



NASIS TAXONOMIC UNIT DESCRIPTIONS

VIRGINIA USER'S GUIDE

VERSION 1.0

November 2001

Compiled by:
Pamela Thomas
Soil Scientist
USDA-NRCS
Richmond, VA 23229

NASIS TAXONOMIC UNIT DESCRIPTIONS

Virginia User's Guide

November 5, 2001

This report generates a narrative Taxonomic Unit Description for a soil survey manuscript. Units of measure are in English units. The report was adapted from the MO16 LA-TUD Ver. 1 report and is formatted for export to Word where Pagemaker type setting codes can be executed. Horizon and location paragraphs will appear to run off the screen in NASIS Report Viewer, but will wrap properly to fit any selected page width in a word processor.

Data needed for this report comes from the following major tables:

Area	Site Association
Site	Mapunit Site Overlap
Pedon	Legend
Site Area Overlap	Component

You must have the legend, mapunits, datamap unit components, component pedons, sites, and pedons linked. See the "Virginia User's Guide: Site and Pedon Data" on for detailed instructions on how to achieve these links. Brief instructions for linking are given on following page.

Use a query in MO16 that will load all the necessary tables. The query is:
MO16-Area/Leg/Rep. DMU/Sites/Pedons by Comp% & Multi MU. Run the query against 5 target tables: Area, Correlation, Component, Site, and Pedon.

NASIS Select Manager

NASIS Site: MLRA16_Office Local National ☐ Ready for Use Only

Query Name: MO16-Area/Leg/Rep. DMU/Sites/Pedons by Comp % & Multi MU

Select One or More Target Tables:

- Correlation
- Data Mapunit
- Component
- Component Pedon
- Pedon

Query Description:

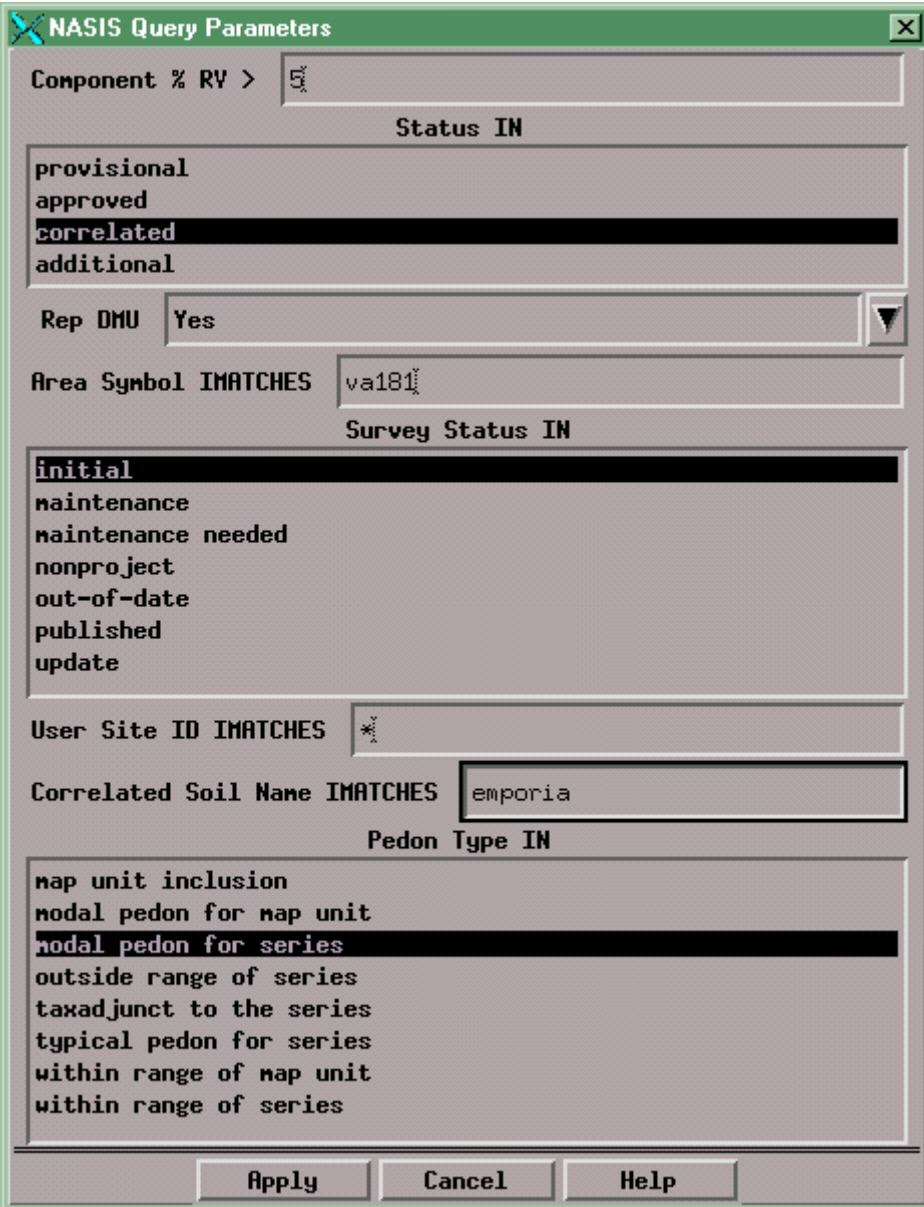
and pedons. This should be run against five target tables (Area, Correlation, Component, Site, and Pedon) to load all the data needed for Taxonomic Unit or pedon description reports. One target table should be

Query Text:

```
FROM area, legend, OUTER (mapunit, OUTER (correlation, data_mapunit, OUTER  
component, component_pedon, pedon, site)), area_type, database  
WHERE component.component_percent_r > ? "Component % RV >" and
```

Apply Cancel Help

When you run the query, a pop-up screen will appear (see below). Enter the information as in the example below. You may use wildcards (*) for *User Site ID* and *Correlated Soil Name* to load all pedons. The query takes some time to load. Be patient. Go have coffee.



The image shows a Windows-style dialog box titled "NASIS Query Parameters". It contains several input fields and lists for configuring a query. The fields are: "Component % RV" with a dropdown menu, "Status IN" with a list box containing "provisional", "approved", "correlated" (selected), and "additional"; "Rep DMU" with a dropdown menu showing "Yes"; "Area Symbol IMATCHES" with a text box containing "va181"; "Survey Status IN" with a list box containing "initial" (selected), "maintenance", "maintenance needed", "nonproject", "out-of-date", "published", and "update"; "User Site ID IMATCHES" with a text box containing a wildcard "*"; "Correlated Soil Name IMATCHES" with a text box containing "emporia"; and "Pedon Type IN" with a list box containing "map unit inclusion", "nodal pedon for map unit", "nodal pedon for series" (selected), "outside range of series", "taxadjunct to the series", "typical pedon for series", "within range of map unit", and "within range of series". At the bottom are three buttons: "Apply", "Cancel", and "Help".

NASIS Query Parameters

Component % RV >

Status IN

- provisional
- approved
- correlated**
- additional

Rep DMU Yes

Area Symbol IMATCHES va181

Survey Status IN

- initial**
- maintenance
- maintenance needed
- nonproject
- out-of-date
- published
- update

User Site ID IMATCHES *

Correlated Soil Name IMATCHES emporia

Pedon Type IN

- map unit inclusion
- nodal pedon for map unit
- nodal pedon for series**
- outside range of series
- taxadjunct to the series
- typical pedon for series
- within range of map unit
- within range of series

Apply Cancel Help

The following links must be made:

1. Link each SITE to its respective MAPUNIT on a LEGEND.

- a. From the **Site Area Overlap** table, table down to the **Site Mapunit Overlap** table.
- b. Click **F8** to open a new row and position the cursor in the **Legend ID** field.
- c. Click the **Choice** button. Select the **Legend**, click **Apply**. (If multiple legends are linked to the Area listed in the Site Area Overlap table, they will all be displayed in the choice list box.
- d. Position the cursor in the **Mapunit Symbol** column.
- e. Click the **Choice** button. All the map units in your legend are displayed.
- f. Select the appropriate **Map unit symbol** associated with the site and click **Apply**. You've now created the site mapunit overlap, which indicates that this site is located within the map unit.

2. Link each PEDON to its respective COMPONENT linked to that MAPUNIT.

- a. On the **View** menu, select **Legends**, then click Correlation.
- b. Highlight **DMU ID** number.
- c. On the **File** menu, select **Load Related**, then click **Data Mapunit**.
- d. On the **View** menu, select **Components**, then click **Component Pedon**.
- e. Click **F8** to insert row.
- f. At the **User Pedon ID** field, click the **Choice** button.
- g. Highlight the **User Pedon Site ID**, then click **Apply**.

3. Link the AREA to the SITE AREA OVERLAP table.

- a. On the **View** menu, select **Site**, then **Site Area Overlap**.
- b. Click **F8** to open a new row.
- c. Select **Area Type** cell. Click the **Choice** button. If you are working with your Non-MLRA Soil Survey Area legend, then click the **National** button. Highlight the **Non-MLRA Soil Survey Area**. Click **Apply**. If you are using your working legend, then click the **local** button. Highlight the **Virginia Working** for MLRA13 and **Working Legends** for MLRA14. Click **Apply**.
- d. Skip the Area Symbol field. In the **Area Name** field, click the **Choice** button. For a working legend, scroll until you find your **area**. Select and click **Apply**. For a Non-MLRA legend, in the match on area name field, type in your county or city name with an asterisk and click search. Select your **area** and click **Apply**. Or simply type out your area name in the field. The **Area Symbol** will automatically populate.

The typifying pedon entered in PEDON should be linked only to the MAPUNIT in which it was described. For example, if your typifying pedon of Frederick is in the Frederick silt loam, 2 to 6 percent slopes phase, link the PEDON to this map unit in the legend, not to other phases of Frederick (other slopes, erosion classes, stoniness,...).

In order to properly run this report, two **text elements** must be populated (in addition to the text element for type location).

1. **SLOPE**. Enter the entire slope range for the series into the SITE TEXT table (**text field** for each SITE). The Text Kind Element in that table should be populated as *Miscellaneous notes*, and the Text Category should be populated as *slope*.

The screenshot shows the NASIS - MLRA14_Office application. The 'Site Text' table is visible with the following data:

Seq	Date	Author	Kind	Category	Subcategory	Text	Rec ID
-	11/02/2001	P.J. Thomas	miscellaneous notes	slope		Text...	503742

A red circle highlights the 'Text' column header, and a red arrow points to a 'NASIS Desktop Editor' window.

2. **RANGE IN CHARACTERISTICS**. Copy the Range in Characteristics section (except for depth to diagnostic features and restrictions) from Word into the **text field** of the COMPONENT TEXT table (details on next page). The Text Kind element in the table should be populated as *miscellaneous notes* and the Text Category should be populated as **RIC** (all caps).

The screenshot shows the NASIS - MLRA14_Office application. The 'Component Text' table is visible with the following data:

Seq	Date	Author	Kind	Category	Subcategory	Text	Rec ID
-	11/05/2001	P.J. Thomas	miscellaneous notes	RIC		Text...	538126

A red circle highlights the 'Text' column header, and a red arrow points to a 'NASIS Desktop Editor' window.

Virginia TUD Population Instructions

Line by Line Source of Data using Emporia Series as example

Emporia Series

FROM CORRELATED SERIES NAME IN COLUMN IN THE **PEDON** TABLE

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status: Unchanged Edit Setup: Pan's Default Default Group: Virginia

Cell Status: -

Pedon				
Transect Interval	Soil Name As Sampled	Correlated Soil Name	Taxon Kind	Pedon Type
-	Emporia	Emporia	series	modal pedon for series

Local Physiographic Area: Southern Coastal Plain

FROM THE LOCAL PHYSIOGRAPHIC NAME COLUMN IN THE **SITE** TABLE

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status: Unchanged Edit Setup: Pan's Default Default Group: Virginia

Cell Status: Protected

Site						
Upslope Length	Slope Shape Across	Slope Shape Up/Down	Slope Complexity	Local Physiographic Name	Geologic Formation	Bedrock Depth
-				Southern Coastal Plain		

Geomorphic Setting: On upland on marine terrace

FROM THE **SITE GEOMORPHIC DESCRIPTION** TABLE – FILL OUT BOTH THE FEATURE TYPE AND FEATURE. SEPARATE ROWS IN THIS TABLE WILL BE JOINED INTO A SENTENCE SEPARATED BY “on” IF NUMBERS ARE USED TO INDICATE WHICH FEATURE IS ON THE OTHER

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status: Unchanged Edit Setup: Pan's Default Default Group: Virginia

Cell Status: -

Site						
Upslope Length	Slope Shape Across	Slope Shape Up/Down	Slope Complexity	Local Physiographic Name	Geologic Formation	Bedrock Depth
-				Southern Coastal Plain		

Site Geomorphic Description					
Seq	Feature Type	Feature Name	Feature Modifier	Feature ID	Exists on Feature I
-	Landform	marine terrace		1	
-	Landscape	upland		2	

Parent Material: Loamy marine sediments

FROM THE CALCULATED PARENT MATERIAL GROUP NAME COLUMN IN THE SITE TABLE

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status: Unchanged Edit Setup: Pan's Default Default Group: Virginia

Cell Status: Protected

Site					
Drainage Class	Site Permeability	Runoff Class	Parent Material Group Name	Plant Association Name	
well	moderate		loamy marine sediments		

Drainage Class: Well drained

FROM THE DRAINAGE CLASS COLUMN IN THE SITE TABLE

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status: Unchanged Edit Setup: Pan's Default Default Group: Virginia

Cell Status: Protected

Site					
Drainage Class	Site Permeability	Runoff Class	Parent Material Group Name	Plant Association Name	
well	moderate		loamy marine sediments		

Permeability Class: Moderate to moderately rapid

CALCULATED FROM THE KSAT COLUMNS IN THE COMPONENT HORIZON TABLE THAT THE PEDON IS LINKED TO

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status: Unchanged Edit Setup: Pan's Default Default Group: Virginia

Cell Status: -

Data Mapunit						
ES	DMU ID	DMU Description	Farm Class	HEL	HEL Water	
-	392799	VA181014BEmporia fsl, 2-6%	1	potentially highly erodible	potentially highly erodible	Virginia

Component						
ES	Seq	Comp %	Component Name	Kind	Major Component	SIR phase
		Low RV High				
-		70 80 90	Emporia	series	yes	

Horizon													
ES	Low	S	RV	High	S	Low	RV	High	Low	RV	High	Low	S
-			1.52	C		14.0000	28.0000	42.0000	0.09	0.09	0.10		
-			1.63	C		14.0000	28.0000	42.0000	0.09	0.12	0.16		
-			1.57	C		1.4000	8.0000	14.0000	0.09	0.12	0.15		
-			1.55	C		1.4000	8.0000	14.0000	0.09	0.12	0.15		
-			1.55	C		1.4000	8.0000	14.0000	0.09	0.12	0.15		

Soil Depth Class: Very deep

CALCULATED FROM THE **PEDON RESTRICTIONS** TABLE – FILL OUT BOTH KIND AND TOP DEPTH. NO ENTRY IN THE TABLE DEFAULTS TO VERY DEEP IN THE REPORT.

The screenshot shows the NASIS - MLRA14_Office interface. The 'Pedon Restrictions' table is displayed with the following data:

Seq	Kind	Hardness	Top Depth	Bottom Depth	Thickness	Rec ID
					Low RV High	
1						

The 'Kind' and 'Top Depth' columns are circled in red. The 'Update Report' button is visible at the bottom left.

Slope: 0 to 6 percent

MUST FILL IN A TEXT FIELD IN THE **SITE TEXT** TABLE – ENTER THE ENTIRE SLOPE RANGE FOR THE SERIES USED IN THE SURVEY AREA. ALSO, FILL IN KIND AS “MISCELLANEOUS NOTES”, AND CATEGORY AS “SLOPE”.

The screenshot shows the NASIS - MLRA14_Office interface. The 'Site Text' table is displayed with the following data:

Seq	Date	Author	Kind	Category	Subcategory	Text
1	11/02/2001	P.J. Thomas	miscellaneous notes	slope		Text...

The 'Kind' and 'Category' columns are circled in red. A red arrow points from the 'Category' cell to the 'NASIS Desktop Editor' window below.

The screenshot shows the NASIS Desktop Editor window. The text '0 to 6' is entered in the text field. The 'Line: 1' and 'Total: 1' fields are also visible. The 'Apply', 'Clear', 'Cancel', and 'Help' buttons are at the bottom.

Associated Soils

Caroline soils that are clayey

Kempsville soils that do not have iron depletions

Slagle soils that are moderately well drained

Uchee soils that have a thick, sandy surface layer

FROM THE **SITE ASSOCIATED SOILS** TABLE – ASSOCIATED SOIL COLUMN
 ALLOWS UP TO 60 CHARACTERS TO DESCRIBE HOW THE ASSOCIATED SOIL
 DIFFERS. ADD SEQUENCE NUMBERS IF YOU WANT THE SOILS TO APPEAR IN A
 PARTICULAR ORDER.

Site Associated Soils

Seq	Associated Soil	Rec ID
1	Kempsville soils that do not h	38767
2	Slagle soils that are moderate	38768
3	Uchee soils that have a thick,	38770
4	Caroline soils that are clayey	38769

Taxonomic Classification

Fine-loamy, siliceous, subactive, thermic Typic Hapludults

FROM THE CALCULATED TAXONOMIC CLASS COLUMN IN THE **COMPONENT**
 TABLE THAT THE PEDON IS LINKED TO.

Component

ES	DMU ID	DMU Description	Farm Class	HEL	HEL Water	
-	392799	VA181014BEmporia fsl, 2-6%	1	potentially highly erodible	potentially highly erodible	Virginia

ES	Proportion	Taxonomic Class	Order	Suborder	Great Group	Subgroup	
-	Steel	Fine-loamy, siliceous, subacti	S	ultisols	udults	hapludults	typic hapludults
-	oderate		C				fine-l

Typical Pedon

Emporia

SERIES NAME IS FROM THE CORRELATED SERIES NAME IN THE **PEDON** TABLE

The screenshot shows the NASIS - MLRA14_Office application window. The 'Pedon' table is displayed with the following data:

Transect Interval	Soil Name As Sampled	Correlated Soil Name	Taxon Kind	Pedon Type
-	Emporia	Emporia	series	modal pedon for series

The 'Correlated Soil Name' field is circled in red.

fine sandy loam

SURFACE TEXTURE IS FROM THE CALCULATED **COMPONENT HORIZON TEXTURE GROUP** TABLE FOR THE COMPONENT HORIZON THAT HAS A DEPTH TO TOP RV OF 0. IF MORE THAN ONE TEXTURE GROUP IS ASSIGNED TO THIS HORIZON IT WILL TAKE THE FIRST. IT IS INTENTIONALLY SET UP TO TAKE THE SURFACE TEXTURE FROM THE CHORIZON TABLE RATHER THAN FROM THE PEDON HORIZON TABLE TO SERVE AS A CHECK BETWEEN THE TWO PARTS OF THE DATABASE TO MAKE SURE THEY AGREE.

The screenshot shows the NASIS - MLRA14_Office application window with the following data tables:

Data Mapunit

ES	DMU ID	DMU Description	Farm Class	HEL	HEL Water
-	392799	VA181014BEmporia fsl, 2-6%	1	potentially highly erodible	potentially highly erodible Virginia

Component

ES	Seq	Low	Comp %	RV	High	Component Name	Kind	Major Component	SIR phase
-		70	80	90		Emporia	series	yes	

Horizon

ES	Seq	Designation	Disc	Master	Prime	Sub	Top Depth	RV	High	Bottom Depth	RV	High
-		A	C	A			Low	0		Low	15	

Horizon Texture Group

Seq	Text Mod & Class	Stratified?	RV?	Rec ID
-	FSL	S	yes	3498640

The 'Text Mod & Class' field in the Horizon Texture Group table is circled in red.

in an area of Emporia fine sandy loam, 2 to 6 percent slopes;
FROM THE MAP UNIT NAME IN THE **MAP UNIT** TABLE FOR THE MAP UNIT THE
SITE IS LINKED TO

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Unchanged Edit Setup Pan's Default Default Group Virginia

CLEAR CANCEL Cell Status -

Legend

Area Type Name	Area Symbol	Area Name	MLRA Office	Correlation Date
Working Legends	VA181	Surry County, VA	raleigh, nc	12/1997

Mapunit

Seq	Mapunit Symbol	Mapunit Name	Status	Total Acres	Rec ID
-	1A	Ackwater silt loam, 0 to 2 per	correlated	570	143495
-	1B	Ackwater silt loam, 2 to 6 per	correlated	756	143496
-	2A	Bibb fine sandy loam, 0 to 2 p	correlated	5076	143497
-	3A	Bohicket mucky silty clay loam	correlated	556	143498
-	4A	Bolling loam, 0 to 2 percent s	correlated	263	143499
-	5B	Burrowsville loamy sand, 2 to	correlated	2379	143500
-	6B	Caroline silt loam, 2 to 6 per	correlated	2011	143501
-	7A	Chickahominy silt loam, 0 to 2	correlated	312	143507
-	8B	Chipley fine sand, 0 to 4 perc	correlated	804	143514
-	9A	Chipley-Leon complex, 0 to 2 p	correlated	1048	143515
-	9B	Chipley-Leon complex, 2 to 5 p	correlated	696	143518
-	10A	Craven fine sandy loam, 0 to 2	correlated	384	143521
-	10B	Craven fine sandy loam, 2 to 6	correlated	12441	143523
-	10C	Craven fine sandy loam, 6 to 1	correlated	898	143526
-	11B3	Craven clay loam, 2 to 6 perce	correlated	1751	143531
-	11C3	Craven clay loam, 6 to 10 perc	correlated	671	143532
-	12B	Craven-Slagle complex, 2 to 6	correlated	5569	143528
-	13B	Dogue loam, 2 to 6 percent slo	correlated	603	143535
-	14A	Emporia fine sandy loam, 0 to	correlated	1232	143536
-	14B	Emporia fine sandy loam, 2 to	correlated	13370	143537

located 2.5 miles northeast of Surry, 1.8 miles northeast of the junction of Highways VA-10 and VA-638,...

FROM THE SITE LOCATION DESCRIPTION IN THE **SITE** TABLE

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Unchanged Edit Setup Pan's Default Default Group Virginia

CLEAR CANCEL 98428 Cell Status Protected

Site

User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Location Description
Emporia	37	9	12.00	north	76	47	35.00	west	NAD27	Text...

NASIS Desktop Editor

File Edit Options

2.5 miles northeast of Surry, 1.8 miles northeast of the junction of Highways VA-10 and VA-638, 1.2 miles northwest of the junction of Highways VA-634 and VA-636, 1.0 mile west of the junction of Highways VA-636 and VA-637, in a stand of loblolly pines; Surry VA 7.5-minute topographic quadrangle; elevation 62 feet.

Line: 1 Total: 7

Apply Clear Cancel Help

Latitude: 37 degrees, 9 minutes, 12.00 seconds N.

Longitude: 76 degrees, 47 minutes, 35.00 seconds W.

FROM THE LATITUDE AND LONGITUDE COLUMNS IN THE **SITE** TABLE

The screenshot shows the NASIS - MLRA14_Office software interface. The 'Site' table is displayed, and a red circle highlights the columns for Latitude and Longitude. The table has the following columns: User Site ID, Lat. Degrees, Lat. Minutes, Lat. Seconds, Lat. Direction, Long. Degrees, Long. Minutes, Long. Seconds, Long. Direction, Datum, and Location Description. The data row shows: Emporia, 37, 9, 12.00, north, 76, 47, 35.00, west, NAD27, and Text...

User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Location Description
Emporia	37	9	12.00	north	76	47	35.00	west	NAD27	Text...

A—0 to 6 inches; brown (10YR 5/3), fine sandy loam; weak fine granular structure; friable, nonsticky, nonplastic; common fine roots; very strongly acid; abrupt smooth boundary...

FROM NUMEROUS ENTRIES IN THE **PEDON** TABLES

The screenshot shows the NASIS - MLRA14_Office software interface. The 'Pedon' table is displayed, showing various pedon horizons. The table has the following columns: User Pedon ID, Pedon Record Origin, Describer's Name, User Site ID, Designation, Disc, Master, Prime, Sub, Top Depth, Bottom Depth, Thickness (Low, RV, High), Tex Mod & Class, and Status. The data rows show: Emporia, NASIS, R.L. Hodges, Emporia, A, C, A, 0, 15, FSL, S; E, C, E, 15, 36, LFS, C; Bt1, C, B, 1, 36, 46, FSL, C; Bt2, C, B, 2, 46, 104, SCL, C; BC, C, BC, 104, 137, SC, C; C, C, C, 137, 183, SR- SL SCL, C.

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness	Tex Mod & Class	Status
Emporia	NASIS	R.L. Hodges	Emporia	A	C	A			0	15	Low RV High	FSL	S
				E	C	E			15	36		LFS	C
				Bt1	C	B		1	36	46		FSL	C
				Bt2	C	B		2	46	104		SCL	C
				BC	C	BC			104	137		SC	C
				C	C	C			137	183		SR- SL SCL	C

Range in Characteristics

Solum thickness: Commonly 40 to 60 inches, but ranges from 40 to 75 inches.

Depth to bedrock: More than 6 feet...

ENTIRE RANGE IN CHARACTERISTICS SECTION IS COPIED INTO THE **COMPONENT TEXT** TABLE IN THE TEXT COLUMN AND EDITED FOR THE SURVEY AREA IF NEEDED. THE KIND COLUMN SHOULD BE POPULATED AS "MISCELLANEOUS NOTES" AND THE CATEGORY COLUMN SHOULD BE POPULATED AS "RIC".

ES	DMU ID	DMU Description	Farm Class	HEL	HEL Water
-	392799	VA181014BEmporia fsl, 2-6%	1	potentially highly erodible	potentially highly erodible Virginia

ES	Seq	Comp %	Component Name	Kind	Major Component	SIR phase	
		Low	RV	High			
-		70	80	90	Emporia	series	yes

Seq	Date	Author	Kind	Category	Subcategory	Text
-			s5 description			Text..
-	11/05/2001	P.J. Thomas	miscellaneous notes	RIC		Text..

Populating the text field for Range in Characteristics

Get your RIC's into Word however you can. Options: 1) copy from Official Series Descriptions on the Internet into Word and edit as needed, 2) use typifying pedons already created in Word (or other word processing software), or 3) copy text field from a pedon already entered into NASIS. Option 3 is probably not available at this time. You will probably be creating the data for others to access.

Enter PageMaker codes as indicated below. This is important if you want the Taxonomic Unit Description to format properly in Word (after running a Macro). Use the following example of Emporia RIC for entering codes. You only need two codes <@33> for new line and <i> and <p> for italics. Include data elements as needed.

<@33><i>Solum thickness:<p> Commonly 40 to 60 inches, but ranges from 40 to 75 inches.
<@33><i>Depth to bedrock:<p> More than 6 feet.
<@33><i>Rock fragments:<p> 0 to 35 percent gravel in the A and B horizons and 0 to 60 percent in the C horizon.
<@33><i>Lithologic discontinuity:<p> Below 40 inches in some pedons.
<@33><i>Consistence:<p> Firm or very firm in some part of the Bt or BC horizon of most pedons.
<@33><i>Exchangeable aluminum:<p> Less than 6 cmol/kilogram of soil in the A and B horizons.
<@33><i>Mica flakes:<p> None to common in some pedons.
<@33><i>Reaction:<p> Very strongly acid through moderately acid, unless limed.

<@33><i>Ap horizon<p>
<@33>Hue -- 10YR or 2.5Y
<@33>Value -- 4 through 6
<@33>Chroma -- 2 through 4
<@33>Texture -- loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam in the fine-earth fraction

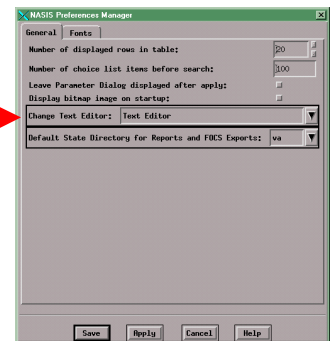
<@33><i>A horizon<p>
<@33>Hue -- 10YR or 2.5Y
<@33>Value -- 2 through 6
<@33>Chroma -- 2 through 4
<@33>Texture -- loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam in the fine-earth fraction

<@33><i>E horizon<p>
<@33>Hue -- 10YR or 2.5Y
<@33>Value -- 5 through 7
<@33>Chroma -- 3 to 6
<@33>Texture -- loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam in the fine-earth fraction

<@33><i>BA or BE horizon<p>
<@33>Hue -- 7.5YR through 2.5Y
<@33>Value -- 5 through 7
<@33>Chroma -- 3 through 6
<@33>Texture -- sandy loam, fine sandy loam, or loam in the fine-earth fraction.

<@33><i>Bt horizon<p>
<@33>Hue -- 5YR through 10YR
<@33>Value -- 4 through 7
<@33>Chroma -- 3 through 8
<@33>Texture -- sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

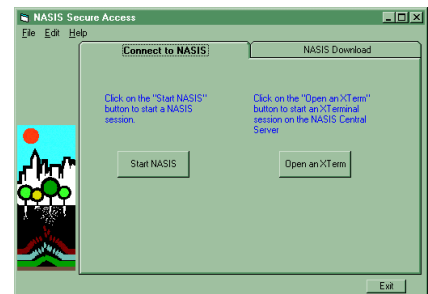
Before copying the RIC into NASIS, you need to set the text editor. In NASIS, select Options-NASIS Preferences. In the Change Text Editor field, Select Text Editor. Click Save and then Apply.



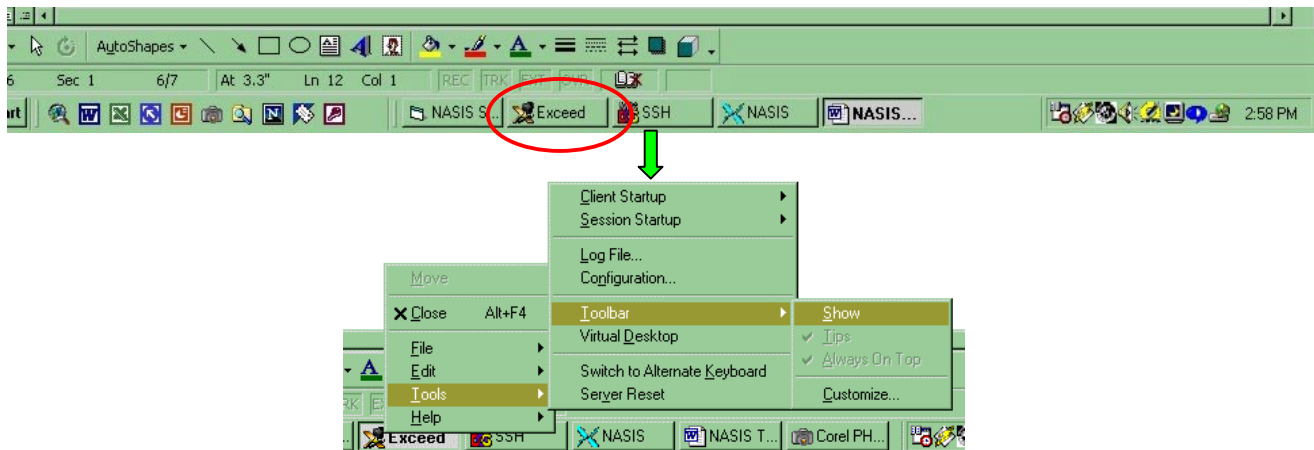
Once you have completed the RIC you need to copy it into NASIS. Unfortunately, this is not a simple copy, paste function. Following are directions from MO13 how to copy Word files into NASIS.

Copying WORD files into NASIS

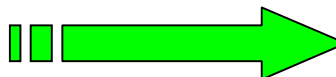
Start NASIS using Secure Access, as usual. This automatically starts EXCEED.



Bring up the EXCEED toolbar. Do this by right clicking the EXCEED BUTTON on the WINDOWS taskbar. On the pop-up menu, go to "Tools", then go to "Toolbar". Click on "Show".

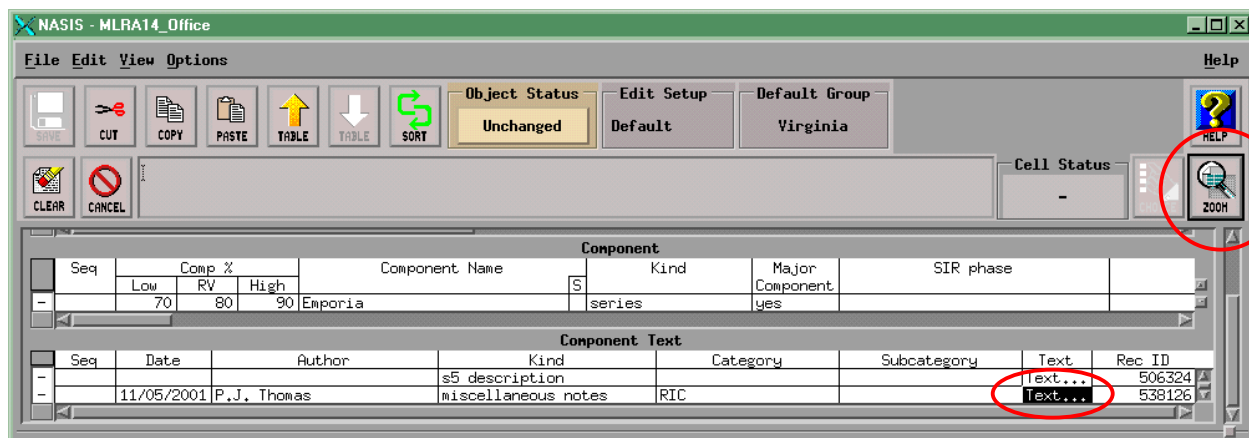


This gives you a toolbar with several objects. Run your cursor over each square and a note will pop-up telling what each button does. The one you need is "Paste Clipboard to X Selection". It looks like a clipboard with an X and an arrow curving away from the X.



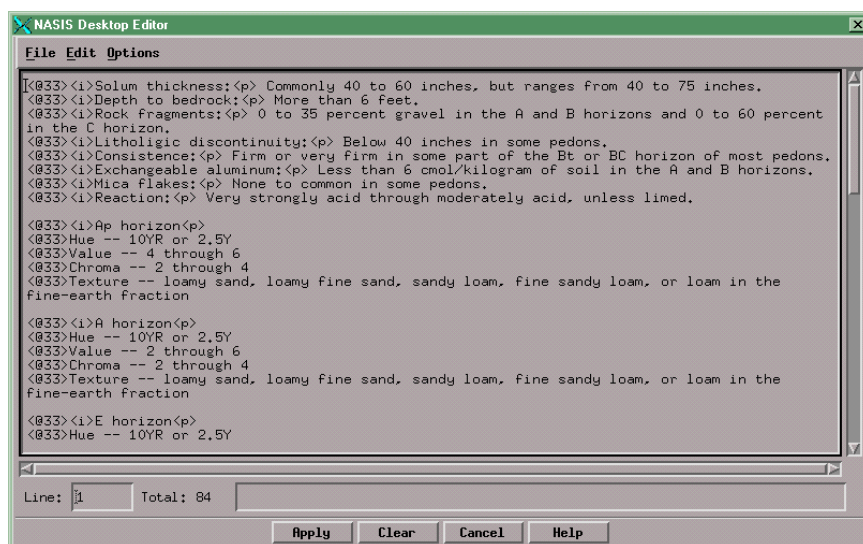
Open the RIC for a pedon in WORD. Select the text you want to copy into NASIS and click Edit-Copy (or right click and select copy). The selected text is now on the Clipboard.

Open the COMPONENT text field for RIC. (Place the cursor in the text field (Text...) and click Zoom to open.)



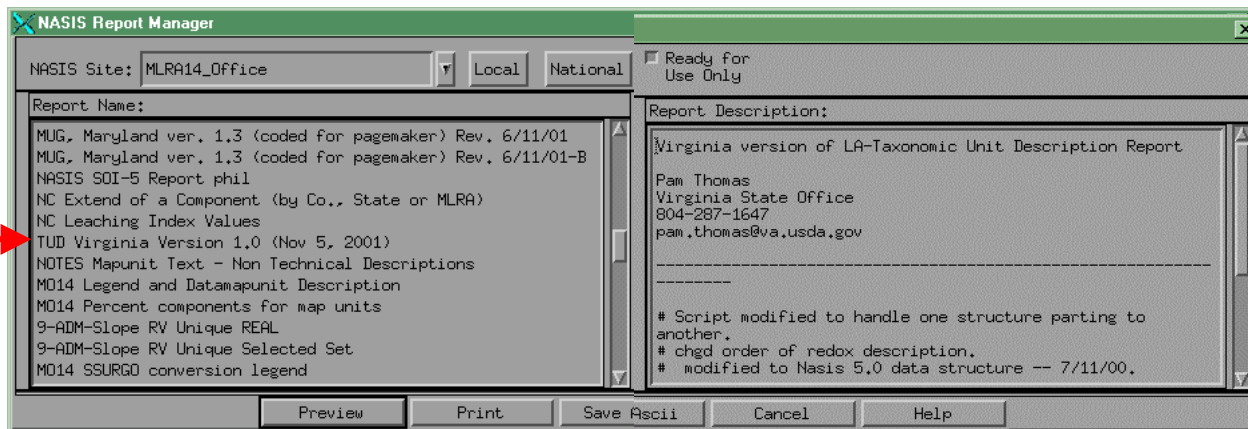
Click on the “Paste Clipboard to X Selection” button.

Put the cursor in the text field and click both the right and the left mouse buttons at the same time. This should insert the text into the field. Click Apply and SAVE. Repeat for additional pedons.



Run the Report in NASIS

Selection Options – Standard Reports to run the TUD. From the MO14 site choose the *TUD Virginia Version 1.0 (Nov. 5, 2001)*. Preview and Save.



Run the Report in Word

Use the following guide from MO14 on running Macros in Word. MO6 macro will be sent via email. Although the instructions are for MUG's, it can also be used for TUD's.

MACRO TO FORMAT MAP UNIT DESCRIPTIONS

Overview

A macro has been developed by MO6 to automatically format map unit descriptions (MUDs) that have been generated from NASIS. The macro is written for Word 97. It only works on files that have the Pagemaker typesetting codes inserted. At this time, all the MO6 MUD reports can be generated with these codes.

The objective of this macro is to enable soil survey project offices to very quickly convert NASIS map unit descriptions to formatted documents that are easy to read and have a professional appearance. The formatted document is nearly identical in appearance to a type-set standard soil survey, and is suitable for distribution to customers.

A brief summary of how this macro is used:

1. Generate a map unit description in NASIS, using a report with codes inserted
2. Transfer the MUD text file to the home computer, and load into Word
3. Run the macro to format the MUD

Installing the Macro

To use this macro it must be added to your normal template in Word 97. The macro is posted on the MO6 HP server as a Word template file named 'MO6macros.dot'. This template file is only used as a "vehicle" to transfer the macro (and other macros written by MO6) to the users' normal template. There is no other use for the MO6macros.dot template in the MUD formatting process.

Steps to Install the Macro:

1. Copy the file "MO6macros.dot" to your computer. Place this file in the directory that holds your normal Word template file (normal.dot). For NRCS CCE computers, this is commonly the directory 'C:\Program Files\Microsoft Office\Templates\'.
2. Open Word, click 'File' menu, then click 'New', click on the 'General' tab, and choose MO6macros.dot, then click OK.
3. Next, with a blank document on the screen, click the 'Tools' menu, then 'Macro', then 'Macros'. In the Macros box, click 'Organizer'. In the 'Organizer' box, click the 'Macro Project Items' tab. On the left side, under the heading 'Macro Project Items available in choose 'MO6macros.dot (Template)' from the choice list.
4. In the large box on the left side, highlight the macro 'MUDformat_0300'. Then click the 'Copy' button to copy this macro to the 'Normal.dot' side. Close the 'Organizer' box.

You have now copied the macro named 'MUDformat_0300' from the MO6macros.dot template to your normal.dot template. If prompted when you exit, save changes to the 'normal.dot' . The macro will then be saved and available whenever a text file document is opened.

The suffix '_0300' of the macro name indicates the revision date, which at this time is March '00. It is expected that this macro will need to be updated periodically.

Running the Macro

1. Load the map unit description document you want to format. (For example, the text file output from the NASIS map unit description report.)
2. Click 'Tools' menu, then 'Macro', then 'Macros'. In the 'Macros' box, choose the macro 'MUDformat_0300', then click 'Run". If this macro does not appear under 'Macros in: Normal.dot' then it was not correctly copied over in steps 3 and 4 above.
3. The macro will automatically apply formatting to the document. A message box is displayed when the macro is finished.

This macro will work on one MUD or on an entire legend. It was tested on a legend of 285 map units and it took about 15 minutes to run. No memory problems were encountered.

Important Considerations When Using the Macro

This macro performs 3 main operations:

1. Applies character, paragraph, and document formatting by keying on the Pagemaker codes;
2. Corrects improper wording that is inherent in the current NASIS MUD reports (such as the phrase 'Water and similar soils');
3. Corrects most of the map unit name to the proper upper/lower case.

Formatting

The macro will correctly apply formatting to any line that contains a Pagemaker code. Only those codes that are currently in use in MO6 MUDs are included in the macro. These codes are not visible in the printed document but are retained as hidden text. (To see the codes on the screen, click Tools – Options – View - Hidden text)

Wording

Be aware that the macro may not perform all the needed edits for proper wording. Because of the variety of possible situations, there will always be a need to make some revisions after running the macro. For example, MUG reports create a heading by adding the word 'Soils' following the component name. When the component is a miscellaneous land type, this creates an incorrect heading ("Rock outcrop Soils"). This is corrected by the macro, but only for these commonly used miscellaneous land types: Badland; Gullied land; Miscellaneous water; Pits, gravel; Pits, mine; Riverwash; Rock outcrop; Rubble land; Urban land; and Water. If other miscellaneous land types are used, the author must correct those individually.

The macro does not delete the unnecessary soil properties for miscellaneous land types, such as available water capacity for Rock outcrop. The author must manually delete these lines as appropriate.

Map unit name case

It is strongly recommended that map unit names, component names, and phase names be entered in NASIS with the proper case. This will eliminate the need to edit the map unit name in many NASIS reports. However, if map unit names are in NASIS as all upper case, the macro automatically changes most of the name to the proper lower case. Except for surface texture and slope phases, it does not change phase names to lower case. These must be corrected individually (for example, Alpha, Cool to Alpha, cool).

Emporia Series

Local Physiographic Area: Southern Coastal Plain

Geomorphic Setting: On upland on marine terrace

Parent Material: Loamy marine sediments

Drainage Class: Well drained

Permeability Class: Moderate to moderately rapid

Soil Depth Class: Very deep

Slope: 0 to 6 percent

Associated Soils

Caroline soils that are clayey.

Kempsville soils that do not have iron depletions.

Slagle soils that are moderately well drained.

Uchee soils that have a thick, sandy surface layer.

Taxonomic Classification

Fine-loamy, siliceous, subactive, thermic Typic Hapludults

Typical Pedon

Emporia fine sandy loam in an area of Emporia fine sandy loam, 2 to 6 percent slopes; located 2.5 miles northeast of Surry, 1.8 miles northeast of the junction of Highways VA-10 and VA-638, 1.2 miles northwest of the junction of Highways VA-634 and VA-636, 1.0 mile west of the junction of Highways VA-636 and VA-637, in a stand of loblolly pines; Surry VA 7.5-minute topographic quadrangle; elevation 62 feet.

Latitude: 37 degrees, 9 minutes, 12 seconds N.

Longitude: 76 degrees, 47 minutes, 35 seconds W.

A—0 to 6 inches; brown (10YR 5/3), fine sandy loam; weak fine granular structure; friable, nonsticky, nonplastic; common fine roots; very strongly acid; abrupt smooth boundary.

E—6 to 14 inches; light yellowish brown (10YR 6/4), loamy fine sand; weak fine granular structure; very friable, nonsticky, nonplastic; common fine roots; strongly acid; clear smooth boundary.

Bt1—14 to 18 inches; yellowish brown (10YR 5/4), fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine roots; 10 percent continuous distinct clay bridging between sand grains; 10 percent medium faint light yellowish brown (10YR 6/4) masses of oxidized iron; strongly acid; clear smooth boundary.

Bt2—18 to 41 inches; strong brown (7.5YR 5/6), sandy clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine roots; 15 percent continuous distinct clay films on all faces of peds; 10 percent medium distinct yellowish red (5YR 4/6) masses of oxidized iron; strongly acid; gradual smooth boundary.

BC—41 to 54 inches; strong brown (7.5YR 5/6), sandy clay; weak coarse subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; 5 percent discontinuous distinct clay films on all faces of peds; 5 percent medium distinct (5YR 4/8) masses of oxidized iron; 10 percent medium prominent light gray (10YR 7/1) iron depletions; strongly acid; clear smooth boundary.

C—54 to 72 inches; light gray (N 7/0) and yellowish red (5YR 4/6) and brownish yellow (10YR 6/6) and strong brown (7.5YR 4/6), stratified sandy loam to sandy clay loam; structureless massive; firm, slightly sticky, slightly plastic; strongly acid.

Range in Characteristics

Solum thickness: Commonly 40 to 60 inches, but ranges from 40 to 75 inches.

Depth to bedrock: More than 6 feet.

Rock fragments: 0 to 35 percent gravel in the A and B horizons and 0 to 60 percent in the C horizon.

Lithologic discontinuity: Below 40 inches in some pedons.

Consistence: Firm or very firm in some part of the Bt or BC horizon of most pedons.

Exchangeable aluminum: Less than 6 cmol/kilogram of soil in the A and B horizons.

Mica flakes: None to common in some pedons.

Reaction: Very strongly acid through moderately acid, unless limed.

Ap horizon

Hue -- 10YR or 2.5Y

Value -- 4 through 6

Chroma -- 2 through 4

Texture -- loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam in the fine-earth fraction

A horizon

Hue -- 10YR or 2.5Y

Value -- 2 through 6

Chroma -- 2 through 4

Texture -- loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam in the fine-earth fraction

E horizon

Hue -- 10YR or 2.5Y

Value -- 5 through 7

Chroma -- 3 to 6

Texture -- loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam in the fine-earth fraction

BA or BE horizon

Hue -- 7.5YR through 2.5Y

Value -- 5 through 7

Chroma -- 3 through 6

Texture -- sandy loam, fine sandy loam, or loam in the fine-earth fraction.

Bt horizon (upper)

Hue -- 5YR through 10YR

Value -- 4 through 7

Chroma -- 3 through 8

Texture -- sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Bt horizon (lower)

Hue -- 5YR through 2.5Y or multicolored without dominant matrix hue

Value -- 4 through 7

Chroma -- 3 through 8

Iron depletions -- commonly are below a depth of 36 inches

Texture -- sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; sandy clay or clay in some pedons

Btg horizon

Hue -- neutral or 5YR through 2.5Y

Value -- 4 through 6

Chroma -- 0 through 2

Texture -- sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam in the fine-

earth fraction; sandy clay or clay in some pedons

BC or CB horizon

Hue -- 2.5YR through 2.5Y or is multicolored without dominant matrix hue

Value -- 4 through 6

Chroma -- 3 through 8

Texture -- coarse sandy loam, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam in the fine-earth fraction; sandy clay or clay in some pedons

BCg or CBg horizon

Hue -- neutral or 2.5YR through 2.5Y

Value -- 4 through 6

Chroma -- 3 through 8

Texture -- coarse sandy loam, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam in the fine-earth fraction; sandy clay or clay in some pedons

C horizon

Hue -- 2.5YR through 5Y or is multicolored without dominant matrix hue

Value -- 3 through 8

Chroma -- 3 through 8

Iron depletions -- most pedons are variegated with iron depletions and accumulations

Texture -- sandy loam through clay in the fine-earth fraction

Cg horizon

Hue -- neutral or 5YR through 5Y

Value -- 3 through 8

Chroma -- 0 through 2

Texture -- sandy loam through clay in the fine-earth fraction