



NASIS 5.0x

Pedon

Thunderbook



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Notes on populating Pedon data elements

This document includes notes and instructions on almost every column in Pedon, however, **it is not necessary to populate every field**. Some pedons may have been described years ago and complete data is not available. **Enter only the data that you have available**. It is not necessary to go back and collect data on these pedons to populate all fields, however, new descriptions should be as complete as possible.

The top priority in MO16 is to populate pedon data for all taxonomic and map unit descriptions in the survey and/or workplan. After these are entered, other pedon descriptions may be entered if time is available.

Use of the Edit Setup named: "Map Unit Symbol sort - pedon tailored" is the minimum set of data for a pedon.

Use the keyboard instead of the mouse when entering data. Keyboard commands are at the end of this document.

References

- NSSH** National Soil Survey Handbook 1996
- SSM** Soil Survey Manual October, 1993
- FBDSS** Field Book for Describing and Sampling Soils
Version 1.1 March 11, 1998
- Keys to Soil Taxonomy 8th ed. 1998**

The procedure for entering a pedon is:

1. Enter information in the Site table
2. Enter information in the Site Observation table
3. Enter information in the Site Area Overlap and Site Mapunit Overlap tables
4. Enter information in the Pedon table
5. Enter all the horizons in the Pedon Horizon Table
6. Then, enter the information in the "hanging" tables (color, structure, etc.) for each horizon. For example, do all colors for all horizons, then all textures, etc.
7. Link the pedon to a component using the Component Pedon table.
! See Linking Diagram at the end of this handbook !

If the Pedon is part of a Transect:

Follow the procedure above, BUT, enter Information in the Transect table - insert a row and define the Transect.

This information will be needed when populating the Pedon table.

If the Pedon is part of an Association (workplan):

Follow the procedure above, BUT, when finished entering all the sites, go to the Site Association Table and define an Association and enter all the associated sites.

WARNING: This document uses NASIS 4.0 and NASIS 5.0 screen shots. Some of the NASIS 5.0 screens use an Edit Setup named "Map Unit Symbol sort - pedon tailored" on the MO5 site.

NOTE: *In the following pages, items that are required for the Taxonomic or Map unit description reports to function properly are highlighted red. Those that are used in the reports, but are optional are orange.*

Site Table

The Site table is intended to record geographic information related to the point where the profile description is taken. In most cases, there will be a separate site record for each profile description. **The Site Table must be populated before you can enter pedon horizon data.** It is a good idea to also populate the site area overlap table and link a Pedon record to the Site table so it is easier to query the site data you have entered. The Site Observation table must also be populated so that the site can be selected by most existing queries. The Pedon table can be linked to the Site data by viewing the Pedon table, open a new row in the Pedon table and enter the User Site ID for the record you just entered in the Site table. If you have populated a site record, but did not populate the site observation table before exiting NASIS, you can find that site record by going to the VIEW menu, select NASIS SITE, select MLRA16_office, and FILE, LOAD RELATED, SITE. This will select all sites associated with MO-16. Your site record should be included.

ES	User Site ID	Lat. Degree	Lat. Minut	Lat. Secon	Lat. Direc	Long. Degree	Long. Minut	Long. Secon	Long. Direc	Location Description	PLSS Secti Details	PLSS Secti	PLSS Towns	PLSS Range	PLSS Merid	UTM Zone	Elev
-	S00KS055001-pit	37	45	53.59	north	100	58	9.99	west	Text...	NE1/4	30 26S	33W				
-	S00KS193001-pit	39	33	12.95	north	101	13	20.17	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193006-pit	39	33	12.95	north	101	13	20.17	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193002	39	33	13.55	north	101	13	20.01	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193003	39	33	13.19	north	101	13	20.80	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193004	39	33	12.59	north	101	13	19.49	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193005	39	33	12.34	north	101	13	19.81	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193007	39	33	9.75	north	101	13	22.54	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193008	39	33	9.79	north	101	13	23.55	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193009	39	33	8.56	north	101	13	23.32	west	Text...	NE1/4 S9 T	9 6	36				
-	S00KS193010	39	33	8.75	north	101	13	22.15	west	Text...	NE1/4 S9 T	9 6	36				

Source Site Site Name of the MO that owns the site data. Automatically assigned by the database.

Rec ID Record ID number that is automatically assigned by the database each time a new record is inserted.

User Site ID ID number used to identify each site in a survey area. Each site may have more than one pedon associated with it. The format for this number will be as follows:

ST-SSA SITE INFO

ST - State Initials

SSA - Soil Survey Area ID Number

SITE INFORMATION - Usually the series name and purpose for the description

For example:

LA095 Convent TP

Lat. Degrees Enter the integer value for the degrees latitude. This information should be entered for all pedons. NOTE: If you would like to be able to generate an Arcview coverage of the location of you pedon sites, make sure you

enter the Latitude, Longitude, the direction, and Datum information. This information is most accurate if generated by a GPS unit, however it can also be obtained from topographic maps if a GPS is not available. This information can be exported from NASIS Pedon and a map generated for your survey area. **(FBDSS 6-1...6-5)**

Lat. Minutes	Enter the integer value for minutes latitude.
Lat. Seconds	Enter the floating point value for seconds of latitude.
Lat. Direction	Enter direction north or south.
Long. Degrees	Enter the integer value for the degrees longitude.
Long. Minutes	Enter the integer value for minutes longitude.
Long. Seconds	Enter the floating point value for seconds of longitude.
Long. Direction	Enter direction east or west.
Datum Name	Enter NAD27 or NAD83 depending on the source material used to locate the site.
Location Description	Enter a narrative description giving the highway directions to the site. The directions should originate from the County or Parish seat.
PLSS Section Details	Give the location in number of feet from a specified section corner. If the specific location is unknown, list the quarter section, 1/16 th section, or as close as you can get. If the area does not use section numbers, use location Description field to specify the location.
PLSS Section	Enter the section number in which the site occurs.
PLSS Township	Enter the township in which the site occurs, such as 29S.
PLSS Range	Enter the range in which the site occurs, such as 3E.
PLSS Meridian	Enter the name of the base meridian.
UTM Zone	This is the preferred locator. Enter zone 13, 14, or 15.
UTM Northing	This is the preferred locator. Enter the distance, in meters, north from the UTM zone origin. For North, origin is the equator and is equal to zero.
UTM Easting	This is the preferred locator. Enter the distance, in meters, proceeding east for the UTM zone. The UTM zone central meridian is the origin and is designated a value of 500,000 meters creating a "false" easting.
Elevation	Enter elevation of site in meters. (FBDSS 1-4)

ES	User Site ID	Lat. Degree	Lat. Minut	Lat. Sec	Lat. Direc	Long. Degree	Long. Minut	Long. Sec	Long. Direc	Location Description	PLSS Secti Details	PLSS Secti	PLSS Towns	PLSS Range	PLSS Merid	UTM Zone	Elevation	Geomorph Component
-	S00KS055001-pit	37	45	53.59	north	100	58	9.99	west	Text...	NE1/4	30	26S	33W				
-	S00KS055002	37	45	53.04	north	100	58	9.74	west	Text...								
-	S00KS055003	37	45	53.03	north	100	58	10.86	west	Text...								
-	S00KS055004	37	45	54.34	north	100	58	9.55	west	Text...								
-	S00KS055005	37	45	53.69	north	100	58	9.28	west	Text...								
-	S00KS055006-pit	37	45	55.11	north	100	58	12.55	west	Text...	NE1/4	30	26S	33W				
-	S00KS055007	37	45	55.05	north	100	58	12.26	west	Text...								
-	S00KS055008	37	45	54.95	north	100	58	13.11	west	Text...								
-	S00KS055009	37	45	55.31	north	100	58	13.38	west	Text...								
-	S00KS055010	37	45	55.77	north	100	58	12.30	west	Text...								
-	S00KS055011-pit	38	8	34.47	north	101	4	1.09	west	Text...	NE1/4	17	22S	24W				
-	S00KS055012	38	8	32.67	north	101	4	0.44	west	Text...								
-	S00KS055013	38	8	32.90	north	101	4	1.70	west	Text...								
-	S00KS055014	38	8	33.86	north	101	4	1.56	west	Text...								
-	S00KS055015	38	8	34.28	north	101	4	0.27	west	Text...								
-	S00KS055016-pit	38	8	36.50	north	101	4	2.30	west	Text...	NE1/4	17	22S	24W				
-	S00KS055017	38	8	36.51	north	101	4	2.12	west	Text...								
-	S00KS055018	38	8	35.96	north	101	4	2.89	west	Text...								
-	S00KS055019	38	8	36.43	north	101	4	3.20	west	Text...								
-	S00KS055020	38	8	36.82	north	101	4	2.29	west	Text...								
-	S00KS081001-pit	37	23	19.18	north	100	58	20.89	west	Text...	S1/2	31	30S	33W				
-	S00KS081002	37	23	18.03	north	100	58	21.50	west	Text...								
-	S00KS081003	37	23	18.93	north	100	58	21.99	west	Text...								
-	S00KS081004	37	23	19.56	north	100	58	21.28	west	Text...								
-	S00KS081005	37	23	18.67	north	100	58	20.51	west	Text...								
-	S00KS081006-pit	37	23	18.51	north	100	59	24.15	west	Text...	SE1/4	36	30S	34W				
-	S00KS081007	37	23	17.93	north	100	59	24.26	west	Text...								
-	S00KS081008	37	23	18.33	north	100	59	24.71	west	Text...								
-	S00KS081009	37	23	18.81	north	100	59	24.11	west	Text...								
-	S00KS081010	37	23	18.46	north	100	59	23.53	west	Text...								

Geomorphic Component – Hills Select one of these 4 positions and enter the geomorphic position of the site from the choice list. It is not necessary to populate more than one of these columns and will usually be redundant or illogical if there are. See example on next page. **(FBDSS 1-7)**

Geomorphic Component – Mountains (FBDSS 1-8)

Geomorphic Component – Terraces (FBDSS 1-7)

Geomorphic Component – Flats (FBDSS 1-8)

Hillslope Profile Enter location on the hill from the choice list. **(FBDSS 1-6)**

Slope Position Enter position from choice list.

Slope Gradient Enter percent slope.

Aspect Enter aspect in degrees azimuth. **(FBDSS 1-5)**

Slope Length USLE Enter length of slope from origin of overland flow to point of deposition or where water enters a channel.

Upslope Length Enter length of slope above site location.

Slope Shape Across Enter from choice list. **(FBDSS 1-6)**

Slope Shape Up/Down Enter from choice list. **(FBDSS 1-6)**

Slope Complexity Enter from choice list. **(FBDSS 1-5)**

ES	User Site ID	Geomorph Component - Hill	Geomorph Component - Terraces	Geomorph Component - Flat	Hillslope Profile	Slope Position	Slope Gradient	Aspect	Slope Shap Across	Slope Shap Up/Down	Slope Complexity
-	S00KS055001-pit			flat			2.0		linear	linear	
-	S00KS055002			flat			2.0		linear	linear	
-	S00KS055003			flat			2.0		linear	linear	
-	S00KS055004			flat			2.0		linear	linear	
-	S00KS055005			flat			2.0		linear	linear	
-	S00KS055006-pit			flat			2.0		linear	linear	
-	S00KS055007			flat			2.0		linear	linear	
-	S00KS055008			flat			2.0		linear	linear	
-	S00KS055009			flat			2.0		linear	linear	
-	S00KS055010			flat			2.0		linear	linear	
-	S00KS055011-pit			flat			0.0		linear	linear	
-	S00KS055012			flat			0.0		linear	linear	
-	S00KS055013			flat			0.0		linear	linear	
-	S00KS055014			flat			0.0		linear	linear	
-	S00KS055015			flat			0.0		linear	linear	
-	S00KS055016-pit			flat			0.0		linear	linear	
-	S00KS055017			flat			0.0		linear	linear	
-	S00KS055018			flat			0.0		linear	linear	
-	S00KS055019			flat			0.0		linear	linear	
-	S00KS055020			flat			0.0		linear	linear	
-	S00KS081001-pit			flat			0.0		linear	linear	
-	S00KS081002			flat			1.0		linear	linear	
-	S00KS081003			flat			1.0		linear	linear	
-	S00KS081004			flat			1.0		linear	linear	
-	S00KS081005			flat			1.0		linear	linear	
-	S00KS081006-pit			flat			0.0		linear	linear	
-	S00KS081007			flat			1.0		linear	linear	
-	S00KS081008			flat			1.0		linear	linear	
-	S00KS081009			flat			1.0		linear	linear	
-	S00KS081010			flat			1.0		linear	linear	

Local Physiographic Name Enter a local name if one appears on 7.5 minute USGS quad.

Geologic Formation Enter name of geologic formation from state geology map.

Bedrock Depth Enter the depth to bedrock in centimeters. Enter the same value as for the profile description. If the profile has an organic surface layer, the depth would be from the top of the organic layer. If the profile has both a Cr and R horizon, depth to bedrock should be to the Cr, however, the current version of the pedon report uses the data in the following columns in the profile description for both horizons. Therefore, both horizons will print out with the same degree of cementation. Hopefully this will soon be fixed. It is not a problem if you have only one horizon designated a bedrock.

Bedrock Kind Enter a single type of bedrock from the choice list.

Bedrock Hardness Enter degree of cementation from the choice list.

Bedrock Fracture Interval **OPTIONAL** Enter fracture interval from choice list.

Bedrock Weathering **OPTIONAL** Enter degree of weathering from choice list.

Bedrock Strike **OPTIONAL** Enter the azimuth of the apparent direction of a horizontal line in the plane of an inclined stratum.

Bedrock Dip Low **OPTIONAL** Enter the low range, in degrees, of the apparent inclination of the bedrock from a horizontal plane.

Bedrock Dip High **OPTIONAL** Enter the high range, in degrees, of the apparent inclination of the bedrock from a horizontal plane.

Drainage Class	Enter a single drainage class. (FBDSS 1-9)
Site Permeability	Enter the overall permeability class of the profile exclusive of the bedrock. (NSSH 618-27).
Runoff Class	Enter class from index established for each survey area. (NSSH 618-34).
Parent Material Group Name	Calculated field. Enter data in Site Parent Material Table. This field must be recalculated each time there is a change in the Site Parent Material table. Generally this should be only one type of parent material: whatever the soil developed from at this specific site. Do not enter the various kinds of parent material the <u>series</u> has developed on.
Plant Association Name	OPTIONAL Guidelines for naming plant associations are still being developed. Until notified differently, use range site names or others as appropriate.
Climate Station ID	OPTIONAL Enter designation assigned by agency responsible for maintaining station.
Climate Station Name	OPTIONAL Enter official name of station, or name by which location is known.
Climate Station Type	OPTIONAL Enter whether this is a U.S. Official station or other type.
Frost Free Days	Enter the average number of days between the last occurrence of 0 degrees Celsius in the spring and the first occurrence of 0 degrees Celsius in the fall.
MAP	Enter mean annual precipitation in millimeters.
REAP	OPTIONAL This column is used to provide an estimate of the actual amount of moisture available for use by plants or for soil forming processes. The amount may be more, less, or the same as the Mean Annual Precipitation of the area. It may vary from MAP as a function of slope, aspect, runoff, etc. The values for REAP are estimated by comparing the vegetation, soil moisture and temperature characteristics existing at the site, with some other location with a similar characteristics and which is considered to be in a neutral setting with respect to slope, aspect, runoff, etc. The MAP values of the neutral site are used as the REAP values at the site in question.
MAAT	Enter mean annual air temperature in degrees Celsius.
MAST	OPTIONAL Enter mean annual soil temperature in degrees Celsius at a depth of 20 inches.
MAWT	OPTIONAL Enter mean winter air temperature in degrees Celsius. This value is the mean of the December, January, and February mean air temperatures.
MSAT	OPTIONAL Enter the mean summer air temperature in degrees Celsius. This value is the mean of the mean June, July and August mean air temperatures.

MSST	OPTIONAL Enter the mean summer soil temperature in degrees Celsius. This value is the mean of the June, July and August mean soil temperature at 20 inches.
MWST	OPTIONAL Enter mean winter soil temperature in degrees Celsius. This value is the mean of the December, January, and February mean soil temperatures at 20 inches.
Flooding Frequency	Enter frequency from choice list. (FBDSS 1-10)
Flooding Duration	Enter duration from choice list. If frequency is none, leave this column blank.
Flooding Month	Enter the beginning month in which flooding is likely to occur.
Ponding Frequency	Enter the frequency from the choice list. (FBDSS 1-11)
Ponding Duration	Enter the ponding duration from the choice list. If frequency is none, leave this column blank.
Ponding Month	Enter the beginning month in which the soil is ponded.
Water Table Duration	Enter the total number of days that the water table is present in the soil. Enter only if you have actual data.
Site Site	MLRA office that owns the database. Entered automatically by the database.
Group	Name of the Group that own the record. Ownership is established by the current group when you create the record. If you belong to more than one group, be sure to change to the correct group before creating the record.
User	Name of the NASIS user to last update a record. Entered automatically by database.
Last Updated	Date and time that each record was last edited. Entered automatically by database.

Site Area Overlap Table

This table is used to specify all the various subdivisions that the site occurs in. It is similar to the Mapunit Overlap table. Enter a new record for each area type, such as County, Survey Area, State, Geographic Province, 7.5 Minute Quadrangle, etc. **(FBDSS 3-2...9)**

Site											
ES	User Site ID	Site permeability	Flooding Frequency	Flooding Duration	Flooding Month	Ponding Frequency	Ponding Duration	Water Table Duration	Ponding Month	User	Group
-	S00KS055001-pit	id	none							Finnell, P	Other Staffs

Site Area Overlap			
ES	Area Type Name	Area Symbol	Area Name
-	County or Parish	KS055	FINNEY
-	MLRA	72	Central High Tablela
-	Non-MLRA Soil S	KS055	Finney County, Kansa
-	State or Territ	KS	Kansas

In the above example, Site number S00KS055001-pit occurs in all the areas listed in the Area Type column. You can specify as many area types as you feel are necessary, keeping in mind that each area you list facilitates querying all pedons within that area. If you want to be able to query all pedons by topographic quad, you will have to list that area type.

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Area Type** Enter a new record for each area type you want to specify. Select Area Type Name from the choice list AND you may select the local list or the NATIONAL List. There is no default choice list for this area type.
- Area Symbol** Enter area symbol from the choice list for each area type.
- Area Name** Name will be automatically entered when symbol is entered, or symbol will be automatically entered if you enter the name.

Use of the "National" list of Area Type Names is necessary to populate this table. Highlight the Area Type Name cell and hit F2 or click on Choice list. There are different lists of Area Type Names - click on the "National" button on the choice list. The list of National Area Type Names will appear in the box. The Area Types shown below should be included at a minimum:

- MLRA**
- Non-MLRA Soil Survey Area**
- State or Territory**
- USGS 7.5 Minute Quadrangles**
- County or Parish**

After entering the Area Type Name, move into the Area Name cell and click on the choice list or use F2 to select from the choice list the appropriate Area Symbol and Area Name. For some lists, it will be necessary to search the choices. For instance, Area Type Name USGS 7.5 Minute Quadrangles, it is best to move to Area Name instead of Area Symbol and click choice. For area symbol you need USGS catalog key for the symbol, and there are 54000 to choose from. Under Area name you can search by name. An entry of Clay*Kansas will give you 7 names to choose from.

Site Mapunit Overlap Table

This table allows the author to link a Site (and subsequently a Pedon) to a map unit within a Legend. This link can be accomplished even if the author does not have permission in the particular legend.

Site																		
ES	User Site ID	Lat. Degree	Lat. Minut	Lat. Secon	Lat. Direc	Long. Degree	Long. Minut	Long. Secon	Long. Direc	Location	PLSS Secti Details	PLSS Secti	PLSS Towns	PLSS Range	PLSS Merid	UTM Zone	Elevation	Geomor Component
-	S00KKS193005	39	33	12.34	north	101	13	19.81	west	Text...	NE1/4 S9 T	9	6	36				

Site Area Overlap		
ES	Area Type Name	Area Name
-	Non-MLRA Soil S, KS193	Thomas County, Kansas

Site Mapunit Overlap							
eq	Legend ID	Legend Description	Survey Status	Correlation Date	Mapunit Symbol	Mapunit Name	Rec ID
-	10620	Detailed Soil Map Legend	published	01/1978	Ka	KEITH SILT LOAM, 0 TO 1 PERCENT	

In this example, this site is linked to the Thomas County, Kansas Legend to the Ka map unit.

Seq Num Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Legend ID Entered via the choice list and is dependent upon the Area Overlap table

Legend Description Automatically populated via choice list

Survey Status Automatically populated when Legend ID is selected.

Correlation Date Automatically populated when Legend ID is selected.

***! Mapunit Symbol** Entered via a choice list and is dependent upon the given legend

Mapunit Name Automatically populated when Mapunit Symbol is selected.

Rec ID

***! BE CAREFUL!** The Choice list shows all map units on the legend - even additional ones with obsolete symbols! Make sure you are choosing a current, active mapunit. A good way to make sure is use **LOAD RELATED**, then **FIND RELATED** to make sure it goes to the active mapunit that you intended.

Site Associated Soils Table

Seq

Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Associated soil

Enter the names of other soil series mapped in proximity to the described pedon. For taxonomic unit TP's also include a brief statement of how it differs.

The screenshot shows the NARS MLRA01 Office application window. The interface includes a menu bar (File, Edit, View, Options, Help), a toolbar with icons for File, Copy, Paste, Undo, Redo, and Sort, and a status bar showing 'Object Status: Unchanged'. The main data area contains two tables:

Site				
Source Site Site	Rec ID	User Site ID	Transect Stop Number	Lat. Degrees M
MLRA01_Office	226	00-JTH-04		43

Site Associated Soils		
Seq	Associated Soil	Rec ID
-	Kirkendall	402
-	Nekoma	403
-	Quosatana	404

At the bottom of the window, there is an 'Update Report' button.

Site Geomorphic Description Table

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Feature Type** Enter one of the 4 choices from the list. *(FBDSS 3-10...3-21)*
- Feature Name** Enter appropriate feature name for the feature type. *(FBDSS 3-10...3-21)*
- Feature Modifier** A user specified term(s) used in association with geomorphic features to further define, clarify, and describe the setting of a soil in the landscape. The terms may, for example, describe relative position, mode of formation, degree of degradation, slope, or geologic time of origin.
- Feature ID** Enter a numeric value starting with 1 if you want to identify a landscape feature that occurs on another landscape feature.
- Exists on Feature ID** Numeric value used to identify where a specific feature occurs on another feature.

Site																		
ES	User Site ID	Lat. Degree	Lat. Minut	Lat. Sec	Lat. Direc	Long. Degree	Long. Minut	Long. Sec	Long. Direc	Location Description	PLSS Secti Details	PLSS Secti	PLSS Towns	PLSS Range	PLSS Merid	UTM Zone	Elevation	Geomorph Component
-	S00KS055001-pit	37	45	53.59	north	100	58	9.99	west	Text...	NE1/4	30	26S	33W				
Site Geomorphic Description																		
ES	Feature Type	Feature Name	Feature ID	Exists on Feature ID														
-	Landform	dune	3	2														
-	Landform	sand sheet	2	1														
-	Landscape	tableland	1															

In the above example, the pedon report will list “dune on sandsheet on tableland”.

Site Parent Material Table

Site																		
ES	User Site ID	Lat. Degree	Lat. Minut	Lat. Secon	Lat. Direc	Long. Degree	Long. Minut	Long. Secon	Long. Direc	Location Description	PLSS Secti Details	PLSS Secti	PLSS Towns	PLSS Range	PLSS Merid	UTM Zone	Elevation	Geomor Component
-	S00KS055001-pit	37	45	53.59	north	100	56	9.99	west	Text...	NE174	30	26S	33W				

Site Parent Material					
ES	Verti Order	Textural Modifier	Kind	Origin	Weathering
-	1	sandy	eolian sands		
-	2	loamy	loess, calcareo		

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Vertical Order Assign each different kind of parent material a numerical value to specify the order of occurrence in the profile. The order in which the different parent materials are printed in the report is determined by the value in this column. More than one record can have the same value. For example, if you had loess and colluvium over glacial till, loess and colluvium would each have a value of one and glacial till would have a value of 2.

Modifier Enter a standard texture modifier if appropriate. For example, loamy alluvium, gravelly outwash, etc. Select from choice list.

Kind Enter the specific type of parent material the soil being described has developed on. If the soil developed on material from several sources, enter each kind of parent material on a separate row. Use choice list. **Do not enter the complete range of parent material for the series. (FBDSS 1-16...1-17)**

Origin Enter type of bedrock the parent material was derived from. Where the parent material was derived from several types of rock, enter a record for each type. NASIS currently does not aggregate these entries very elegantly, so they will have to be edited in any reports. Hopefully this will be corrected in the near future. **(FBDSS 1-18...1-19)**

Weathering Enter degree of weathering from the choice list. **(FBDSS 1-20)**

Site Text Table

Site																		
ES	User Site ID	Lat. Degree	Lat. Minut	Lat. Sec	Lat. Direc	Long. Degree	Long. Minut	Long. Sec	Long. Direc	Location	PLSS Secti Details	PLSS Secti	PLSS Towns	PLSS Range	PLSS Merid	UTM Zone	Elevation	Geonor Component
-	S00K5055001-pit	37	45	53.59	north	100	58	9.99	west	Text...	NE1/4	30	265	33N				

Site Text						
ES	Date	Author	Kind	Category	Subcategory	Text
-	01/10/2001	DR	site note.			Text...
-	08/17/2001	PRF	site note.			Text...

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Date** Current date is automatically entered when record is created.
- Author** Enter full name or initials.
- Kind** Enter from choice list.
- Category** Any entry. Should use a list to maintain consistency.
- Subcategory** Any entry. Should use a list to maintain consistency.
- Text** Any entry

Site Observation Table

This table should have an observation record for each date that you record information. If all you do at the site is record a pedon description, there will be only one record for that date. However, if you record temperature data at this site, there will be an observation record for each time you record the temperature.

The screenshot shows a software window with a menu bar (File, Edit, View, Options, Help) and a toolbar. Below the toolbar is a text field containing '11/27/2000'. The main area contains two tables:

Site																	
ES	User Site ID	Lat. Degree	Lat. Minut	Lat. Secon	Lat. Direc	Long. Degree	Long. Minut	Long. Secon	Long. Direc	Location Description	PLSS Secti Details	PLSS Secti	PLSS Towns	PLSS Range	PLSS Merid	UTM Zone	Elev
-	S00KS055001-pit	37	45	53.59	north	100	58	9.99	west	Text...	NE1/4	30	26S	33W			

Site Observation								
ES	Observation Date	Observation Date Kind	Air Photo ID	Surface Water Kind	Surface Water Depth	Microrelief Kind	Microrelief Elevation	Microrelief Pattern
-	11/27/2000	actual site obs						

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Observation Date The current date is automatically entered when the record is created. If the observation date kind is the actual date of observation, change the date to that date.

Observation Date Kind Enter from choice list.

Air Photo ID If the observation site is recorded on an aerial photo, record the number of the photograph.

Surface Water Kind Enter from choice list whether flooded, ponded, or none.

Surface Water Depth If there is water on the surface, enter depth in centimeters.

Microrelief Kind Enter high or low from choice list.

Microrelief Elevation Enter vertical difference in centimeters.

Microrelief Pattern Specify whether or not there is a pattern, from choice list.

Yield Study ID Arbitrary number of your choice to designate a yield study area. Use up to 10 characters, letter or numbers.

Site Erosion Accelerated Table

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Kind** Enter from choice list whether the erosion is sheet, gully, etc. (*FBDSS 1-20*)

Site Existing Vegetation Table

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Local Plant Symbol** Enter plant symbol from Local Plant Table. The Local Plant Table will eventually be replaced by the Plants table. Until that happens, if you want to use a plant symbol that is not in the Local Plants Table, contact the MO database manager to have it entered in the table.
- Local Plant** Plant name is entered automatically when plant symbol is entered. The symbol will be automatically entered if you enter the correct common name.

The screenshot shows the NASIS - MLRA01_Office application window. The interface includes a menu bar (File, Edit, View, Options, Help), a toolbar with icons for file operations (Save, Cut, Copy, Paste, Undo, Redo, Sort) and a status bar showing 'Object Status: Unchanged'. Below the toolbar are three data tables:

Site		
Source Site	Site	Rec ID
MLRA01_Office		240

Site Observation				
Seq	Observation Date	Observation Date Kind	Air Photo ID	Surface Water Kind
-	10/18/1972	actual site observation date	2HH-30	none observed

Site Existing Vegetation			
Seq	Local Plant Symbol	Local Plant Name	Rec ID
-	ACMA3	bigleaf maple	723
-	ALRU2	red alder	717
-	POMU	western swordfern	720
-	PSME	Douglas fir	721
-	UNCA	Oregon myrtle	725

Site Observation Text Table

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Date	Current date is automatically entered when record is created.
Author	Enter full name, not initials.
Kind	Enter from choice list.
Category	Consult list of approved categories and subcategories.
Subcategory	Same as above.
Text	Enter notes related to site properties.

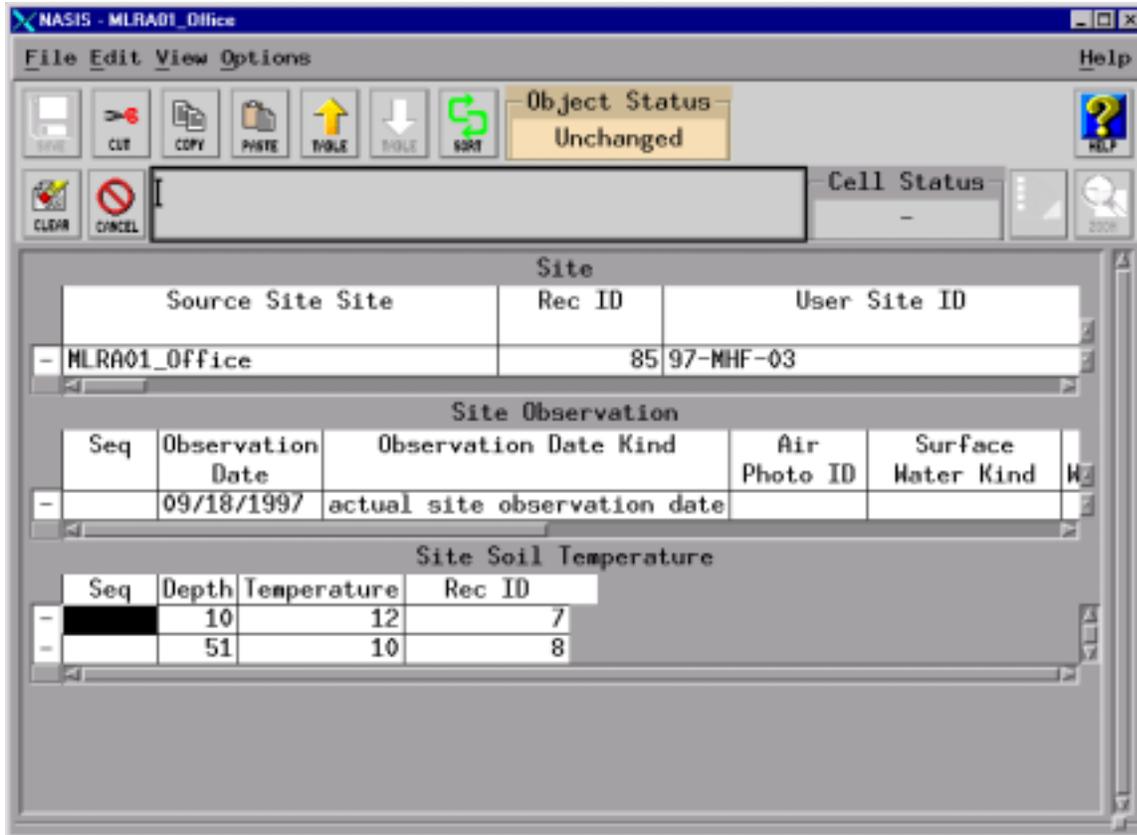
Site Soil Moisture Table

The Site Soil Moisture table describes the soil moisture profile at the time of the observation. This table may be used to record the moisture state of a soil at different periods throughout the year by entering a new record for each observation.

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Top Depth	Depth to the top of the moisture layer being described.
Bottom Depth	Depth to the bottom of the described layer.
Observed Moisture State	Moisture status of the layer, from choice list. (FBDSS 1-12)
Vol Moisture %	Amount of water in the soil layer expressed as a volume %.
Moisture Tension	Moisture tension in bars, determined by field methods. Do not guess.

Site Soil Temperature

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Depth	Enter depth at which temperature is taken, in centimeters.
Temperature	Enter temperature in degrees Celsius. Currently this is an integer field. We are going to try to get it changed to floating point to more accurately display temperature data.



This site had temperatures recorded at depths of 4 and 20 inches on September 18, 1997.

Pedon Table

Soil Name As Sampled	User Site ID	User Pedon ID	Pedon #	Site Observatio	Observatio Date	Observatio Date Kind	Describer's Name	Correlated Soil Name	Tax
- Keith-irrigated	S00KS193007	S00KS193007		99434	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-irrigated	S00KS193010	S00KS193010		99431	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-irrigated	S00KS193009	S00KS193009		99432	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-irrigated	S00KS193008	S00KS193008		99433	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-irrigated	S00KS193006-pit	S00KS193006-pit		27128	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-nonirrigated	S00KS193003	S00KS193003		99428	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-nonirrigated	S00KS193005	S00KS193005		99430	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-nonirrigated	S00KS193002	S00KS193002		99427	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-nonirrigated	S00KS193004	S00KS193004		99429	11/30/2000	actual sit	DeAnn Rick	Keith	
- Keith-nonirrigated	S00KS193001-pit	S00KS193001-pit		27102	11/30/2000	actual sit	DeAnn Rick	Keith	
- Richfield-irrigated	S00KS055019	S00KS055019		27125	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-irrigated	S00KS055018	S00KS055018		27126	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-irrigated	S00KS055017	S00KS055017		27123	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-irrigated	S00KS055020	S00KS055020		27124	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-irrigated	S00KS055016-pit	S00KS055016-pit		27122	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-nonirrigat	S00KS055012	S00KS055012		27118	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-nonirrigat	S00KS055015	S00KS055015		27119	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-nonirrigat	S00KS055014	S00KS055014		27120	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-nonirrigat	S00KS055013	S00KS055013		27121	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Richfield-nonirrigat	S00KS055011-pit	S00KS055011-pit		27117	11/27/2000	actual sit	DeAnn Rick	Richfield	
- Satanta-irrigated	S00KS081004	S00KS081004		27110	11/28/2000	actual sit	DeAnn Rick	Satanta	
- Satanta-irrigated	S00KS081005	S00KS081005		27116	11/28/2000	actual sit	DeAnn Rick	Satanta	
- Satanta-irrigated	S00KS081003	S00KS081003		27109	11/28/2000	actual sit	DeAnn Rick	Satanta	
- Satanta-irrigated	S00KS081002	S00KS081002		27108	11/28/2000	actual sit	DeAnn Rick	Satanta	

Note: the Edit Setup - Map Unit Symbol sort - pedon tailored is used in this screen shot.

User Pedon ID

A unique identifier for the pedon being described. It is made up of the concatenation of the last two digits of the calendar year in which the pedon was collected, soil survey area ID, and a short statement showing the series and purpose for the description. For example: **01LA095 Carville TP** The soil survey area ID should be the survey area that the pedon was originally collected in. If you use a pedon from an adjoining survey area as your type location, the user pedon ID and other location information should reflect the survey area in which the pedon was collected.

Pedon Record Origin

Describer's Name

Enter full name of the person that described the pedon, if known.

User Site ID

User supplied ID number that is assigned when you enter the site data. This and the above site ID are automatically entered when you select a site from the choice list.

Site ID

This is the ID number of the site this pedon will be associated with. It is entered **automatically** when a site is selected from the choice list. **The Site and Site Observations data must be entered before a pedon can be linked to it.**

Site Observation ID The Site Observation ID, Observation Date, and Observation Date Kind columns work together. They are used to link this pedon to a particular site Observation record stored in the Site Observation table. The site observation information must be entered before an entry can be made here. The same choice list appears for either column. When you enter data in any of the columns, NASIS automatically enters the corresponding data in the other columns.

If you have made more than one site observation, for example, recording soil temperatures, you will have to select the observation for the date in which the pedon was described.

Observation Date See above.

Observation Date Kind See above.

User Transect ID The Transect ID and User Transect ID columns identify the transect in which a pedon occurs. Entering values in these columns is optional. The Transect ID and User Transect ID columns work together. When you select an entry from the choice list, or enter a value directly in one of these columns, NASIS automatically enters the corresponding data in the other column. The transect must be described in the Transect table before you can enter values here that will link to it.

Transect Author

Transect ID

Transect Stop Number

Transect Interval

Soil Name As Sampled Name of the series assigned to the pedon at the time it was described.

Correlated Soil Name This column must be updated with progressive correlations if the series name is changed. This column must be filled in for the taxonomic and mapunit description reports to function properly. The preferred format is initial cap followed by small letters.

Taxon Kind Enter from choice list.

Pedon Type Enter the type of pedon as it relates to the series. Initially, the typical and modal pedons for the series should be entered. Next, the modal pedons for map units should be entered. Other pedons that are within the series or map unit range, or inclusions may be entered later if desired. Use the key below:

Pedon type definitions:

- 1- Typical pedon for series - OSD type location pedon
- 2- Modal pedon for series - Representative pedon for the series in the survey area.
- 3- Modal pedon for Map unit - Representative pedon for a map unit, but not for the series.
- 4- Within range of series, Within range of map unit, Outside range of series, Outside range of map unit, Taxadjunct, Inclusion - All others that do not meet one of the above.

File Edit View Options Hel

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status: Unchanged Edit Setup: Map unit symbol sort - pedon tailored Default Group: Administration

CLEAR CANCEL Satanta-irrigated Cell Status: -

Pedon											
ES	Soil Name As Sampled	Pedon Purpose	Exposure Size	Exposure UOM	Cover Kind 1	Cover Kind 2	Erosion Class	Particle Size	Particle Size Mod	Temp Class	Te
-	Keith-irrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-irrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-irrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-irrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-irrigated	research s	2	m	crop cover	row crop		fine-silty		mesic	mes
-	Keith-nonirrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-nonirrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-nonirrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-nonirrigated	research s	2	cm	crop cover	row crop		fine-silty		mesic	mes
-	Keith-nonirrigated	research s	2	m	crop cover	row crop		fine-silty		mesic	mes
-	Richfield-irrigated	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-irrigated	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-irrigated	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-irrigated	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-irrigated	research s	2	m	crop cover	row crop		fine		mesic	mes
-	Richfield-nonirrigat	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-nonirrigat	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-nonirrigat	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-nonirrigat	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-nonirrigat	research s			crop cover	row crop		fine		mesic	mes
-	Richfield-nonirrigat	research s	2	m	crop cover	row crop		fine		mesic	mes
-	Satanta-irrigated	research s			crop cover	row crop		fine-loamy		mesic	mes

- Pedon Purpose** Select from choice list. Enter the reason the pedon was described.
- Pedon #** Enter the consecutive number of the pedon sampled in a particular survey area.
- Exposure Size** Size of the description pit in meters or centimeters.
- Exposure UOM** Specify meters or centimeters.
- Cover Kind 1** Natural cover at the description site. Select from choice list. First level or general type of cover. **(FBDSS 1-14)**
- Cover Kind 2** Second level or more specific cover type related to Cover Kind 1. Select from choice list. **(FBDSS 1-14)**
- Erosion Class** Enter class of accelerated erosion. **(SSM p86) (FBDSS 1-20)**

ES	Soil Name As Sampled	Order	Suborder	Great Group	Subgroup	Reaction	Moist Subclass	Taxonomic Class
-	Keith-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-nonirrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-nonirrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-nonirrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-nonirrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Keith-nonirrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine-silty, mix C Finnell
-	Richfield-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-irrigated	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-nonirrigat	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-nonirrigat	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-nonirrigat	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-nonirrigat	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-nonirrigat	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Richfield-nonirrigat	mollisols	ustolls	argiustoll	aridic arg		aridic (torric)	Fine, smectitic C Finnell
-	Satanta-irrigated	mollisols	ustolls	haplustoll	aridic hap		aridic (torric)	Fine-loamy, mix C Finnell

- Taxonomic Class** Calculated field. Enter data in following columns and recalculate each time a change is made.
- Order** Enter order from choice list. . (*Keys to Soil Taxonomy 8th ed.*)
- Suborder** Enter suborder from choice list. . (*Keys to Soil Taxonomy 8th ed.*)
- Great Group** Enter great group from choice list. . (*Keys to Soil Taxonomy 8th ed.*)
- Subgroup** Enter subgroup from choice list. . (*Keys to Soil Taxonomy 8th ed.*)
- Particle Size** Enter particle size from choice list . (*Keys to Soil Taxonomy 8th ed. p295*)
- Particle Size Mod** Enter modifier if appropriate, from choice list.
- CEC Activity Class** Enter activity class from choice list, based on CEC to clay ratio. (*Keys to Soil Taxonomy 8th ed. p303*)
- Reaction** Enter reaction class from choice list. . (*Keys to Soil Taxonomy 8th ed. p304*)
- Temp Class** Enter the taxonomic family temperature class used to construct the official classification name. If the temperature class is embedded in the classification name, leave this field null. . (*Keys to Soil Taxonomy 8th ed. p304*)
- Moist Subclass** Enter the soil moisture subclass regardless of whether it is included in the name of the subgroup. . (*Keys to Soil Taxonomy 8th ed. p32*)
- Temp Regime** Enter the actual soil temperature regime. This field is used to sort components by soil temperature. . (*Keys to Soil Taxonomy 8th ed. p34*)

Keys to Taxonomy Edition Used

PSC Top Depth	Enter depth to the top of the particle size control section in centimeters. . <i>(Keys to Soil Taxonomy 8th ed. p297)</i>
PSC Bottom Depth	Enter depth to the bottom of the particle size control section in centimeters. . <i>(Keys to Soil Taxonomy 8th ed. p297)</i>
Current Weather	Enter current weather conditions when pedon was described. This information is useful when completing performance appraisals. Lousy weather gets more points than nice weather.
Current Air Temp	Enter current air temperature when the pedon was described. This information is used to indicate how badly the pH samples might have been contaminated by sweat on your hands.
Lab Source ID	Enter name of Lab providing data. If data was processed at the current NSSL, enter Lincoln. If data was processed at one of the state University labs, enter the University. This field will only accept 7 characters.
Lab Pedon #	Enter pedon number assigned by National Soil Survey Lab, or other laboratory if pedon was sampled.
Pedon Site	MLRA office that owns the data. Automatically entered by NASIS.
Group	Name of the user group that owns the data. Automatically entered by NASIS.
User	Name of NASIS user entering the data. Automatically entered by NASIS.
Last Updated	Date and time record was last edited. Automatically entered by NASIS.
Source Pedon Site	Automatically entered by NASIS.

Pedon Diagnostic Features Table

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Kind	REQUIRED Enter one record for each diagnostic feature that applies to the pedon being described. Select from choice list. (<i>Keys to Soil Taxonomy 8th ed. p13</i>)
Top Depth	REQUIRED Enter depth to the top of the specified feature – in centimeters.
Bottom Depth	REQUIRED Enter depth to the bottom of the specified feature – in centimeters.
Thickness	Enter difference between top and bottom in RV column. Enter low and high values if you have enough data to calculate ranges.

Pedon										
ES	Soil Name As Sampled	User Site ID	User Pedon ID	Pedon #	Site Observatio	Observatio Date	Observatio Date Kind	Describer Name	Correlated Soil Name	1
-	Keith-irrigated	S00KS193009	S00KS193009		99432	11/30/2000	actual sit	DeAnn Rick	Keith	

Pedon Diagnostic Features					
ES	Kind	Top Depth	Bottom Depth	Thickness	
				Low	High
-	mollic epipedon	0	44		
-	argillic horizon	44	138		

Pedon Field Measured Property

The Pedon Field Measured Property table contains the results of field or office conducted soil property analyses that apply to the profile as a whole, that cannot be stored elsewhere in the database as separate data elements in other tables. **Analyses that apply to specific horizons are entered into the Pedon Horizon Field Measured Property table.** This table is used to record data that does not have a specific field in any other NASIS table. Data entered in this table will be in the database, but currently is not printed out in the pedon report. *If you have a soil property that you want displayed in the profile description, place that data in the Pedon Horizon Text table and specify the Kind as: horizon note, formatted.*

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Name	Enter any property that does not already have a column available for entering data. For potential codes see the section " Potential Field Measured Property Codes " at the end of this book.
Value	Enter the value of the Property (see potential list)
Unit of Measure	Enter the Unit of Measurement (cm, mmho/cm, etc.)

Pedon Restrictions

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Kind** Enter a record for as many restrictions as are present. Select from the choice list.
- Hardness** Enter the degree of cementation of the restricting layer.
- Top Depth** Enter the depth to the top of the restricting layer – centimeters.
- Bottom Depth** Enter the depth to the bottom of the restricting layer – centimeters. See note below for bedrock example.
- Thickness** Enter the RV thickness. If data is available, enter low and high range.

The screenshot shows the NASIS - MLRA01_Office software interface. The main window contains two data entry tables. The top table, titled "Pedon", has columns for Site ID, User Site ID, Site Observation ID, and Observation Date. The bottom table, titled "Pedon Restrictions", has columns for Seq, Kind, Hardness, Top Depth, and Bottom Depth. The "Object Status" is "Unchanged" and the "Cell Status" is "-".

Site ID	User Site ID	Site Observation ID	Observation Date
257	00-GDM-01	221	07/15/2000

Seq	Kind	Hardness	Top Depth	Bottom Depth
1	bedrock (paralithic)	weakly	65	79
2	bedrock (lithic)	very strongly	79	90

Pedon Surface Fragments

If you are separating surface fragments, record the data in this table. If you enter surface fragments in this table, do not enter the same fragments in an O horizon or the surface mineral layer.

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Cover %** Enter the percent of the ground surface covered by rock fragments 2mm to 250mm. (SSM p145-150)

- Spacing** Average distance between stones and/or boulders, measured between edges. (SSM p145-150)
- Kind** Type of bedrock from choice list. If there are multiple kinds of rock, enter a record for each with appropriate data.
- Size** Enter each size as a separate record. Use the average axial dimension for the RV and record the range in low and high.
- Shape** Record whether fragments are flat or nonflat.
- Roundness** Record angularity of fragments from choice list.
- Hardness** Record degree of cementation from choice list.

Pedon						
Site ID	User Site ID	Site Observation ID	Observation Date	Observation Date Kind		
N	22 98-AM-01	14	02/18/1999	entry creation date		

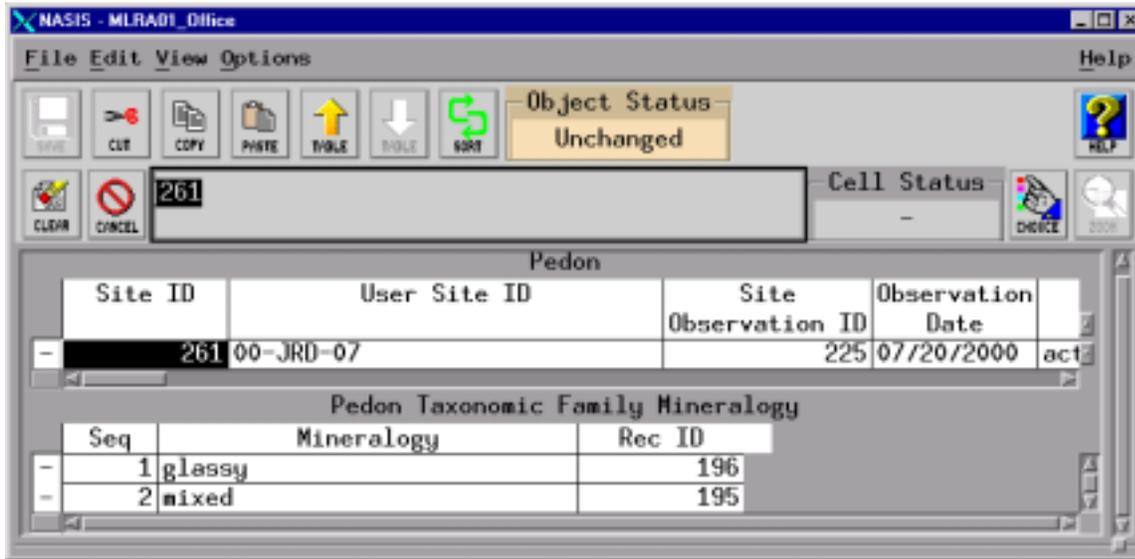
Pedon Surface Fragments									
	Cover %	Spacing	Kind	Size			Shape	Roundness	Hardness
				Low	RV	High			
N	2.00	6.00	basalt	250	450	600	nonflat	subangular	indurated
N	0.05		basalt	75	162	250	nonflat	subangular	indurated

In this example, the soil surface has both cobbles and stones. The percent cover is recorded for both, but spacing is recorded only for stones and boulders. Percent cover is more important for fragments less than 250mm as it affects erosion hazard. Spacing is more significant for stones and boulders as it impacts the use of tillage implements.

Pedon Taxonomic Family Mineralogy

Seq This is an instance where the sequence number is important. Assign sequence numbers in the order that the mineralogy classes should be displayed. If numbers are not assigned, classes will be displayed in alphabetical order.

Mineralogy Enter mineralogy class from choice list.



Pedon Taxonomic Family Other Criteria

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Family Other Record soil characteristics other than the defined family characteristics of particle-size, mineralogy, reaction classes, and soil temperature classes. These include depth, consistence, moisture equivalent, slope, and permanent cracks. (*Keys to Soil Taxonomy, 8th ed. p297-310*)

Pedon Taxonomic Moisture Class

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Moisture Class Record the soil moisture class even though it may be evident in the classification name. Where it is not evident, this field will provide clear identification of the actual moisture regime.

Pedon Text

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Date	Date the note is recorded. Current date is entered automatically by database.
Author	Enter the name of the person making the note. Do not use initials.
Kind	Enter kind of note from choice list.
Category	Refer to list of approved categories and subcategories.
Subcategory	Same as above.
Text	

Pedon Horizon

ES	Soil Name As Sampled	User Site ID	User Pedon ID	Pedon #	Site Observatio	Observatio Date	Observatio Date Kind	Describer Name	Correlated Soil Name
-	Keith-irrigated	S00KS193009	S00KS193009		99432	11/30/2000	actual sit	DeAnn Rick	Keith

ES	Designa	Disc	Master	Sub	Deserv S Method	Top Depth	Bottom Depth	Tex Mod & Class	Strati	Est Clay	Varie Color	Rupture Moist	Rupture Dry	Rupture Cement	Stickine
-	Ao1		A	1	C push t	0	10	SIL	C no		no	friable	slightly		
-	Ao2		A	2	C push t	10	17	SIL	C no	27.0	no	friable	slightly		
-	AB		AB		C push t	17	28	SICL	C no	30.0	no	friable	slightly		
-	Bt		B		C push t	28	55	SICL	C no		no	friable	slightly		
-	Btk		B		C push t	55	74	SIL	C no		no	friable	slightly		
-	Bk1		B	1	C push t	74	105	SIL	C no		no	friable	slightly		
-	Bk2		B	2	C push t	105	149	SIL	C no		no	friable	slightly		
-	Bk3		B	3	C push t	149	215	SIL	C no		no	friable	slightly		

Note the Edit Setup used in this screen shot. The C in the status box indicates this is a calculated entry.

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Observation Method Enter the type of excavation used to observe the soil profile. If the lower part of the profile was described using an auger hole, specify so. (FBDSS 2-1)

Designation Calculated field, but may also be entered manually. Enter data in adjacent columns to the right in order to calculate. (FBDSS 2-2...2-4)

Disc Enter the numeric value if a discontinuity is present.

Master Enter the master horizon designation for each layer described (choice list).

Sub If the master horizon is subdivided, enter a consecutive numeric value for each subdivision. Refer to A horizon in example below.

Prime If two or more horizons of the same kind are separated by one or more horizons of a different kind in a pedon, identical letter and number symbols can be used for these horizons that have the same characteristics, e.g. A-E-Bt-E-Btx-C, identifies two E horizons. To emphasize this characteristic, the prime (') symbol is added after the master horizon designation of the lower of the two horizons that have identical designations, e.g. A-E-Bt-E'-Btx-C. The prime symbol, when appropriate is applied to the master horizon designation, and any lowercase letter symbols follow it: B't. In rare cases when three layers have identical letter symbols, double prime symbols can be used for the lower of these horizons: E". (Keys to Soil Taxonomy)

Top Depth Enter depth to the top of the horizon in centimeters. (FBDSS 2-4...2-5)

Bottom Depth Enter depth to the bottom of the horizon in centimeters.

- Thickness** Enter the difference between top and bottom in the RV column. Low and high values are optional.
- Tex Mod & Class** Calculated field. Enter data in Horizon Texture table.
- Stratified?** If the horizon is stratified, enter yes; otherwise no or leave blank.
- Est Clay %** Enter field estimated clay. Do not enter lab data.
- Est Silt %** Enter field estimated silt content. Do not enter lab data.
- Est Sand %** Enter field estimated sand content. Do not enter lab data.
- Variagated Colors?** Indicate whether colors are variagated or not, or leave blank.
- Rubbed Fiber %** Enter rubbed fiber content for histosols.
- Unrubbed Fiber %** Enter the unrubbed fiber content for histosols.
- Observed Moisture State** Enter the moisture state of the profile at the time it was described.
- Rupture Moist** Moist consistence.
- Rupture Dry** Dry consistence.

ES	Soil Name As Sampled	User Site ID	User Pedon ID	Pedon #	Site Observatio	Observatio Date	Observatio Date Kind	Describer Name	Correlated Soil Name
-	Keith-irrigated	S00KS193009	S00KS193009		99432	11/30/2000	actual sit	DeAnn Rick	Keith

ES	Designation	Rupture Dry	Rupture Cement	Stickiness	Plasticity	Permeability Class	Field pH	Efferv Class	Efferv Agent	Boundary Distinctness	Boundary Topography
-	Ap1	ghtly				moderate		none		abrupt	smooth
-	Ap2	ghtly				moderate		none		clear	smooth
-	AB	ghtly				moderate		none		abrupt	smooth
-	Bt	ghtly				moderate		none		clear	smooth
-	Btk	ghtly				moderate		slight		clear	smooth
-	Bk1	ghtly				moderate		strong		clear	smooth
-	Bk2	ghtly				moderate		strong		clear	smooth
-	Bk3	ghtly				moderate		strong		clear	smooth

Rupture Cement

Rupture Plate

Manner of Failure If the soil is smeary, the degree of smeariness is entered in this column.

Stickiness

Plasticity

Tough Class

Penetration Resistance

Penetration Orientation

Ksat Enter Ksat only if you have actual measured data. Estimated permeability based on soil properties should be entered in the following Permeability Class column. (*FBDSS 2-62 2-64*)

Ksat Std Dev Calculated Standard Deviation.

Ksat Rep # Number of replications.

Permeability Class Enter estimated class from choice list. If you have data, enter the class that includes the Ksat Rep value. (*NSSH 618-73*), (*FBDSS 2-62 2-64*)

Field pH (*FBDSS 2-64*)

pH Method Enter the method used to determine pH. Currently, there is no choice for NaF pH's. If you have NaF pH data and want it displayed in the printed pedon description, enter this data in the Horizon Text, Formatted notes.

Efferv Class Enter class from choice list. If there is no reaction, enter none. (*SSM p192*) (*FBDSS 2-65*)

Efferv Loc obsolete Obsolete data field. Do not enter anything in this field. It is to be used in the conversion of pedon data not directly entered in NASIS.

Efferv Agent Enter chemical agent used to test for carbonates from choice list. If Effervescence Class is none, do not enter an agent.

Alpha Dipyr reaction Enter whether the reaction is positive or negative. If the soil is not tested, leave blank.

EC Enter the electrical conductivity of the soil. Use only measured values. (*NSSH 618-9*)

EC Method Enter the method used to determine conductivity.

SAR Enter SAR from lab data. If SAR is negligible, enter 0. (*NSSH 618-36*)

Excav Diff Enter from choice list. (*NSSH 618-12*)

Boundary Distinctness (*FBDSS 2-5*)

Boundary Topography (*FBDSS 2-5...2-6*)

Total Volume % Normally, we have not recorded this data, however if you have dual horizons such as B/E, it may be useful information to record the extent of each part in these 2 columns.

Lateral Area %

Pedon Horizon Cementing Agent

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Cementing Agent

Pedon Horizon Color

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Color % Enter the **percent** that each color occupies in the horizon. If there is more than one color, enter each color in a separate record. (**FBDSS 2-7...2-8**)

Phys State Describe color location and condition of the sample. Select from choice list. (**FBDSS 2-8**).

Hue

Value

Chroma

Moist State Enter moisture state in which the color was determined.

Pedon Horizon Concentrations

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Percent Enter percent of area covered by concentrations. If entering previously collected pedons which use classes to describe quantity, estimate percent from chart in FBDSS. (**FBDSS 2-17...2-23**)

Size

Contrast (**FBDSS 2-12**)

Hardness Enter degree of cementation from choice list.

Shape Enter shape from choice list.

Kind Enter kind from choice list. If you encounter a concentration of something that is not listed in the choice list, enter it in a horizon formatted text note and it will be displayed in the pedon report.

Location Enter location from choice list.

Boundary Enter distinctness of boundary, from choice list.

Pedon Horizon Concentrations Color

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Color Percent

Hue

Value

Chroma

Moist State

Rec ID

Pedon Horizon Designation Suffix

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Suffix Enter as many as apply, each on a separate record. (***FBDSS 2-3***)

Pedon Horizon Features

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Kind

Total volume %

Lateral Area %

Pedon Horizon Field Measured Properties

Results of field or office conducted soil property analyses that apply to specific horizons are entered into the Pedon Horizon Field Measured Property table. This table is used to record data that does not have a specific field in any other NASIS table. Data entered in this table will be in the database, but currently is not printed out in the pedon report. If you have a soil property that you want displayed in the profile description, place that data in the Pedon Horizon Text table and specify the Kind as: horizon note, formatted.

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Name	Enter any property that does not already have a column available for entering data. For potential codes see the section " Potential Field Measured Property Codes " at the end of this book.
Value	Enter the value of the Property (see potential list)
Unit of Measure	Enter the Unit of Measurement (cm, mmho/cm, etc.)

Pedon Horizon Fragments

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Vol %	Enter the volume percent of each size and kind of rock fragment.
Kind	If you identify several different kinds of rock fragments, enter each in a separate record. For example, if a horizon is described as having 20 percent basalt and sandstone fragments, enter 10 percent basalt and 10 percent sandstone in separate records. Do not enter 20 percent of each so that the total comes out to 40 percent.
Size	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Shape	
Roundness	
Hardness	Degree of cementation must be entered to distinguish between fragments and parafragments.

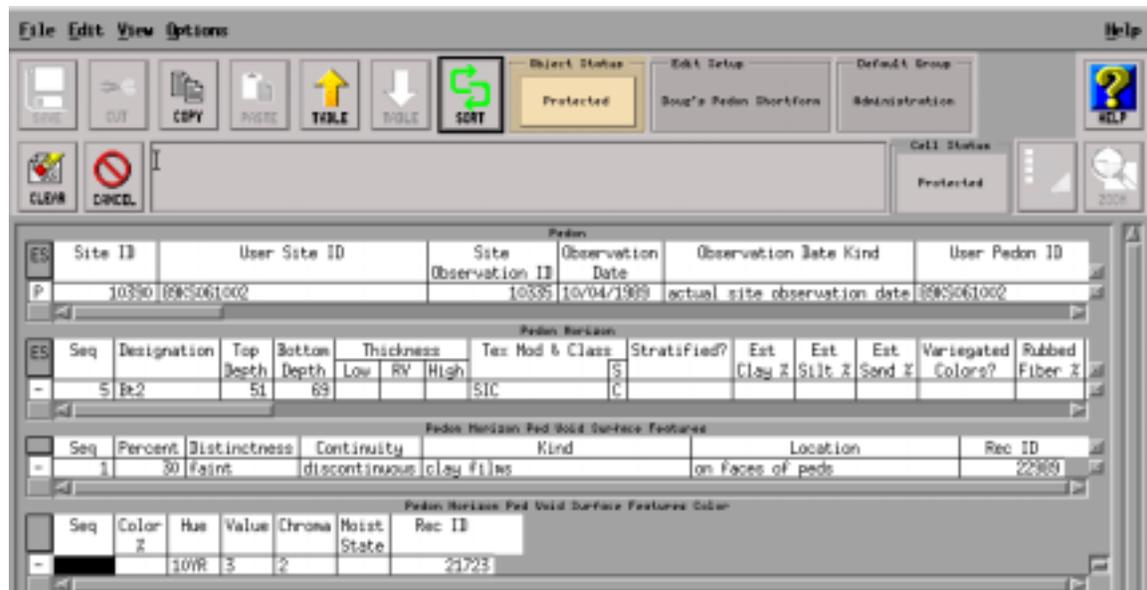


Pedon Horizon Mottles

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Percent Size Contrast Hue Value Chroma Shape Moist State Location – obsolete Enter mottled colors of lithochromic origin. (FBDSS 2-7...2/12)

(FBDSS 2-12)



Pedon Horizon Ped Void Surface Features

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Percent	Enter percent of surface that feature covers. For old descriptions and OSD's, convert few, common and many to percent. (FBDSS 2-26) .
Distinctness	(FBDSS 2-27)
Continuity	(FBDSS 2-26)
Kind	(FBDSS 2-24)
Location	(FBDSS 2-27)

Pedon Horizon Ped Void Surface Features Color

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Color Percent	
Hue	
Value	
Chroma	
Moist State	
Rec ID Hue	

Pedon Horizon Pores

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.						
Quantity	Enter the actual number of pores per unit area. For old descriptions, use the following conversions: <table><tr><td>Many</td><td>10</td></tr><tr><td>Common</td><td>4</td></tr><tr><td>Few</td><td>.5</td></tr></table> (FBDSS 2-53)	Many	10	Common	4	Few	.5
Many	10						
Common	4						
Few	.5						
Size	(FBDSS 2-53...2-55)						
Continuity	(FBDSS 2-58)						
Shape	List shape of pores from choice list. Interstitial pores are packing voids and should not be used unless the horizon consists of coarse sand or rock						

fragments. Use irregular pores in finer textured horizons. (FBDSS 2-56, 57)

Pedon Horizon Redoximorphic Features

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Percent	Entries are for features of redoximorphic origin. (FBDSS 2-13...2-16)
Size	
Contrast	(FBDSS 2-12)
Hardness	
Shape	
Kind	
Location	
Boundary	

Pedon Horizon Redoximorphic Features Color

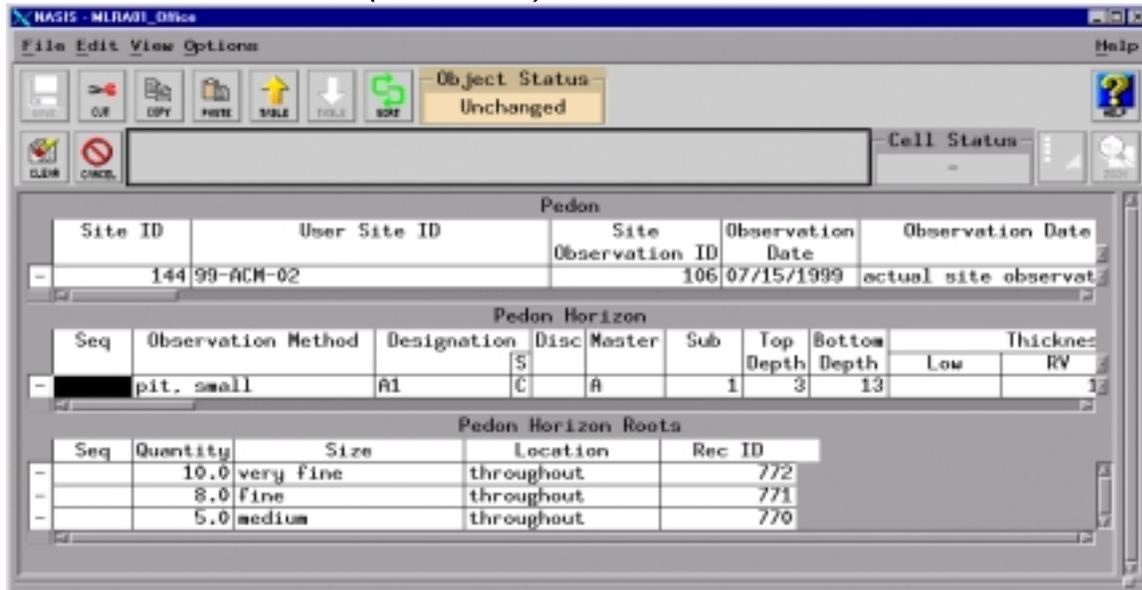
Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Color Percent	
Hue	
Value	
Chroma	
Moist State	
Rec ID Hue	

Pedon Horizon Roots

Seq	Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
Quantity	Enter the actual number of roots per unit area. For old descriptions, use the following conversions: Many 10 Common 4 Few .5 (FBDSS 2-53)

Size (FBDSS 2-53)

Location (FBDSS 2-55)



The pedon report will list this A1 horizon as having many roots of each size because the quantity is >=5.

Pedon Horizon Sample

The lab is entering these the lab is making a copy of the pedon and entering these numbers in their copy. If you send a pedon to the lab and have entered the pedon into NASIS at some point in time if you query by pedon user ID you will note that there is a copy that is owned by the lab. As an example two pedons from Clay County were sent to the lab early this summer. The user pedon ID is 01KS027010 and 01KS027011. If you query these pedons by user ID you get 4 loaded into the pedon table and 2 sites in the site table. One set owned by the lab, the other by the user.

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Lab Sample # Enter sample number for each horizon.

Pedon Horizon Soil Structure

Seq Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.

Grade Enter structure grade from choice list. When structure is massive or single grain, enter structureless as the grade. (FBDSS 2-38...2-45)

Size

Type

Structure ID See note below following graphic.

Parts to Structure ID

The screenshot shows the NASIS - MLRAD1_Office software interface. The main window displays three data tables:

Pedon				
Site ID	User Site ID	Site Observation ID	Observation Date	Observation
M	106 99-DLW-07	80	11/29/1999	actual site of

Pedon Horizon									
Seq	Observation Method	Designation	Disc	Master	Sub	Top Depth	Bottom Depth	T	
-	3 pit. small	Bw	C	B		8	15	0	

Pedon Horizon Soil Structure				
Grade	Size	Type	Structure ID	Parts to Structure ID
- moderate	medium	subangular blocky	1	2
- moderate	fine	subangular blocky	2	

If the structure type breaks to finer size, you must assign structure ID's to each record and enter a value in the "Parts to" column. Otherwise, each size will be listed separately as though they both occur in place in the profile. If both sizes occur in place, it is not necessary to assign Structure ID numbers.

Pedon Horizon Text

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Date**
- Author**
- Kind**
- Category**
- Subcategory**
- Text**

Pedon Horizon Texture

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Texture** (*FBDSS 2-28...2-30*)
- In Lieu** Organic surface layers and bedrock should have an entry in this column.

Pedon Horizon Texture Modifier

Seq

This is one instance in which a sequence number is necessary. In order for the rock fragment modifier to come out first, it must either appear first in the list of modifiers, or have a sequence number of 1. For example, if you have a texture of stony ashy loam, the modifiers must be listed thus:
(**FBDSS 2-32**)

1. ST
2. ASHY

Modifier

Enter all modifiers that apply to the texture.

The screenshot shows the NASIS - MLRA01_Office software interface. The main window displays the following data entry sections:

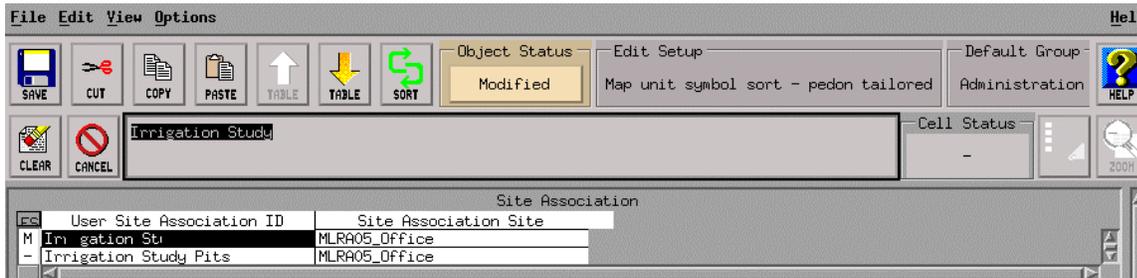
Site ID	User Site ID	Site Observation ID	Observation Date
141	98-JFD-01	102	11/05/1998

Thickness		Tex Mod & Class		Stratified?
Low	RV	High		S
	11		PGR-ASHY-LCOS	C no

Seq	Texture	In Lieu	Rec ID
	lcos		500

Seq	Modifier	Rec ID
1	pgr	311
2	ashy	310

Site Association



Source Site Association Site

Rec ID

User Site Association ID

A Unique identifier should be used to name the association of sites and pedons used for the project. A suggestion is the following format 01KS201-*some unique identifier* that will make recall easier down the road.

When populating **Site Association Site** use Copy row. When all sites are in the site table, highlight all rows click on edit, copy rows; then go to **site association site** and paste. This is easier and faster than the choice list.

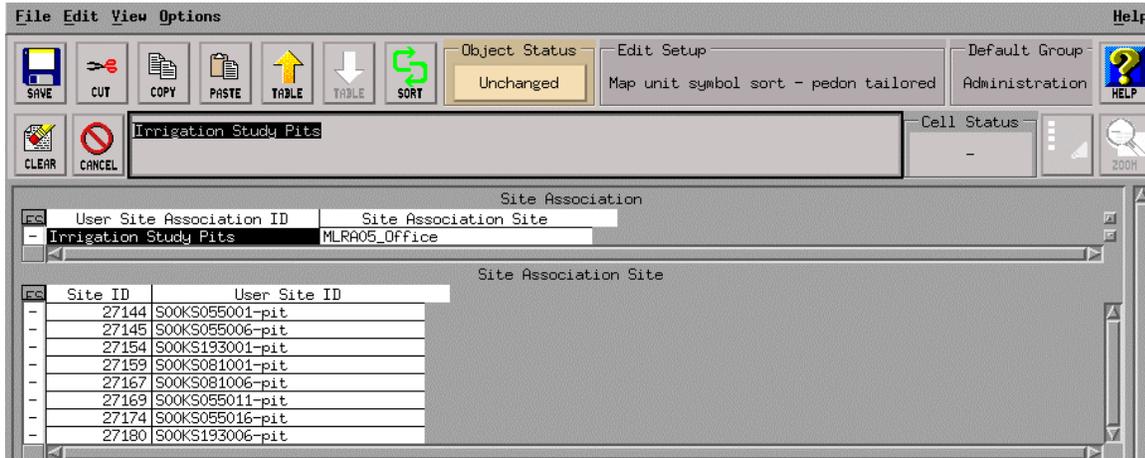
Site Association Site

Group

User

Last Updated

Site Association Site



- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Site ID** Use the choice list to select those site IDs to be included into the Site Association
- User Site ID** Or, use the choice list to select those Users Site IDs to be included into the Site Association

Site Association Text

- Seq** Entries are not necessary, however if you enter a sequence number in one row, enter a number in all rows.
- Date**
- Author**
- Kind**
- Category**
- Subcategory**
- Text**

Transect

ES	User	Transect ID	Transect Author	Transect Kind	Transect Selection Method	Transect Delineation Size	Transect Direction	Transect Site	Group
-	00KS0891	00KS0891	W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	00KS0891	00KS0891	W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	00KS0891	00KS0891	W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	00KS0891	00KS0891	W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	00KS0891	00KS0891	W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	00KS0891	00KS0891	W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	00KS0891	00KS0891	W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	01KS197 - Lm1		W. Wehmueller	regular interval	biased		270	MLRA05_Office	Kansas R4
-	2001KS201-3		W. Wehmueller	random point	random			MLRA05_Office	Kansas R4
-	2001KS201-4		W. Wehmueller	regular interval	biased		329	MLRA05_Office	Kansas R4

This table is used to link pedons into a Transect. Note the User Transect ID in both screen shots.

The screen example printed illustrates the problem that occurred in conversion. There are 8 lines shown that are transect id 00KS0891. This should be 1 line with 8 pedons in the pedon table. Line 9 of that illustration shows the format to use for transect id's. 01KS197 - Lm1, is a transect done in 2001, KS197 (Wabaunsee County) the first transect of the Lm map unit.

User Transect ID

Transect Author

Transect Kind

Transect Selection Method

Transect Delineation Size

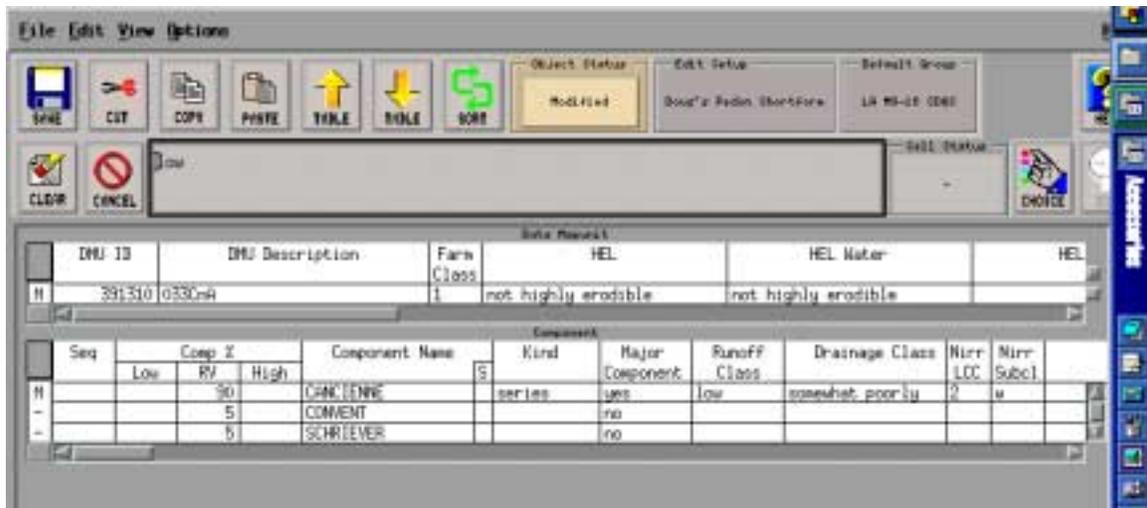
Transect Direction

Transect Interval (in Pedon table).

ES	Soil Name As Sampled	Correlated Soil Name	User Site ID	User Pedon ID	User Transect ID	Transe Stop N	Transect Interval	Pedon #	Site Observatio
-	Nuckolls		00KS089002	00KS089002	00KS0891	2			10034
-	Keith-irrigated	Keith	S00KS193009	S00KS193009					9943
-	Keith-irrigated	Keith	S00KS193008	S00KS193008					9943
-	Keith-irrigated	Keith	S00KS193007	S00KS193007					9943
-	Keith-irrigated	Keith	S00KS193010	S00KS193010					9943
-	Keith-irrigated	Keith	S00KS193006-pit	S00KS193006-pit					2712
-	Keith-nonirrigated	Keith	S00KS193002	S00KS193002					9942
-	Keith-nonirrigated	Keith	S00KS193003	S00KS193003					9942
-	Keith-nonirrigated	Keith	S00KS193004	S00KS193004					9942
-	Keith-nonirrigated	Keith	S00KS193005	S00KS193005					9943

Component

Several tables under the component object must be filled out in order to create links and add other information needed for most current Taxonomic and Map unit description reports. In the COMPONENT table itself, it is also necessary to assure that certain columns are correctly populated for most Taxonomic and Map unit reports to work. Those are:



Data Result					
DNU ID	DNU Description	Farm Class	HEL	HEL Water	HEL
11	391510 0330m4	1	not highly erodible	not highly erodible	

Component										
Seq	Comp %			Component Name	Kind	Major Component	Runoff Class	Drainage Class	Nirr LCC	Nirr Subcl
	Low	RV	High							
11		50		CONCRETE	series	yes	low	somewhat poorly	2	w
		5		CONVENT		no				
		5		SCHRIEVER		no				

Comp %: Low, RV & High values for all major and minor components should be entered. RV's should add up to 100%. The ranges and RV's should be based on statistical analysis of transect or random point data. If two major components have the same percents, the sequence column should also be populated to keep components in the correct order.

Component name: Must be entered for any component.

Kind: Should be populated utilizing the choice list.

Major Component: Must be set to "Yes" for all major components. Minor components may either be set to "No" or left blank.

Runoff Class: Should be populated using the Index Surface Runoff Classes guide in NSSH Part 618.50.

Drainage Class: Enter the correct drainage class for the series.

Nirr LCC: Enter correct land capability class for the component.

Nirr Subcl: Enter correct land capability subclass for the component.

Component Pedon

The component pedon table links any component of a data mapunit to a pedon that has been entered in the pedon table.

Seq	User Pedon ID	Describer's Name	Soil Name As Sampled	Pedon ID	Rep Pedon?
1	00L4095-Cancienne TP	Dennis Bougereaux, Milton Step	Cancienne	112764	yes

Seq: Sequence number

User Pedon ID: Select from choice list, or type in if known.

Describer's Name: Fills in automatically when a pedon is chosen from the choice list, or can be queried for in choice list to find all pedons by author(s).

Soil Name As Sampled: Fills in automatically when a pedon is chosen from the choice list, or can be queried for in choice list to find pedons by soil name.

Pedon ID: Fills in automatically when a pedon is chosen from the choice list.

Rep Pedon?: This needs to be entered as a "Yes" for any pedon that is being used as a typical pedon for the series, or as a representative pedon for a map unit in any of the survey areas that are using the DMU. All other pedons that are not typical or representative pedons should be entered as "No" or may be left blank.

Component Geomorphic Description

The component geomorphic description table and tables below it hold data about the Landscape, Landform, Microrelief or Anthropogenic features that any component of a data mapunit has.

The screenshot shows a software window titled 'Data Report'. It contains three tables:

DMU ID	DMU Description	Fam. Class	HEL	HEL Water	HEL
391310	033CrA	1	not highly erodible	not highly erodible	

Seq	Comp. I	Comp. II	Comp. III	Component Name	Kind	Major Component	SIR phase
	Low	RV	High				
		90		CHOCENE	series	yes	

Seq	Feature Type	Feature Name	Feature Modifier	Feature ID	Exists On Feature ID	RV?	Rec ID
	Landform	natural levee			1	no	426592
	Landscape	delta plain		1		no	426593

Seq: Sequence number. Usually not needed because it is generally preferable for multiple rows to sort by Exists on Feature ID.

Feature Type: Select from choice list, or type it in if known.

Feature Name: Select from choice list, or type it in if known.

Feature Modifier: Type in additional modifier words to the feature name. For example, if “Mississippi River” is entered as a Feature Modifier to the Feature Name “delta plain”, the reports will return “Mississippi River delta plain”.

Feature ID: Assign any interger as an ID number to the feature name that you want to show another feature name existing on.

Exists on Feature ID: Enter the same number as you assigned for the Feature ID only on the row for the feature name that you want to show existing on the other feature. For example, in the screen setup above, the reports will return “On natural levee on delta plain”, because natural levee exists on 1, and 1 is the Feature ID for delta plain.

RV: Enter Yes or No, or leave blank. This could be used where you want to indicate that a component of a map unit can be on several different landscapes or landforms, but is typified on one. Most map unit or taxonomic reports however will show all regardless of what the RV is set at.

Component Two Dimensional Surface Morphometry

The component two dimensional surface morphometry table holds data about the hillslope position that the map unit component is on.

Seq	Hillslope Profile	Rec ID
N	shoulder	70160

Seq: Sequence number. Usually not needed unless multiple rows are entered that need to be in order.

Hillslope profile: Select from choice list, or type it in if known.

Component Slope Shape Surface Morphometry

The component slope shape surface morphometry table holds data about the shape of the surface that the map unit component is on.

Seq	Slope Shape Across	Slope Shape Up/Down	Rec ID
N	convex		25721

Seq: Sequence number. Usually not needed unless multiple rows are entered that need to be in order.

Slope shape across: Select from choice list, or type it in if known.

Slope shape Up/Down: Select from choice list, or type it in if known.

Component Parent Material Group and Component Parent Material

The component parent material group and component parent material tables hold data about the parent material type, source and characteristics. The Taxonomic unit and Map unit description reports get data about the component parent material from this table.

The screenshot shows a software interface with a menu bar (File, Edit, View, Options, Help) and a toolbar with icons for Cut, Copy, Paste, Table, Hide, Sort, Object Status, Edit Setup, Default Group, Clear, and Cancel. Below the toolbar are several data tables:

DMU ID	DMU Description	Fam. Class	HEL	HEL Water	HEL
391310	0330Ch	1	not highly erodible	not highly erodible	

Seq	Comp E	Component Name	Kind	Major Component	SIR phase
Low	RV	High			
	SO	CINCIENNE	series	yes	

Seq	Group Name	RV?	Rec ID
	silty alluvium	C no	177530

Seq	Vertical Order	Textural Modifier	General Modifier	Kind	Origin
		silty		alluvium	

Component Parent Material Group:

Seq: Sequence number. Usually not needed

Group Name: Will accept any manual entry, or can be calculated from data entered in the component parent material table.

RV: "Yes" or "No". Not needed if only one row.

Component Parent Material:

Vertical Order: Integer. Enter if there is more than one row for a contrasting parent material that is over another. If a vertical order is entered, the calculated result will separate the two parent materials with the word "over". If no vertical order is entered it will separate two parent materials with "and/or".

Textural modifier: From choice list. General textural characteristics of the parent material, where appropriate..

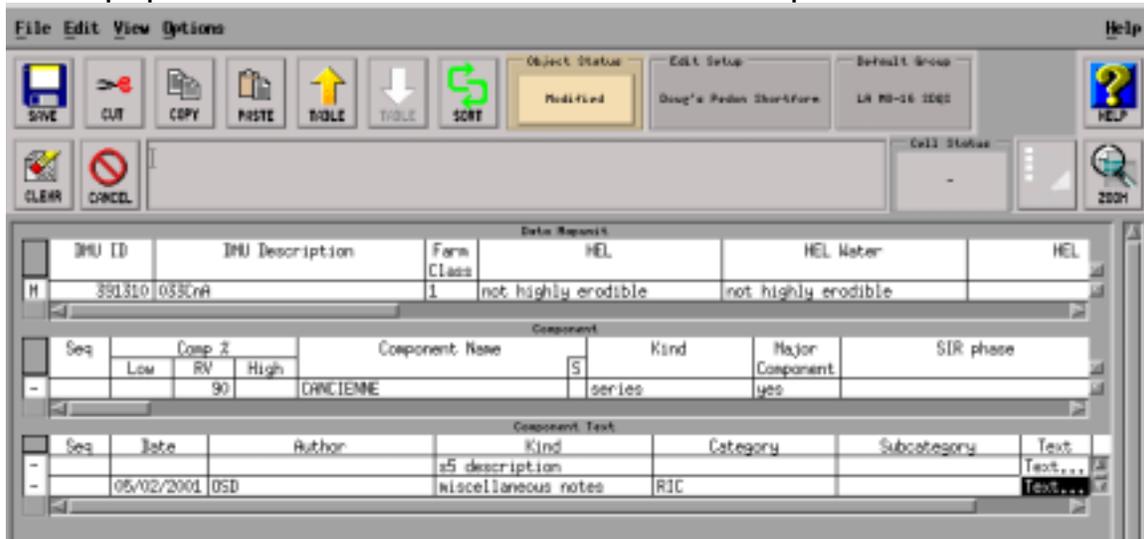
General Modifier: Any other general terms or words. When calculated, data in this column will precede the textural modifier.

Kind: From choice list.

Origin: From choice list (where appropriate)

Component Text

The component text table will accept any text data about the component of a data mapunit. The Taxonomic unit description report gets text data about the series range in characteristics from this table when populated as in the lower row in the example below.



The screenshot shows a software interface with a menu bar (File, Edit, View, Options, Help) and a toolbar with icons for Save, Cut, Copy, Paste, Move, Table, Sort, Object Status, Edit Setup, Default Group, Clear, Cancel, Call Status, and Zoom. Below the toolbar is a 'Data Report' window containing three tables.

IMU ID	IMU Description	Form Class	HEL	HEL Water	HEL
H	391310 033CrA	1	not highly erodible	not highly erodible	

Seq	Comp Z		Component Name	Kind	Major Component	SIR phase
	Low	RV				
-		90	ORACIENNE	series	yes	

Seq	Date	Author	Kind	Category	Subcategory	Text
-			25 description			Text...
-	05/02/2001	OSD	miscellaneous notes	RIC		Text...

Seq: Sequence number. Usually not needed

Date: Entry date. Fills in automatically when a row is inserted.

Author: Initials or name; for data copied from another source, enter source name (eg. OSD).

Kind: Enter from choice list; Use miscellaneous notes for Taxonomic unit range in characteristics text.

Category: Will accept any entry. Type in **RIC** for Taxonomic unit range in characteristics text. Use **dif** for minor components differentia statements.

Subcategory: Will accept any entry. Generally not needed.

Text: Zoom to open text box. Copy in RIC from internet copy of OSD for Taxonomic unit range in characteristics text and edit to fit ranges for the survey area. This is easily done by first opening the OSD on the National OSD site. Highlight the range in characteristics section of the OSD, then pick EDIT, then COPY. Open the Zoom box, then right click on the Exceed icon at the bottom of the screen. Then pick EDIT, then PASTE TO X SELECTION, then FROM CLIPBOARD. Right and left click simultaneously in the Zoom box, then edit the text to fit the survey area or to change format. Minor component differentia also can be copied from OSD.

Mapunit Text

The mapunit text table will accept any text data about the mapunit. The Mapunit description report will return text information about the mapunit use and will leave off management statements for specific uses when the rows are populated as in the example below (blackened rows).

Legend						
Area Type Name	Area Symbol	Area Name	MLRA Office	Legend Descri		
- Non-MLRA Soil Survey Area	LA095	St John the Baptist Parish, Lo	little rock, ar	Detailed Soil Map L		
Mapunit						
Seq	Mapunit Symbol	Mapunit Name	Kind	Status	Total Acres	Li
-	CU	CARLIN AND ALLEMANDS MUCKS	M undifferentiated group	correlated	6298	Low
Mapunit Text						
Seq	Date	Author	Kind	Category	Subcategory	Text
-	12/29/2002	JDS	map unit description	NOT USE		Text...
-	03/06/2002	JDS	map unit description	USE		Text...
-			nontechnical description	AGR	060	Text...
-			nontechnical description	AGR	078	Text...
-			nontechnical description	RNG	007	Text...
-			nontechnical description	SOI	229	Text...

Seq: Sequence number. Usually not needed

Date: Entry date. Fills in automatically when a row is inserted.

Author: Initials or name; for data copied from another source, enter source name

Kind: Enter from choice list; Use “map unit description” for Map unit major use notes. Nontechnical descriptions are generally already in the table for most map units as in the example above. Do not disturb correlation or other types of miscellaneous notes already in the table.

Category: Will accept any entry. Type in “USE” for entering the Mapunit major uses. Type in “NOT USE” for entering uses that you do not want a management statement for in the MUG report.

Subcategory: Will accept any entry. Generally not needed except for codes in Nontechs.

Text: Zoom to open text box. For category “USE” notes, type in a sentence or list the major uses. Preferred format is initial cap. For category “NOT USE” notes, list the use(s) that you do not want to get a management statement for in the MUG. The format can be anything, however the note must contain certain text strings in order to block any statements. Text strings that trigger blocking of statements are as follows:

roplan -- To block Cropland management statements for the map unit.

astur -- To block Pasture management statements for the map unit.

oodlan -- To block Woodland management statements for the map unit.

Using Edit Setups

The use of an Edit Setup will increase the efficiency of populating the Pedon Database. The screen shot below displays all of the pedon related Edit setups available on the MLRA16_Office NASIS Site.

Any of these can be used to enhance entry of Pedon Data. To change your edit setup:

The screenshot shows a software application window with a menu open. The menu item 'Change Edit Setup' is selected, opening a dialog box. The dialog box has a 'NASIS Site' dropdown set to 'MLRA16_Office' and 'Local' radio buttons selected. Under 'Select Edit Setup:', a list of options is shown, with 'Doug's Pedon Shortform' selected. Below the list, a 'Setup Description:' text area contains the following text:

This format eliminates certain columns from the SITE and PEDON and underlying tables that are not being used in the southern parts of MO-16. In addition it scroll locks the horizon sequence and designation columns in the PEDON HORIZON table so they are visible as you move across the table.

Buttons at the bottom of the dialog include 'Apply', 'Make Default', 'Cancel', and 'Help'.

Using Queries

Once data are entered into NASIS, queries are used to select data to be edited or reported. The following pedon related queries are currently available on the MO16 site:

Area/Leg/Rep. DMU/Sites/Pedons by Comp % & Multi MU: Use this query to load all pedons and the sites, mapunits, and components that they are linked to. The Query allows the user to specify area symbol, user site ID, correlated series name, and has multiple choices for legend type, mapunit status, and pedon type. Used to load all necessary information for TUD and MUD reports.

Pedon by pedon ID & NASIS Site: This query will pull those Pedons that match the User pedon ID number and NASIS Site supplied. Unlinked and improperly linked pedons will also be pulled.

Pedon by pedon ID, Type & NASIS Site: This query will pull those Pedons that match the User pedon ID number, pedon type and NASIS Site supplied. Unlinked and improperly linked pedons will also be pulled.

Site and pedon by site association: This query will pull linked Sites and linked Pedons that are linked to the Site association specified.

Sites by Non MLRA SSA in Site Area overlap table: This query will pull those Sites and linked Pedons that have the non-MLRA Soil Survey area specified in the Site area overlap table.

Sites by User Site ID: This query will pull those Sites that match the User Site ID number supplied. Unlinked and improperly linked sites will also be pulled.

NASIS Site: MLRA16_Office [Local] [National] Ready for Use Only

Query Name: Area/Leg/Rep. DMU by Comp % & Multi MU % Legend Status

Select One or

Area	RTF-Soil Moisture Status (By component, depth, & status)
Legend	PEDON-Area/Leg/Rep. DMU/Sites/Pedons by Comp % & Multi MU
Mapunit	PEDON-Pedon by Pedon ID & NASIS Site
Correlation	PEDON-Pedon by Pedon ID, Type & NASIS Site
Data Mapunit	PEDON-Site and pedon by Site Association
	PEDON-Sites by Non MLRA SSA in Site Area overlap table
	PEDON-Sites by User Site ID
	Components-Selection by Slope % (Low & High)

Query Description:
Use this query to select only the current linked or unlinked (Yes or No in Correlation Table) components for a survey area, and Sites and Pedons linked to the components. This should be run against five target tables (Area,

Query Text:
FROM area, legend, OUTER (mapunit, OUTER (correlation, data_mapunit, OUTER component)), area_type
WHERE component.component_percent_r > ? "Component % RV >" and

[Apply] [Cancel] [Help]

Other queries include this list created in October 2001:

Query Name Query Site

MO01-Area/Leg/Rep. DMU/Sites/Pedons by Comp % & Multi MU
 PEDON - by correlated series name
 PEDON - by sampled name
 PEDON - by Site Area Overlap
 PEDON - by State
 PEDON - by User Pedon ID and database
 PEDON - by User Pedon ID and type

MLRA01_Office
 MLRA01_Office
 MLRA01_Office
 MLRA01_Office
 MLRA01_Office
 MLRA01_Office
 MLRA01_Office

Query Name

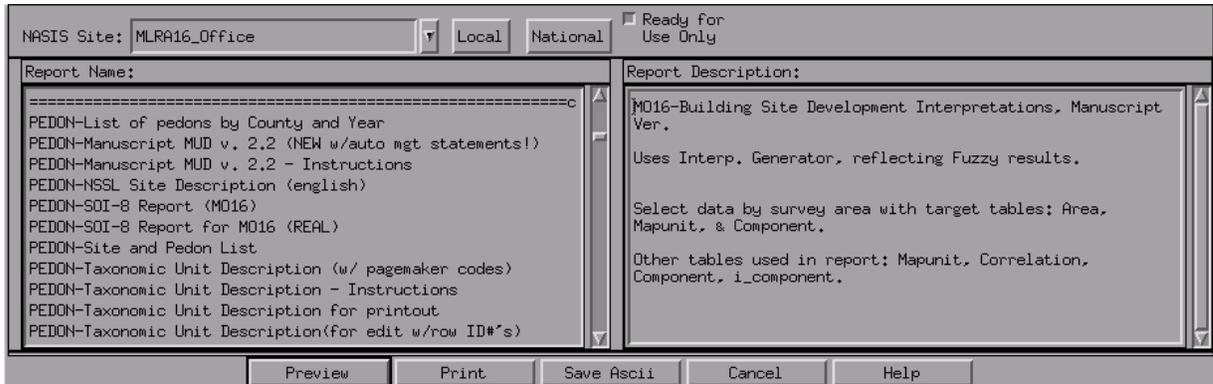
site index list
 transect by transect id
 Site index list (OH)
 Pedon/Site by usiteid, descname, soinmassamp
 Site by User Site ID
 site index list
 Site/Pedon by Series, Descriptor's Name, and User Site ID
 232-Sites, Pedons, and Site Assoc. by User Site ID
 MO16-Area/Leg/Rep. DMU/Sites/Pedons by Comp % & Multi MU
 MO16-Pedon by Pedon ID & NASIS Site
 Pedon by Pedon ID, Type & NASIS Site
 Sites by User Site ID
 TX-Pedons-ALL where site id is not null
 xJDC Site, Pedon, and Site Association
 xJDC Pedons by Pedon ID
 1Rule Doc Not by rule name and NASIS site
 Pedon by soil name as sampled
 pedon by iid
 Pedons by Site Area Overlap
 Pedons by User Pedon ID
 Pedons converted from PDP by NASIS site
 Query by query name and NASIS site
 Site Associations & Sites by Site Assoc Record ID
 Sites & Pedons by Site Record ID
 Sites & Site Assoc by Site Record ID
 Sites by Site Area Overlap
 Sites by User Site ID
 Sites not linked to pedons by NASIS site
 Pedons by compkind
 Pedons by sampled series name
 Pedons by User Pedon ID
 Pedons by User Pedon ID and NASIS site
 Pedons by User Pedon ID and USER in NSSL
 Pedons by User Pedon ID by date
 Sites by User Site ID

Query Site

MLRA11_Office
 MLRA11_Office
 MLRA12_Office
 MLRA13_Office
 MLRA13_Office
 MLRA13_Office
 MLRA13_Office
 MLRA13_Office
 MLRA16_Office
 MLRA16_Office
 MLRA16_Office
 MLRA16_Office
 MLRA16_Office
 MLRA16_Office
 MLRA16_Office
 MLRA16_Office
 NSSC Data
 NSSC Data
 NSSC Pangaea
 NSSL
 NSSL
 NSSL
 NSSL
 NSSL
 NSSL
 NSSL

Reports

There are several reports on the MLRA16_Office NASIS Site that arrange pedon data or utilize pedon data. The screen shot below shows pedon related reports that are currently available and ready for use on the MLRA16_Office site:



List of pedons by county and year - This report is designed to generate a list of pedons that have been described in a selected county in a selected year. The user is prompted to enter the County or Parish symbol(i.e. KS201 for Washington County, Kansas) and then the year of interest in 4 digit format. This report will aid the user in determining the numbering sequence to use when entering pedons. It will also be useful in trying to locate user_site_id and user_pedon_id numbers when the county and year of description are known. An empty report can be the result of several situations:

1. No pedons entered for specified county in the year specified.
2. Pedons entered were not linked to a County or Parish in the site_area_overlap table.

This report runs on the permanent database and can be run before loading any selected set. Contents of the selected set are disregarded.

Manuscript MUD v. 2.2 (NEW w/ auto management statements!) - This report writes a complete map unit description that includes a thumbnail profile description from the pedon data, and also includes automatically generated management statements for major agronomic and urban uses. Sites and pedons for typical pedons in the survey area must be loaded in the selected set, and the legend and data mapunits must also be loaded for the survey area and properly linked to the sites and pedons. The report has pagemaker codes and can be quickly formatted to a publish quality document using Pagemaker or using an MS-Word Macro that is available upon request. NASIS data entry requirements for this report are highlighted in red and orange in this handbook.

Map Unit Description v. 2.2 - Instructions - Instructions for populating data in NASIS for the Map Unit Description v. 1.2 report that is on the MLRA16_Office Site. Nothing needs to be loaded in the selected set to generate these instructions.

NSSL Site Description (english) - Same as Pedon Description (english) on the Pangaea site except that:

- 1). It rounds to nearest whole inch;
- 2). It leaves out color moisture state, pH method, and numerical pH;
- 3). It shows a semicolon instead of "and" between redox features.

Soi-8 Report (MO-16) – Generates a soil 8 for pedons in the selected set. Uses lab numbers and classifications from the Site and Pedon tables.

Soi-8 Report for MO-16 (REAL) – Generates a soil 8 for pedons in survey area(s) you enter at a prompt. Not necessary to load a selected set. Uses lab numbers and classifications from the Site and Pedon tables.

Site and Pedon List - Prints a list of site and pedon ID's and coordinates in the selected set.

Taxonomic Unit Description (w/ pagemaker codes) – This report uses site and pedon data to write a complete, manuscript quality Taxonomic unit description. Sites and pedons for survey area typical pedons must be loaded in the selected set, and the legend and data mapunits must also be loaded for the survey area and properly linked to the sites and pedons. The report has pagemaker codes and can be quickly formatted to approximate a published page using an MSWord Macro that is available upon request. NASIS data entry requirements for this report are highlighted in red and orange in this handbook.

Taxonomic Unit Description - Instructions – Instructions for populating data in NASIS for the Taxonomic Unit Description Reports that are on the MLRA16_Office Site. Nothing needs to be loaded into the selected set to generate these instructions.

Taxonomic Unit Description for printout – This report uses site and pedon data to write a complete, manuscript quality Taxonomic unit description. Sites and pedons for survey area typical pedons must be loaded in the selected set, and the legend and data mapunits must also be loaded for the survey area and properly linked to the sites and pedons. The report does not have pagemaker codes and is intended for immediate printout from NASIS for review and editing work. NASIS data entry requirements for this report are highlighted in red and orange in this handbook.

Taxonomic Unit Description (for edit w/ row ID's) – This report uses site and pedon data to write a complete, manuscript quality Taxonomic unit description. Sites and pedons for survey area typical pedons must be loaded in the selected set, and the legend and data mapunits must also be loaded for the survey area and properly linked to the sites and pedons. Mapunit, DMU, Site, and Pedon ID's are included at the top of the pages for checking the links in NASIS. The report does not have pagemaker codes and is intended for immediate printout from NASIS for review and editing work. NASIS data entry requirements for this report are highlighted in red and orange in this handbook.

All Available Reports

There are 116 reports, across the national database, that have been designed for review or printing of pedon data. The list is added to as more users begin using the data and requesting reports. These are the reports found as of October 2001:

Report Name	Report Site
EXPORT - Pedon Locations	MLRA01_Office
PEDON - 5.0 Pedon Description (english)	MLRA01_Office
PEDON - List of Pedons for MO1 by group ownership	MLRA01_Office
PEDON - List of Pedons for MO1 by pedon ID	MLRA01_Office
PEDON - List of Pedons for MO1 by series	MLRA01_Office
PEDON - List of Pedons for MO1 by site ID	MLRA01_Office
PEDON - List Pedons by group ownership - selected set	MLRA01_Office
PEDON - List Pedons by pedon ID - selected set	MLRA01_Office
PEDON - List Pedons by series - selected set	MLRA01_Office
PEDON - List Pedons by site ID - selected set	MLRA01_Office
PEDON - MO-1 Pedon Description (english)	MLRA01_Office
Component Use - with pedon ID	MLRA02_Office
CORR - MO-1 Pedon Description (english)	MLRA02_Office
OSD-Pedon Description (work in progress) MO2	MLRA02_Office
PEDON - Classification Key by correlated name, with user id	MLRA02_Office
PEDON - Classification Key by sampled as name, with user ped	MLRA02_Office
PEDON - CLASSIFICATION, sorted by correlated name	MLRA02_Office
PEDON - CLASSIFICATION, sorted by sampled as name	MLRA02_Office
PEDON - CLASSIFICATION, sorted by user pedon ID	MLRA02_Office
PEDON - CLASSIFICATION, sorted by user site ID	MLRA02_Office
PEDON - Component Pedon Info - MO2	MLRA02_Office
PEDON - Pedon Info - MO2	MLRA02_Office
PEDON - Site/Pedon conversion notes	MLRA02_Office
PEDON - SOI-8 Report - MO2	MLRA02_Office
Pedon location-new test	MLRA02_Office
Pedon location-sorted by soilname	MLRA02_Office
PEDON - Export test (copy from MO1)	MLRA03_Office
DATA DUMP: user_site_id & lat/long	MLRA04_Office
PEDON - DATA DUMP	MLRA05_Office
PEDON - List by County and Year	MLRA05_Office
PEDON - List by Non-MLRA Survey Area and Year	MLRA05_Office
PEDON - National Standard	MLRA05_Office
PEDON - Pedon Description	MLRA05_Office
PEDON - Pedon Description (eng and metric) w/ pedon note v2.	MLRA05_Office
PEDON - Pedon Description (english and metric)	MLRA05_Office
PEDON - Pedon Description (english and metric) w/ pedon note	MLRA05_Office
PEDON - Pedon Description (english and metric) w/o pedon not	MLRA05_Office
PEDON - Pedon Description w/expanded notes (english and metr	MLRA05_Office
PEDON - Pedon Notes	MLRA05_Office
PEDON - Pedons in the DB	MLRA05_Office
PEDON Count soil name as sampled	MLRA05_Office
PEDON DATA DUMP - features	MLRA05_Office
PEDON DATA DUMP - horizon	MLRA05_Office
PEDON Diagnostic Feature average thickness	MLRA05_Office

Report Name

PEDON featkind 2
PEDON field meas prop
PEDON field meas prop number of occurrences
PEDON Site Association and Sites
PEDON Transects by author
MT033-PEDON LIST
MT033-PEDON OUTPUT
MT033-PEDON PLANTS
MT033-PEDON REPORT 1 FOR DOWNLOAD
Pedon Site ID Numbers
SD PEDON - Pedon Description (english and metric)
PEDON-AZ MUG(short form)
LA-Site and Pedon List
NASIS Sites and Pedons Naming Conventions-DRAFT
Pedon fix by siteid
Pedon fix by usiteid
ia-PEDON LIST-sort by user_pedon_id
ia-PEDON-Pedon Description (english)
ONTONAGON PEDON - Pedon Description (english and metric)
Pedon Description - test
Check Lat and long pedon data
Check Pedon Data and text
PEDON - Pedon Description (english)(OH)
Text - Pedon text notes
Text - Pedon text notes(width unlimited)
OH In pedon? (MUG, part 8)
MUG Pedon (subreport) Virginia version
LA-Site and Pedon List
Location of pedons for ArcView
Data dump real: Pedon Site ID Numbers by pedon(s)
Data dump: Pedon Site ID Numbers selected set
PEDON - Pedon Description (english) old
PEDON - Pedon Description (metric) old
Pedon Property Values (RV only)
Transect summary
PEDON - Pedon Description (english)
PEDON - Pedon Description (metric)
Data dump all: Pedon Site ID Numbers
Data dump print: Pedon Site ID Numbers
Data dump real: Pedon table
Data dump real: Site table
Data dump: Pedon Site ID Numbers
LIMS - Site DATA DUMP (tgr)
PEDON - DATA DUMP Pedon (tgr)
PEDON - Pedon Desc mod tgr (metric)
PEDON - Pedon Desc with head and id (metric)
PEDON - Pedon Description (metric)

Report Site

MLRA05_Office
MLRA05_Office
MLRA05_Office
MLRA05_Office
MLRA05_Office
MLRA07_Office
MLRA07_Office
MLRA07_Office
MLRA07_Office
MLRA07_Office
MLRA07_Office
MLRA07_Office
MLRA08_Office
MLRA09_Office
MLRA09_Office
MLRA09_Office
MLRA09_Office
MLRA10_Office
MLRA10_Office
MLRA10_Office
MLRA10_Office
MLRA11_Office
MLRA11_Office
MLRA11_Office
MLRA11_Office
MLRA11_Office
MLRA11_Office
MLRA12_Office
MLRA14_Office
MLRA16_Office
MLRA16_Office
NSSC Data
NSSC Data
NSSC Data
NSSC Data
NSSC Data
NSSC Data
NSSC Pangaea
NSSC Pangaea
NSSL
NSSL

NASIS Keyboard Commands

You can navigate around the NASIS tables, activate menus and buttons, and edit text using the mouse or the keyboard. If an action calls for a combination of keystrokes, the second key in the sequence should be pressed while still holding down the first key. Please note that these lists may not be accurate for all keyboards.

Navigating with the keyboard

These keys are functional when the edit window is active:

Shft+F3:	up one table
Shft+F4:	down one table
down arrow key:	next record
up arrow key:	previous record
Tab:	next field
Shft+Tab:	Shft+Tab:

Window Management (Motif window manager only)

Alt+F2:	refresh
Alt+F3:	lower window
Alt+F4:	close window
Alt+F5:	restore window
Alt+F7:	move window
Alt+F8:	resize window
Alt+F9:	minimize window
Alt+F10:	maximize window

Activating menus and buttons

Esc:	Cancel
Enter or Spacebar:	accept/activate
F1:	activate Help menu
F2:	Choices
F5:	Save
F6:	Delete
F8:	Insert
F10:	activate NASIS menu bar
Shft+F1:	activate context-sensitive help
Shft+F2:	Zoom Edit
Shft+F3:	Up table
Shft+F4:	Down table

Once the menu bar is activated, you can select the desired menu item by pressing the key corresponding to the underlined letter ("hot key") of that selection. You can also open menus and activate specific menu options directly by pressing the Alt key and the appropriate hot key. For example, to activate the Save option from the File menu, you would press Alt+f, then s. If you are using a Sun keyboard, use the "meta" key instead of the Alt key. The meta key is to the left of the space bar, labeled with a dot.

Keys for text editing

Use the following keys when working in the edit window:

Del:	delete next character
Backspace:	delete previous character
left arrow:	left
right arrow:	right
Ctrl+left arrow:	word left
Ctrl+right arrow:	word right

Potential Field Measured Property Codes

Suggested Pedon Field Measured Property Codes Table

ACLAY	A horizon clay content	CNTLSAND	Percent sand in the control section
BCLAY	B horizon clay content	CNTLSI	Percent silt in the control section
BDFRACTM	Bedrock fracture size (cm)	ROCKFRAG	Rock fragments on surface(%)
BEDINCL	Bedrock inclination - degrees	ROCKCLS	Rock outcrop class
AUGRFDEM	Depth of auger refusal (cm)	SLOPESH	Shape of slope
SOLUDEPM	Depth of solum (cm)	SURFFPH	Soil reaction - surface layer
ATCDEPM	Depth to abrupt texture change (cm)	SLOPE	Soil slope(%)
AGRCDEPM	Depth to agric horizon (cm)	STONECLS	Stoniness class
ALBDEPM	Depth to albic horizon (cm)	STONECVR	Surface cover of stones(%)
ANDIDEPM	Depth to andic properties (cm)	SURFSTNS	Surface stones
ARGDEPM	Depth to argillic horizon (cm)	SURFTHM	Surface thickness (cm)
ROCKDEPM	Depth to bedrock (cm)	SURFTH	Surface thickness (in)
CALCDEPM	Depth to calcic horizon (cm)	ACRCTHKM	Thickness of agric horizon (cm)
CAMBDEPM	Depth to cambic horizon (cm)	ALBTHKM	Thickness of albic horizon (cm)
PANDEPM	Depth to cemented pan (cm)	ANTHRTHM	Thickness of anthropic horizon (cm)
CLAYDEPM	Depth to clay (cm)	ARGTHKM	Thickness of argillic horizon (cm)
TILLDEPM	Depth to compact till (cm)	CALCTHKM	Thickness of calcic horizon (cm)
DRNDDEPM	Depth to durinodes (cm)	CAMBTHKM	Thickness of cambic horizon (cm)
DURIDEPM	Depth to duripan (cm)	DURITHKM	Thickness of duripan (cm)
FRGPDEPM	Depth to fragipan (cm)	FRGTHKM	Thickness of fragipan (cm)
LIMEDEPM	Depth to free lime (cm)	GYPTHKM	Thickness of gypsic horizon (cm)
GYPDEPHM	Depth to gypsic horizon (cm)	HISTTHKM	Thickness of histic horizon (cm)
HISTDEPM	Depth to histic horizon (cm)	KANDTHKM	Thickness of kandic horizon (cm)
KANDDEPM	Depth to kandic horizon (cm)	MELNTHKM	Thickness of melanic epipedon (cm)
MOTLDEPM	Depth to mottles (cm)	MOLLTHKM	Thickness of mollic epipedon (cm)
GLEYPDEPM	Depth to mottles with chroma 2 or less (cm)	NATRTHKM	Thickness of natric horizon (cm)
NATRDEPM	Depth to natric horizon (cm)	OCHRTHKM	Thickness of ochric epipedon (cm)
OXICDEPM	Depth to oxic horizon (cm)	OXICTHKM	Thickness of oxic horizon (cm)
PLCDEPM	Depth to paralithic contact (cm)	PECATHKM	Thickness of petrocalcic horizon (cm)
PERMDEPM	Depth to permafrost (cm)	PLACTHKM	Thickness of placic horizon (cm)
PECADEPM	Depth to petrocalcic horizon (cm)	PLAGTHKM	Thickness of plaggen epipedon (cm)
PFCDEPM	Depth to petroferric contact (cm)	SALITHKM	Thickness of salic horizon (cm)
PEGYDEPM	Depth to petrogypsic horizon (cm)	SOMBTHKM	Thickness of sombric horizon (cm)
PLACDEPM	Depth to placic horizon (cm)	SPODTHKM	Thickness of spodic horizon (cm)
PLINDEPM	Depth to plinthite (cm)	SULFTHKM	Thickness of sulfuric horizon (cm)
SALIDEPM	Depth to salic horizon (cm)	UMBRTHKM	Thickness of umbric epipedon (cm)
SANDDEPM	Depth to sand (cm)	AFRAGPCT	Vol of rock fragments - A hor.
SHALDEPM	Depth to shale (cm)	BFRAGPCT	Vol of rock fragments - B hor.
SLIKDEPM	Depth to slickensides (cm)		
LIDEPM	Depth to soft powdery lime (cm)		
SOMBDEPM	Depth to sombric horizon (cm)		
SPODDEPM	Depth to spodic horizon (cm)		
STONDEPM	Depth to stones or cobbles (cm)		
SULFDEPM	Depth to sulfuric horizon (cm)		
WTDEPM	Depth to water table (cm)		
ASPECT	Direction of soil exposure		
GILGHGTM	Height of gilgai (cm)		
CNTLCLAY	Percent clay in the control section		

Suggested Pedon Horizon Field Measured Property Codes

CC	percent calcium carbonate equivalent
CE	cation exchange capacity
CL	percent clay
EC	electrical conductivity equivalent
GE	gypsum equivalent
GF	percent, by weight < 20 mm base 5-2 mm fragments
GM	percent, by weight < 20 mm base 20-5 mm fragments
GW	percent, by weight < 20 mm base 20-2 mm fragments
OB	percent fiber unrubbed
OR	percent fiber rubbed
PA	phosphorus retention
PB	Bromthymol blue
PC	Cresol red
PG	Bromcresol green
PL	LaMotte-Morgan
PM	pH meter 1:1 water
PN	pH meter 1:2 calcium chloride
PP	Phenol red
PR	Chlorophenol red
PS	soiltest
PT	Thymol-blue
PY	pH Ydrion
PZ	pH unspecified
S2	percent passing # 200 sieve
S4	percent passing # 40 sieve
SA	percent sand
SC	percent coarse and very coarse sand
SF	percent fine sand
SI	percent silt
SM	percent medium sand
SR	sodium absorption ratio
SV	percent very fine sand

Linking Sites and Pedons to Mapunits and Components:

It's easy to feel like a rat in a maze when you're linking pedons to sites, mapunits and data mapunits in NASIS. This diagram may help to get back on the right path. Straight yellow arrows indicate it is a direct drop from one table to another by default. Angled yellow arrows indicate that you have to use the menu tree to move to the table. Curved yellow arrows mean that the tables are linked by a common ID number and can be found easiest using the Load Related and Find Related options. Tables are indicated as boxes that are grouped into their major objects by color.

