This lesson covers the basic editing functions that are available in NASIS. A review of Chapter 2 “Working in NASIS Windows” may be necessary to understand the icons and menu options for editing the data. NASIS is a client-server application that is read-only, therefore, before editing, data must be “Checked Out” from the National server.

Editing Concepts

The Local Database and the Selected Set are “Read-Only”. Data within the “selected set” must be “checked out” from the national database before it can be edited. The editing concept in NASIS version 6.0 now includes the following steps:

1. A query is used to return data from the National Database to the Local Database.
2. A query is used to load data from the local database into the selected set.
3. If desired, data is filtered to identify rows to be edited.
4. Row(s) are highlighted and data is “Checked Out” (a lock is placed on the national database).
5. Data is edited.
6. Data edits are uploaded using “Upload All Changes to National Database” (data is saved).
7. Data is “Checked In” (lock is released at the national database).

Step 1: Loading the Local Database
Refer to Chapter 4 “Building the Selected Set”

Step 2: Load data into the Selected Set.
Using standard queries, build the selected set. It may contain the entire MLRA dataset or a specific query can be used to filter the data. This exercise will use the filtering tools available in the NASIS interface to narrow the data to be edited.
The Table Layout is easily modified to fit user’s needs.

**Step 3:** Filter data
Each column header contains a funnel icon. Using the Filter functions, the selected set is tailored specific to the data to be edited:

The selected set is further filtered to meet the users’ editing needs.
Notice the Filter string is built and displayed at the bottom of the Edit panel and above the Status panel. This filter string can be edited using the “Edit Filter” button on the lower right corner of the Editor panel. This data is filtered to include “major components” that are “series” and have a local runoff of “medium”.

For this exercise, the result includes soils that are being reviewed for proper placement into the “medium” local runoff class. The highlighted row is questionable in the medium runoff. The next step is to edit the data.
Step 4: Check Out data
This step presumes that the user has permissions to edit the data. The user must be in the Group that owns the data. The row(s) is (are) highlighted and the data is “Checked out”. The Table Editor menu or toolbar and Table toolbar all contain an icon used to check out the data.

The Check Out is confirmed in the Status Messages panel and the row is marked as “Editable” with an “E”.

Notice, the two components in this view are members of the same Data Mapunit. It is the Data Mapunit that is checked out. The components are within the specific Data Mapunit and therefore are both marked for edit. Data are only checked out at the object level. In this case the Data Mapunit is the object and thus all of the child table data for the record checked out are editable.
Step 5: Edit data
A choice list is available for most fields and is used to correct the data field (choice lists only appear if the data is checked out and editable):

The edit is saved to the local database when the cursor is moved to a different row or when the “End Edit” icon has been selected.

Before leaving the table, the edit must be documented. ALL edits will be documented in the appropriate Text table. The Text table will provide documentation of the data elements that were edited. Each edited record will have a time and author stamp showing when the record was last edited and by whom. A corresponding record should appear in the Text table identifying what the author edited on the specific date.

Note the Status changed from P (prior) to M for a manual entry.
Step 6: Upload edits to National database
The edited data is saved to the National database using the “Upload All Changes to National Database” option on the NASIS menu or NASIS toolbar.

The edited row was modified from “medium” to “high”. After saving, this row no longer appears in the filtered selected set. The filter must be removed to view the edited Component.

The filter is still active and includes only those components with “medium” local runoff class. The filtered “Hedville” component is still marked with an “E” and can still be edited. The changes were saved to the local database, and uploaded to the national database, but, the data is still available to edit.

Step 7: Check In data
After the edited data is saved (to the local database and uploaded to the national database) it must be Checked In to the national database. The row is highlighted and the menu or toolbar icon “Check In Selected Trees (CI)” or “Check In All (CI)” is used to check in the data. This will release the locks on the records.

NOTE: Although the “Hedville” component is the item being edited, it is a member of the Data Mapunit “041LA”. Edit permission is set at the object’s parent table – the Data Mapunit in this case. When the Data Mapunit table is opened and the component child table is opened, the user will see that all rows are marked with the “E”.
Final result:
The data is now returned to the national database (checked in) and the “E” is removed from the row. The lock is now released from the national database:
Clear Cell

There are many fields in NASIS that are controlled using choice lists. The choice lists do not contain a NULL or Blank field. There are instances where a NULL field is preferred over a populated field. For instance, a component in which the Irrigated Capability Class is populated in an area not typically irrigated. The “Irr LCC “ field is controlled by a choice list. To clear the cell the user must first “Check Out” the record and then use the “Clear Cell” from the Table Editor menu or the icon from the Editor toolbar.

Copy, Cut and Paste Data

NASIS includes the ability to copy data, cut data and to paste data. The database contains parent and child tables. In some instances it may be necessary to perform these functions on the entire object versus the particular row of data. The following paragraphs are in sequence with the icons in this image:

1. The “Copy Selected Rows” command places a duplicate of the selected rows, with NO associated child records, onto the clipboard. For instance, if a row in the Data Mapunit is selected then only that one row of data is placed on the clipboard.

2. The “Copy Selected Tree” command places a duplicate of the selected row(s), including ALL associated child records, onto the clipboard. No changes are made to the original data when it is copied. For instance, if a row in the Data Mapunit is selected and the tree is copied, then a copy of the Data Mapunit and all its components, component child tables and all of their horizons and horizon child tables will be placed on the clipboard.
3. The “Cut Selected Rows” command places a duplicate of the selected row(s), with NO associated child record(s), onto the clipboard. It then marks the highlighted row for deletion. If a record in a Parent table is selected, then only that one record is placed on the clipboard, but the entire set of parent and child records are marked for deletion.

4. The “Cut Selected Tree” command places a duplicate of the selected row(s), including ALL associated child records, onto the clipboard and marks the highlighted tree for deletion. No changes are made to the data when it is copied to the clipboard, but the original records are marked for deletion. For instance, if a row in the Data Mapunit is selected and the tree is cut, then the Data Mapunit and all its components, component child tables and all of their horizons and horizon child tables will be placed on the clipboard and the Data Mapunit will be marked for deletion.

The use of either copy function allows any data to be copied, including data the user does not own or data that is locked. However, use of the cut feature on a record the user does not own or on data that is not checked out will fail since the data cannot be marked for deletion.

5. The “Paste Rows/Trees (Inserting New Rows)” command transfers the data that has been placed onto the clipboard into the selected table(s) by inserting a new row or tree within the assigned table.

6. The “Paste Rows/Trees (Replacing Selected Rows)” command transfers the data that has been placed onto the clipboard into the selected table(s) by marking the highlighted row(s) for deletion and inserting a new row or tree within the assigned table.

7. The “Discard Changes in Selected Trees” will discard all changes (edits) in the current table since they were last
   a. checked out,
   b. had changes uploaded to the national database, or
   c. had changes discarded.

Copy Selected Row or Selected Tree

The Table Editor menu and Table Editor toolbar icons become active when data exists in the Editor Panel.

Highlight a row within the Data Mapunit table. The decision is to either copy that specific record (Copy Rows) or Copy that specific record and all child records (Copy Trees).

The icon for Copy Selected Record is the two spreadsheets.
The icon for Copying Selected Trees is two trees:
A “Tree” in NASIS is the parent table and its children. In this case, the parent is copied (the Data Mapunit) along with all its children (Component and Horizon tables and child tables). Upon completion, the Status box will identify the time used to copy all rows. This is followed by pasting the record.
Paste Rows/Trees

There are two PASTE options;

1. Paste Rows/Trees (Inserting New Rows)

Choose “Paste Rows/Trees (Inserting New Rows)”. Completion messages will appear in the Status Messages panel. A new record will be added to the table with a status of “N” for New.
This new record is an exact copy of the parent record:

Edits can be made on the new data. The edits are then uploaded to the National Database and finally all data is “Checked In”.

2. Paste Rows/Trees (Replacing Selected Rows)

Assume there is a more complete Hedville component populated in another Data Mapunit that could replace the current. In this example, a Hedville component is copied from another Data Mapunit and the existing is replaced.

Highlight the row and select “Copy Selected Trees” (Component and all child tables):
Highlight the row to be replaced and click “Paste Row/Trees (Replacing Selected Rows)”: 

The result of the Paste is the new Component, and its child tables, is pasted and the highlighted Component row is marked for deletion:

To finish this edit, the composition is edited to “30”. The data is then saved using “Upload to National Database” on the NASIS menu. And, the data is “Checked In”: 

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This completes the process steps for Pasting Rows and Trees.
Using Find/Replace

The Global Assign function in NASIS 5.x has been replaced with the “Find/Replace” option in NASIS 6. This option is located on the Right Click menu on the column header.

The key to using this function is to filter the selected set to include only those records in which the action will be performed. AND, since this is an edit function, the data to be edited MUST be Checked Out.

The Find/Replace differs from the paste option in that Paste works on the entire row, while Find/Replace works on an individual column.

With the Find/Replace command, a global edit can be performed on a specific data element value, such as changing a Master horizon designation from “H1” to “A” for the same components in all data map units, or changing the T value for a group of selected soils.

The first step is to filter the selected set. The selected set is filtered to include only the Hedville components. It is further filtered to include only the “H1” horizons.

The second step is to “check out” the data to be edited.
Using the “right-click” menu on the Designation column, Find/Replace is chosen. In the Find/Replace parameter box, the edits are made to replace the ‘H1’ with ‘A’.

Find/Replace only works on those records in which the user is a member of the ownership group and only on those records that are “Checked Out”. Records in the selected set that are owned by another group or not checked out will not be modified. The edit will ignore the records in which the user is not a member of the ownership group. Edits cannot be made on data that is “Locked”; if a record in the selected set is checked out by another user. NASIS will display a message indicating that at least one record is locked and the global operation fails on that record.

Notice the “H1” changed to “A” on all “checked out” records but not the Protected record.
**Find/Replace issues:**

Data in NASIS 6 tables can be
1. sorted
2. filtered, or
3. grouped.

It is important to remember that the Find/Replace works on those records that are “Checked Out”, only.

It is important to remember that data is “Checked Out” at the Object's Parent table. For example, if the decision is to edit a specific component name (e.g. Hedville) the data is checked out at the Data Mapunit so ALL components in those Data Mapunits are also checked out.

**Filter**
In this scenario the data was filtered before using of the Find/Replace. When data is filtered, then only that data appears in the selected set. Since the “Hedville” component is the only data in the selected set then it is the only data that will be edited.

**Sorting**
Consider the “Sorting” of a table. If the component table is sorted and the Hedville components are highlighted and “checked out”, then all other components within the Data Mapunit in which the Hedville component belongs are also “checked out”. Therefore, the selected set will include “checked out “components other than the Hedville components. A Find/Replace command will affect all components that are checked out in the selected set. To keep the edit from affecting any other checked out components, those other components must be removed from the selected set.

**Grouped**
Consider the grouped data. Similar to the sorting of data, however the checked out data may not appear in the specific group in which the edit is to be made. If a Find/Replace function is made on a selected set that is grouped, then the Find/Replace will impact all checked out records. If there are records hidden in other groups that are checked out, then all checked out records in the selected set will be affected.

Verify your selected set prior to using the Find/Replace command.
Discard All Changes

If after performing an edit, or a Find/Replace edit, the user realizes that records were inadvertently changed, the user can use the “Discard Changes” found on the Editor toolbar.

Or select from the Table Editor menu

<table>
<thead>
<tr>
<th>NASIS</th>
<th>Tables Explorer</th>
<th>Table Editor</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Selected Set</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setup Local Database</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refresh Local Database</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check for Local Conflicts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upload All Changes to National Database</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discard All Changes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check In All</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discard all changes made since each changed data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>View Status Messages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>View Local Conflicts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>View Upload Conflicts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>View Validation Results</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage User Profile...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage Table Layouts</td>
<td></td>
<td></td>
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<tr>
<td>Manage Toolbars...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Import Pedons...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Using Global Paste

The Global Paste is a function that copies data from one child table and pastes that data to all occurrences of that child table within the selected set that are “checked out”. It is not explained or addressed in the NASIS menus or toolbars. This function is one that is only explained here in this chapter. The steps involved in this function are:

1. The selected set is filtered to include only those records to be edited
2. The child table is opened for that one record to be copied
3. The rows from that child table are copied
4. The cursor is placed in the Parent table
5. The “Paste Rows/Trees” is activated
6. The dialog box appears and the user defines the paste function

In this scenario, the Component data has been filtered to a specific component name and the data has been “Checked Out”:

The Component Crop Yield child table is opened:

The decision is to copy the crop yield rows in DMU “113LN” and replace the existing data in the other 4 Longford components.
From the Table Editor Menu, or the Table Editor Toolbar, choose “Copy Selected Rows.”

The records in the Parent table are then highlighted – in this case the 4 Longford component records are highlighted:

And using either the Table Editor Menu or the Table Editor Toolbar, the “Paste Rows/Trees (Replacing Selected Rows)” is chosen. The Status Message Panel will document the paste.

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The result is that all selected rows will have the Component Crop Yield table populated with the copied data and the existing data is marked for deletion:

This same process can be used and the “Paste Rows/Trees (Inserting New Rows)” can be used if the decision is to append existing data.
Lesson Summary

In this chapter, basic editing tasks of Clear Cell, Cut, Copy, and Paste involving specific “Row(s)” of data or specific “Tree(s)” of data (parent and child tables) were performed that can be applied throughout NASIS. The use of delete and removal of delete functions were discussed. The analysis functions of sorting, filtering and grouping were discussed to identify the advantages of each tool. The use of the Find/Replace and the Global Paste functions were explained. These editing functions can be used to manage data in any of the objects and tables.