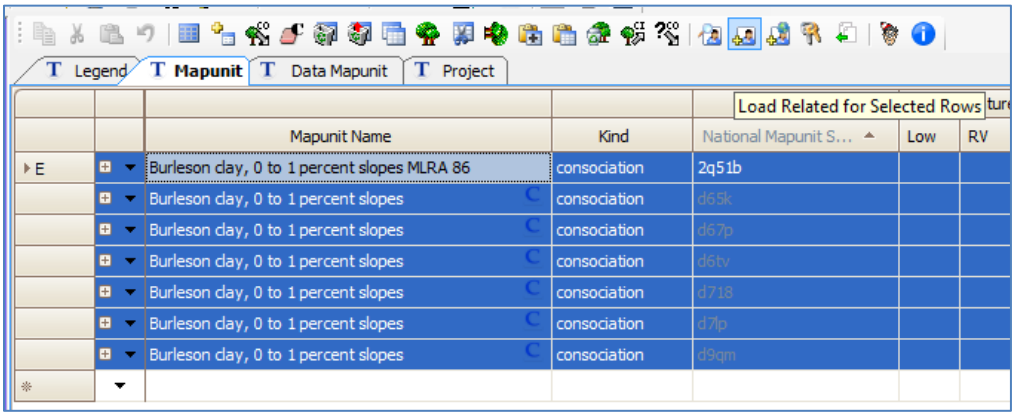


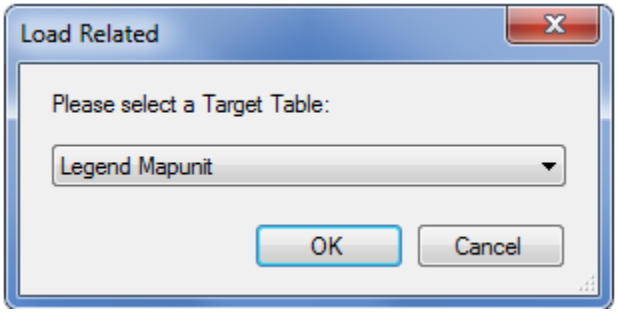
4. Open the Mapunit table. Review the map units.

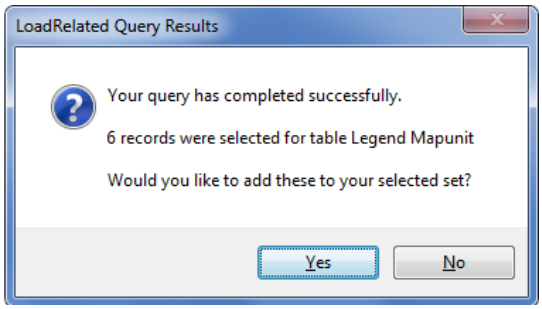


Notice in NASIS 6.2, map unit status is no longer in the Mapunit table. This query did not load the Legends.

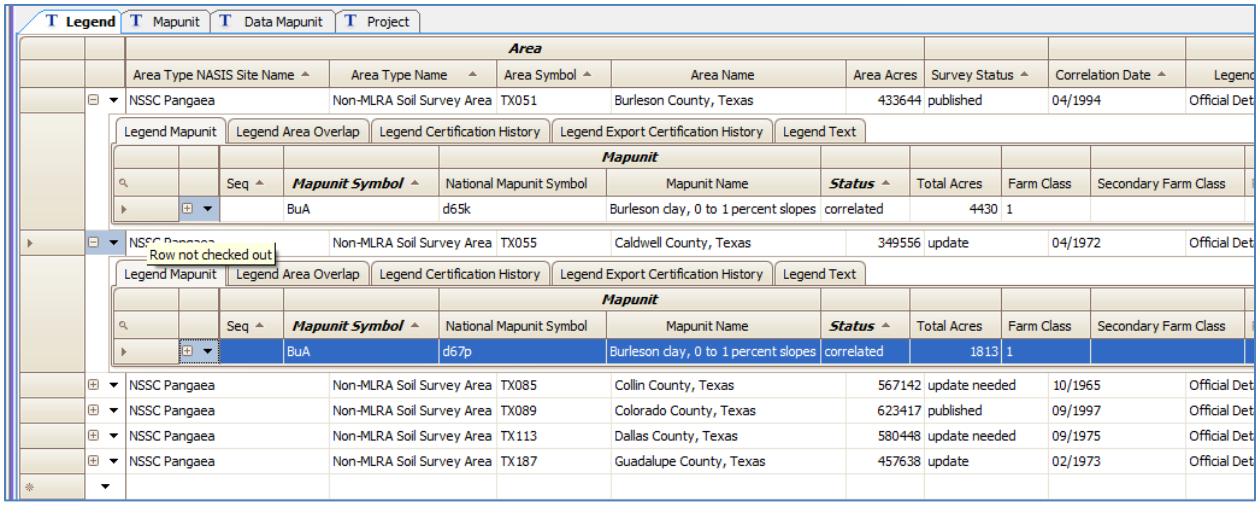
5. Highlight all the map units (Ctrl+A). Then choose 'Load Related for Selected Rows" and choose Legend Mapunit. This process will populate the Legend Mapunit table with the map units for this project.



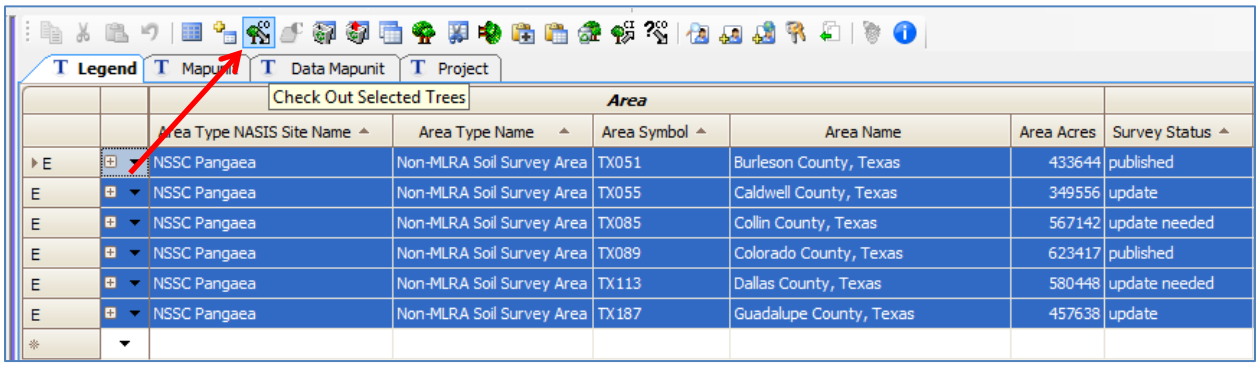




6. The Legend Mapunit table contains only the map units within the Mapunit table.



7. Check out the Legends to edit.

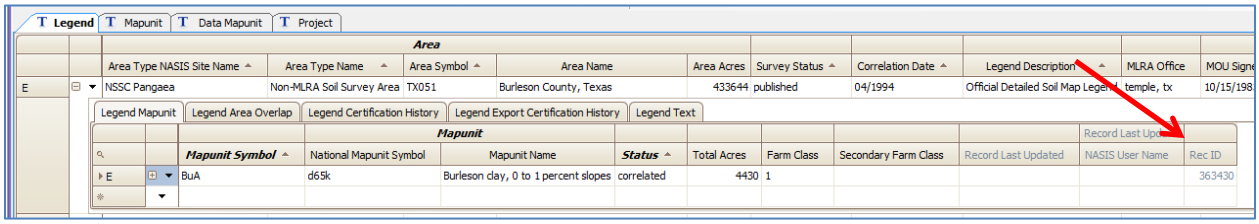


		Area Type NASIS Site Name	Area Type Name	Area Symbol	Area Name	Area Acres	Survey Status
E		NSSC Pangaea	Non-MLRA Soil Survey Area	TX051	Burleson County, Texas	433644	published
E		NSSC Pangaea	Non-MLRA Soil Survey Area	TX055	Caldwell County, Texas	349556	update
E		NSSC Pangaea	Non-MLRA Soil Survey Area	TX085	Collin County, Texas	567142	update needed
E		NSSC Pangaea	Non-MLRA Soil Survey Area	TX089	Colorado County, Texas	623417	published
E		NSSC Pangaea	Non-MLRA Soil Survey Area	TX113	Dallas County, Texas	580448	update needed
E		NSSC Pangaea	Non-MLRA Soil Survey Area	TX187	Guadalupe County, Texas	457638	update

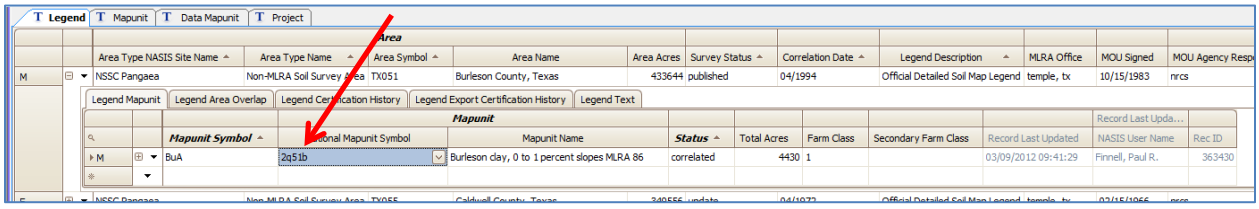
8. The new ‘MLRA 86’ map unit will need to be added to each Legend Mapunit table, and the map unit status will need to be modified for each map unit. The critical step in this process is to replace the Legend Mapunit link for the old map unit with the new map unit. There are two methods to complete this task:

Method one (direct reassignment)

1. **The next few steps are critical and must be explicitly followed by the SDQS (especially for SDJR Projects)**
   a. At this time, the new '*Burleson clay, 0 to 1 percent slopes MLRA 86'* map unit is not associated with any legend. Using the 'Load Related' function in Step 5 above, the Legends are populated with the original publication '*Burleson clay, 0 to 1 percent slopes*' map units.
   b. Open the Legend table, then open the child table Legend Mapunit – NOTE the number assigned to the original map unit in this table is RecID (363430). This is the number that is converted to the 'mukey' for the SSURGO database. It is an important field that links the spatial and the attribute data. If this number changes for a given map unit symbol, then the link between the spatial and attribute databases is broken. Breaking this link requires the spatial data to be recalled at the staging server, essentially adding more work.
   c. Note: If this process is followed, the overlap tables do not have to be altered, assume proper population in the first place.

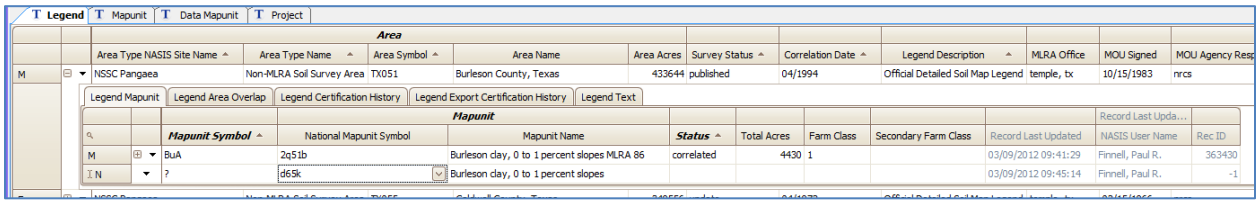


2. Notice the screen shot in Step 6 item #4 above. The screen shot is of the Mapunit table and in it you can identify the National Mapunit Symbol for the MLRA map unit – **2q51b**. Remember the National Mapunit Symbol for your new map unit because it will be used in these steps.



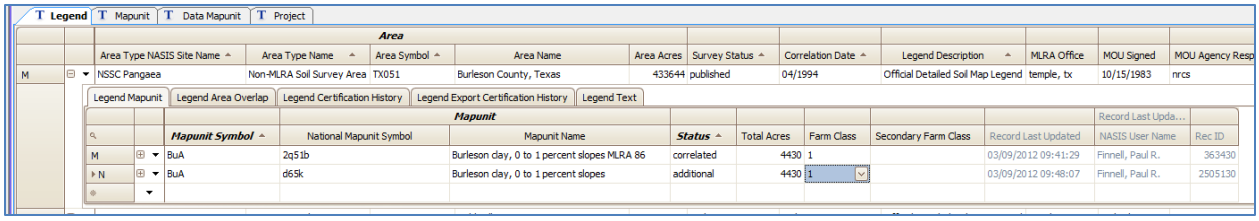
3. Notice in the image above, the National Mapunit Symbol field was changed from the old map unit to the new MLRA map unit. This method does not change the RecID number for the existing map unit (363430). Remember, this is necessary to maintain the 'mukey' link between the attribute to spatial links. We have modified record 363430 from the old map unit to replace it with the new map unit.

4. Insert a new row in the same Legend Mapunit table and enter the National Mapunit Symbol for the map unit that was just replaced – **d65k.**



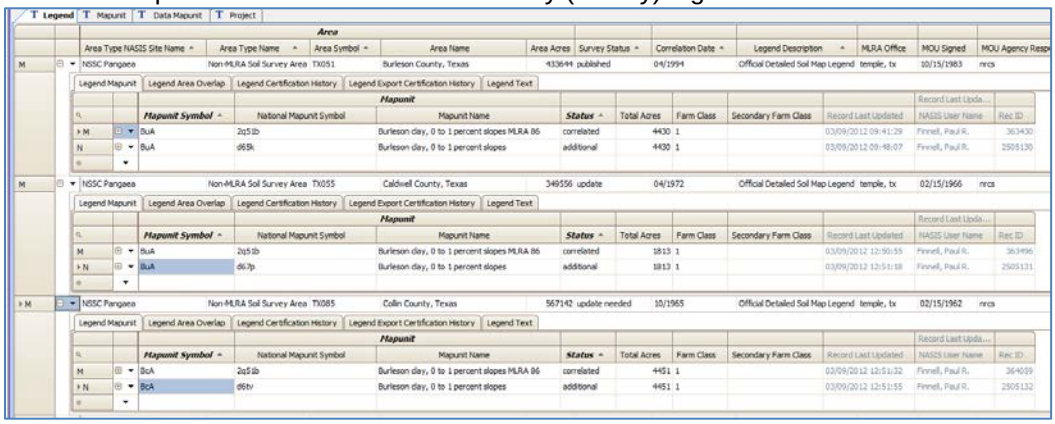
5. Now that the original map unit has been added back to the Legend Mapunit table, re-enter the publication symbol, acres, status, and farmland class for the old map unit. Do not forget to 'finish'

the edit by moving away from the row or clicking on the 'green check mark' in the lower portion of the editor screen:



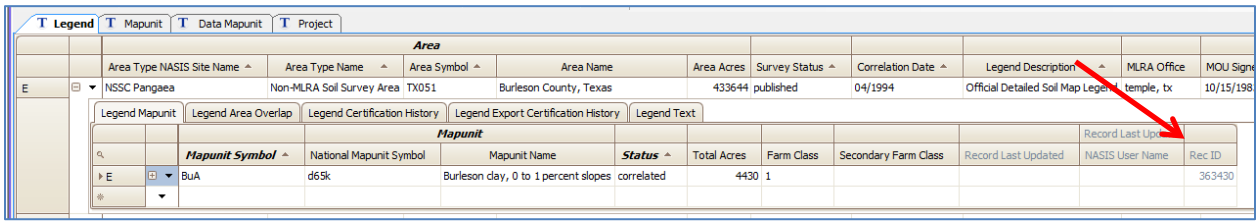
6. Notice the original RecID (363430) and the publication symbol (BuA) is preserved, however the map unit name (Burleson clay, 0 to 1 percent slopes MLRA 86) now reflects MLRA map unit. (**This name was provided for this example to differentiate the map units – YOU SHOULD NOT FOLLOW this method for the official name of the map unit.**) The new RecID (2505130) is linked back to the original map unit. Nothing is lost.
7. This process continues for each Legend in which the new map unit will be assigned. It allows the new map unit to be added to the Legend without requiring a spatial recertification or spatial recall at the staging server. It will eliminate future problems associated with managing SSURGO spatial data and NASIS attribute databases.
8. Then document the edits in the Legend Mapunit Text table. Document the changes and which map unit was replaced.

However, if a map unit within the county is split, and the MLRA map unit is being added to replace specific polygons within the county (or survey) then a new map unit symbol will be assigned to the new map unit. Follow NSSH and Soil Survey Regional Office guidance on map unit phase names. Same named map units are not allowed in a county (survey) legend.

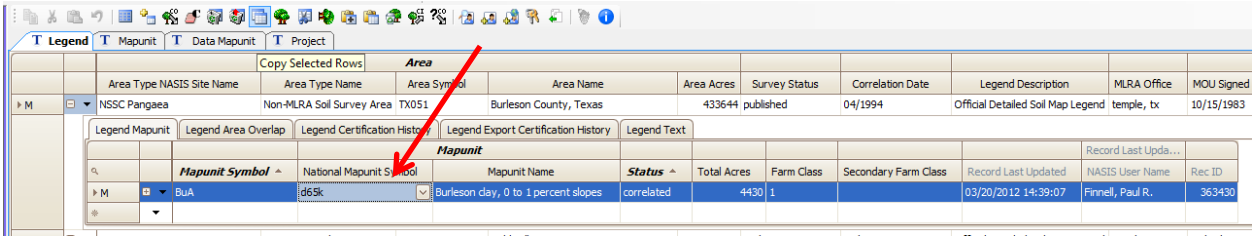


Method two: Copy and Paste

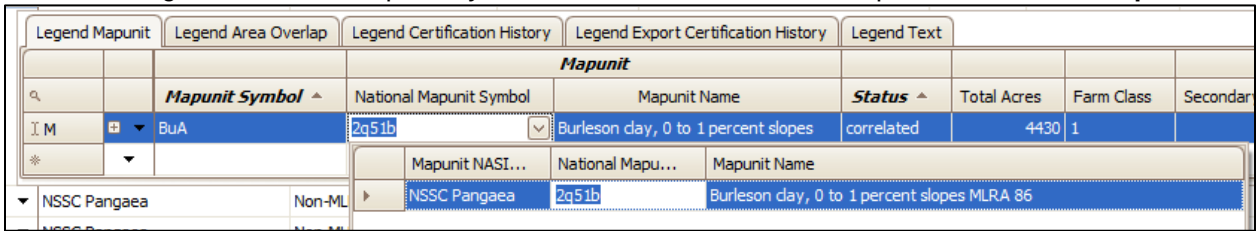
1. **The next few steps are critical and must be explicitly followed by the SDQS (especially for SDJR Projects)**
   a. At this time, the new '*Burleson clay, 0 to 1 percent slopes MLRA 86'* map unit is not associated with any legend. Using the 'Load Related' function, the Legends are populated with the original publication '*Burleson clay, 0 to 1 percent slopes*' map units.
   b. Open the Legend table, then open the child table Legend Mapunit – NOTE the number assigned to the original map unit in this table is RecID (363430).
   This is the number that is converted to the 'mukey' for the SSURGO database. It is an important field that links the spatial and the attribute data. If this number changes for a given map unit symbol, then the link between the spatial and attribute databases is broken. Breaking this link requires the spatial data to be recalled at the staging server, essentially adding more work.
   c. Note: If this process is followed, the overlap tables do not have to be altered, assume proper population in the first place.



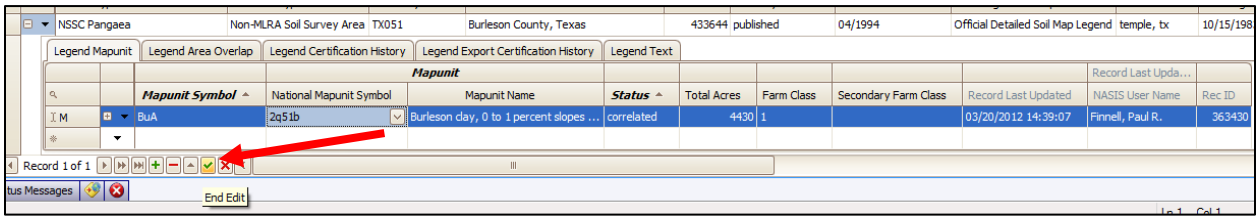
2. Highlight the original map unit and "Copy Selected Rows".



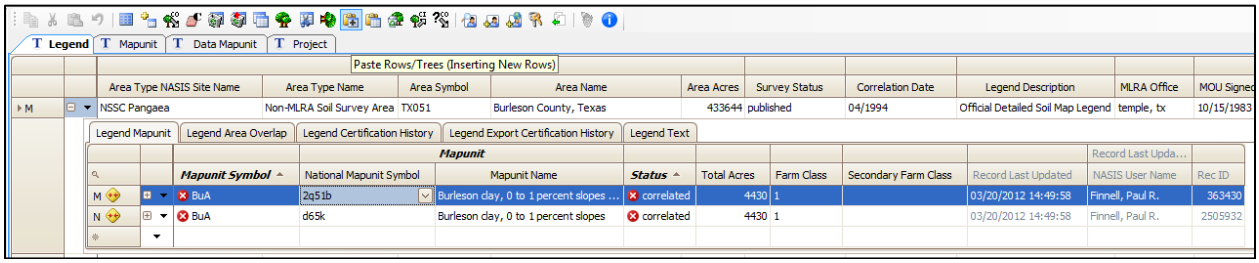
3. Change the National Mapunit Symbol to reflect the new MLRA map unit – Remember **2q51b**?



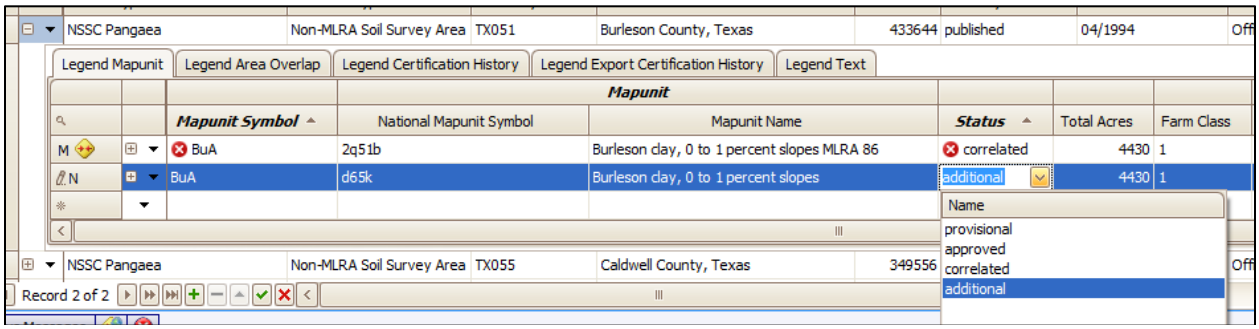
4. End the edit by clicking on the Green Checkmark to accept the change in National Mapunit Symbol



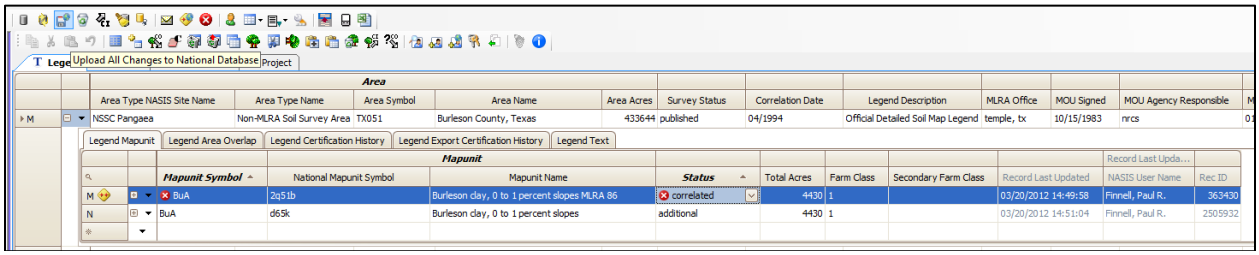
5. Paste the old map unit back (Paste Rows/Trees Inserting New Rows) into the Legend Mapunit table.



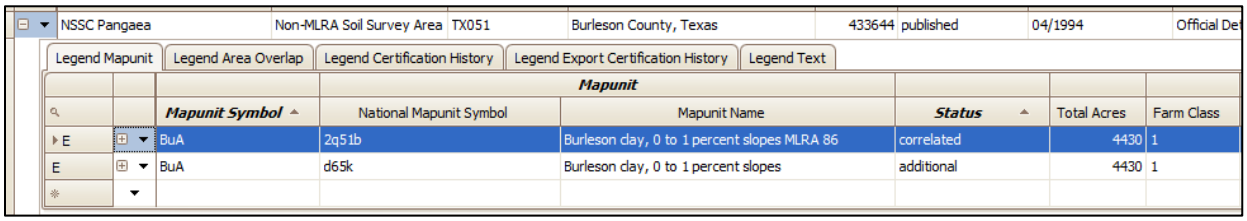
6. Change the status of the old national map unit symbol ‘d65k’ to ‘additional’ then ‘End Edit’ by clicking on the green check mark in the lower left hand corner of the Editor window.



7. Then ‘Upload All Changes to National Database’



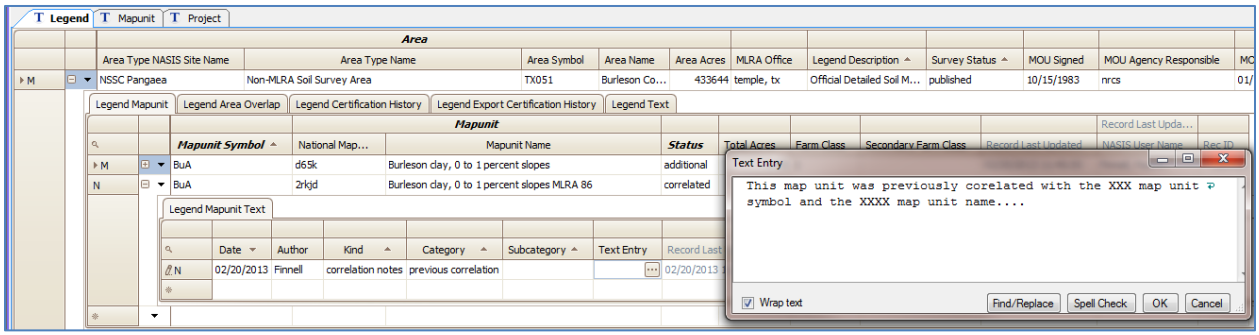
8. The result is the new MLRA map unit replaces the old map unit, retaining the same Record ID number. And, the old county map unit is pasted in with a new Record ID number.



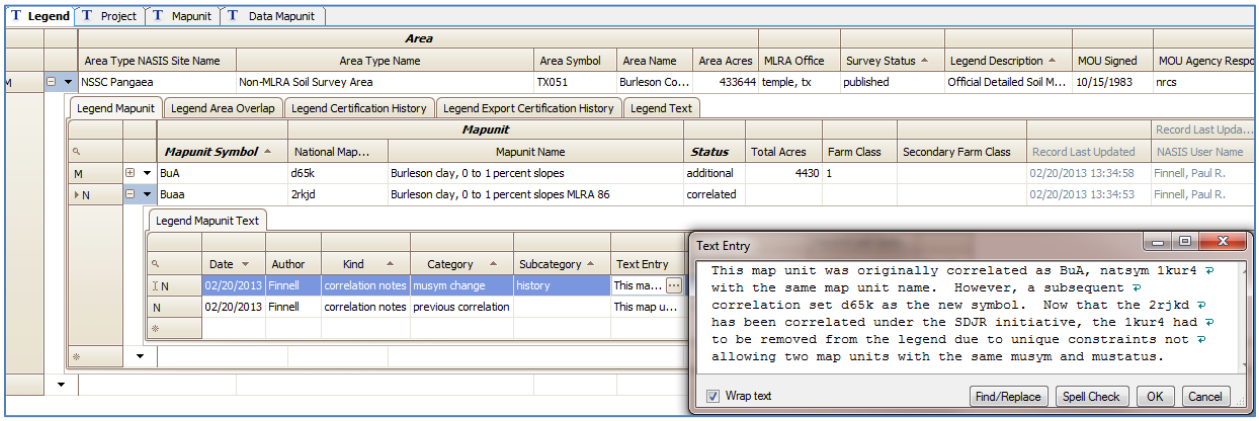
9. Remember, this method is necessary to maintain the ‘mukey’ link between the attribute to spatial links. Record ID 363430 has been modified from the old map unit to the new map unit.
10. Document the edits in the Legend Mapunit Text table.
    a. This map unit becomes the representative map unit. Include in the Legend Mapunit Text table all text notes from any previous correlations made to the same map unit symbol.

For instance, in the example above, if there are Legend Mapunit Text notes for the additional map unit, they can be copied and pasted into the new 'correlated' map unit.

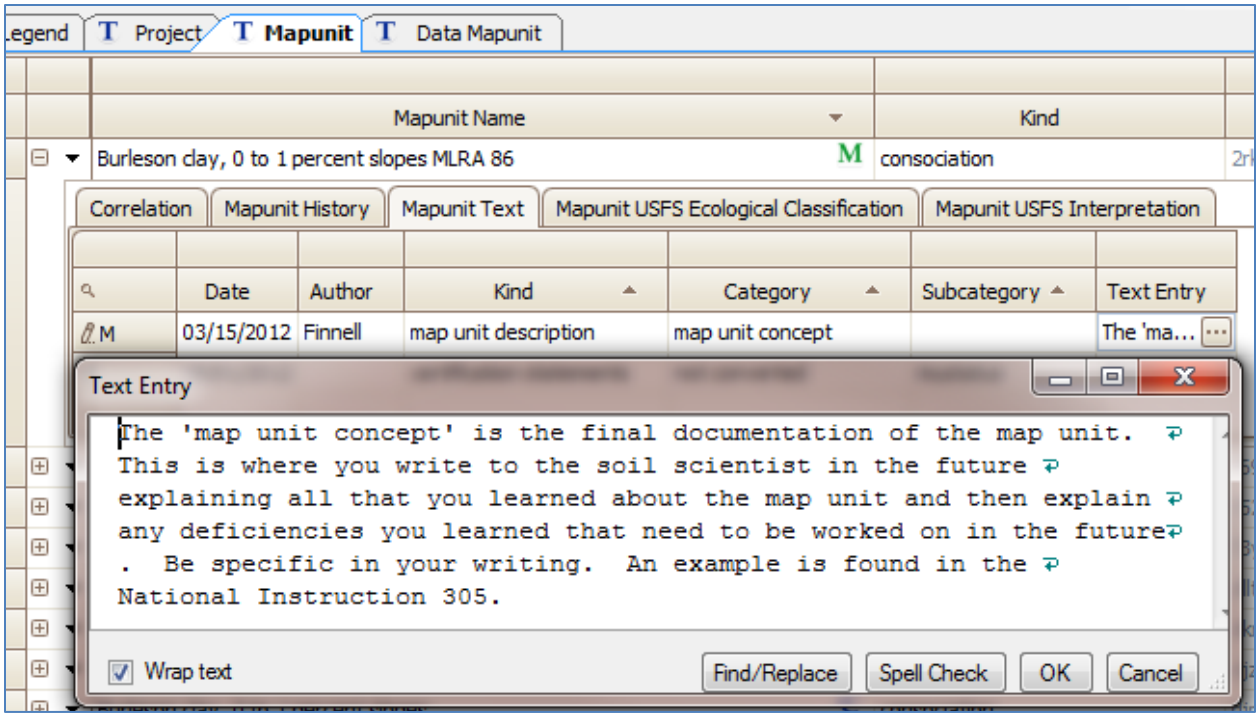
b. Future NASIS releases may include a new Legend Mapunit History table, but until this becomes available the best location is in the Legend Text table. The Kind is 'correlation notes' and the Category 'previous correlation'.



c. There may be instances when the Legend contains a map unit with multiple correlations for a given map unit. A map unit could include an additional and a correlated status'. When adding a new map unit into the legend, the unique constraint will not allow a second 'additional' status. The Legend Text table will be used to capture the previous musym, muname, and nationalmusym combinations. The Kind is 'correlation notes' and the Category 'musym change' and the Subcategory 'history'.



11. Final and most important documentation – Map Unit Concept notes.



12. Remember any temporary identification added for the MLRA map unit needs to be removed before it is published; in this example, “MLRA 86” was used. In most instances this will be done by the SDQS.

Other important steps include:

1. **Population of the Mapunit History table** –
This table is populated whenever a new map unit is created and at each event in which the map unit correlation is affected. Now that it has been correlated and replaced 4 other map units, then all 5 mapunits must have an entry into the Mapunit History table by the SDQS.

2. **Population of the Datamapunit Certification table** –
Open the Data Mapunit table and then open its child tables to the Data Mapunit Certification History table. This table is to be populated by the Soil Survey Leader at the time of completion of the Quality Control and then again by the Soil Data Quality Specialist at the completion of the Quality Assurance. This table is used to identify the person responsible for the work and provide notes pertaining to the certification.

3. **Population of the Legend Certification table**
The Legend Certification table is designed to provide a listing of the certification history for quality control and quality assurance. The Legend Certification record can be copied, the Legends highlighted and the record pasted to all legends.

4. **Population of any necessary text notes**
All completed projects will include a map unit text note that documents the findings of the project in terms of a description of the new MLRA mapunit concept. The note will be added to the Mapunit Text table with the Kind set to *'map unit description'* and the Category set to *'map unit concept'* for those projects. The map unit concept note is written by the SSL before sending the project for Quality Assurance.

5. "***Upload All Changes to National Database***" and then

6. "***Check In All***"

7. **"Export Legends"**
The Legends and all associated project data are ready for the State Soil Scientist to submit to the Soil Data Warehouse. The State Soil Scientist or designee will populate the Legend Export Certification History table at time of export.

8. Complete Project Management
Enter milestone completion dates for "Project completed date" and ensure all milestones have appropriate progress and completion dates. For SDJR projects report acres in Project Mapping Progress Table after completion of quality assurance.

9 Enter Future MLRA Projects identified during the course of the project.