



VIRGINIA USER'S GUIDE SITE AND PEDON DATA

VERSION 1.1

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VIRGINIA USER'S GUIDE SITE AND PEDON DATA

(Adapted from NASIS 5.0 User's Guide – Chapter 19 and MO-1 Pedon Thunderbook)

DEFINE A NEW SITE

1. **View** menu, click **Sites**, then click **Site**.
2. Click **F8** to create a new row.
3. In the **User Site ID** cell, type the ***name of your pedon/profile/transect***. The name must be unique for each pedon entered. Use sample number, name, etc. Suggestion: If you use the sample #, i.e., S01VA-181-5, also include the name of the soil, e.g., Emporia. It makes it easier for you and others to view your data.
4. Insert information for location, elevation,...; enter as much detail as possible; as a minimum include *latitude and longitude, location description, elevation, geomorphic component, slope, bedrock features (if available), drainage class, parent material, and flooding frequency*.
5. If you have several pedons/profiles/transects you wish to enter into the database, it is more time efficient to enter all of the site data before proceeding to the next steps.

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

Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Location Description
98424	Craven	37	9	1,00	north	76	52	54,00	west	NAD27	Text...
98457	Craven eroded	37	8	25,00	north	76	6	37,00	west	NAD27	Text...
98426	Dogue	37	8	17,00	north	76	42	57,00	west	NAD27	Text...
98428	Emporia	37	9	12,00	north	76	47	35,00	west	NAD27	Text...
98458	Emporia gravelly	37	9	8,00	north	76	51	14,00	west	NAD27	Text...

The NASIS Text Field Editor dialog box displays the following text:

Craven fine sandy loam, 2 to 6 percent slopes, 2.7 miles northwest of Surry, 1.2 miles north-northeast of the junction of Highways VA-10 and VA-618, 0.3 mile west of the junction of Highways VA-618 and VA-619, 350 north of Highway VA-619, in an idle field; Claremont VA 7.5-minute topographic quadrangle; elevation 102 feet.

Buttons: Apply, Clear, Cancel, Help

6. Either table down or select **View, Site Observation, Site Observation** to open Site Observation table.
7. Click **F8** to create a new row.
8. Enter *observation date*.
9. In the **Observation Date Kind** cell, click on the **Choice** list, and select **Actual site observation date**.
10. Enter other data as available.

The screenshot shows the NASIS - MLRA14_Office application window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table Up, Table Down, Sort, Object Status (Unchanged), Edit Setup (Default), Default Group (Virginia), Cell Status, and a Help icon. A text field displays '04/25/1991'. Below this is a table with two sections: 'Site' and 'Site Observation'.

Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Locati
98424	Craven	37	9	1.00	north	76	52	54.00	west	NAD27	Text...

Seq	Observation Date	Observation Date Kind	Air Photo ID	Surface Water Kind	Surface Water Depth	Microrelief Kind	Microrelief Elevation	Microrelief Pattern
-	04/25/1991	actual site observation date	14	none	observed			

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

11. **Table down** to the **Site Soil Moisture** table.
12. Press **F8** to enter a row, then complete the **Top Depth**, **Bottom Depth**, and **Moisture Status** (from site observation, not the OSD or typical pedon moisture status)
13. As with the Site table, if you have more than one pedon/profile/transect to enter, complete site observation and site soil moisture table before proceeding to the next step.

The screenshot shows the NASIS - MLRA14_Office application window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table Up, Table Down, Sort, Object Status (Unchanged), Edit Setup (Default), Default Group (Virginia), Cell Status, and a Help icon. A text field is empty. Below this are two tables: 'Site Observation' and 'Site Soil Moisture'.

Seq	Observation Date	Observation Date Kind	Air Photo ID	Surface Water Kind	Surface Water Depth	Microrelief Kind	Microrelief Elevation	Microrel. Pattern
-	03/21/1989	actual site observation date						

Seq	Top Depth	Bottom Depth	Observed Moisture State	Vol Moisture %	Moisture Tension	Rec ID
-	0	178	moist			6565

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

OTHER SITE TABLES

Site Associated Soils

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Unchanged Edit Setup Default Default Group Virginia HELP

CLEAR CANCEL 98424 Cell Status Protected

Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds
98424	Craven	37	9	1.00	north	76	52	54.00

Site Associated Soils

Seq	Associated Soil	Rec ID
1	Emporia	38713
2	Caroline	38714
3	Slagle	38715
4	severely eroded soils	38716
5	soils with clayey substrata	38717
6	soils with more silt in the su	38718

Site Geomorphic Description

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Unchanged Edit Setup Default Default Group Virginia HELP

CLEAR CANCEL 98424 Cell Status Protected

Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Zone
98424	Craven	37	9	1.00	north	76	52	54.00	west	NAD27	Tex

Site Geomorphic Description

Seq	Feature Type	Feature Name	Feature Modifier	Feature ID	Exists on Feature ID
	Landform	marine terrace	clayey	1	
	Landscape	coastal plain		2	1

Site Parent Material

The screenshot shows the 'NASIS - MLRA14_Office' window. The 'Object Status' is 'Unchanged', 'Edit Setup' is 'Default', and 'Default Group' is 'Virginia'. The 'Cell Status' is 'Protected'. The 'Site' table has one record with Rec ID 98424, User Site ID Craven, and coordinates 37° 9' 1.00" N, 76° 52' 54.00" W. The 'Site Parent Material' table has one record with Seq 1, Vertical Order 1, Textural Modifier clayey, General Modifier, Kind marine deposits, and Origin.

Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Location Description
98424	Craven	37	9	1.00	north	76	52	54.00	west	NAD27	Text...

Seq	Vertical Order	Textural Modifier	General Modifier	Kind	Origin
1	1	clayey		marine deposits	

Site Text

The screenshot shows the 'NASIS - MLRA14_Office' window. The 'Object Status' is 'Unchanged', 'Edit Setup' is 'Default', and 'Default Group' is 'Virginia'. The 'Cell Status' is '-'. The 'Site' table has one record with Rec ID 98424, User Site ID Craven, and coordinates 37° 9' 1.00" N, 76° 52' 54.00" W. The 'Site Text' table has one record with Seq 1, Date 07/26/1989, Author P.J. Thomas, Kind correlation notes, Category, Subcategory, and Text.

Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Location Description
98424	Craven	37	9	1.00	north	76	52	54.00	west	NAD27	Text...

Seq	Date	Author	Kind	Category	Subcategory	Text
1	07/26/1989	P.J. Thomas	correlation notes			Text...

The screenshot shows the 'NASIS Text Field Editor' window. The text content is as follows:

The typical pedon is within concept of the series.
Four map units approved:
10A -- Craven loam, 0 to 2% slopes
10B -- Craven loam, 2 to 6% slopes
10C -- Craven loam, 6 to 10% slopes
12B -- Craven-Slagle complex, 2 to 6% slopes

Buttons: Apply, Clear, Cancel, Help

ESTABLISHING A SITE AREA OVERLAP

1. On the **View** menu, select **Site**, then **Site Area Overlap**.
2. Click **F8** to open a new row.
3. 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**.
4. 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. E.g., Surry* will return two fields. Select your **area** and click **Apply**. Or simply type out your area name in the field. The **Area Symbol** will automatically populate.
5. Replicate steps 2-4 for each site observation.

NASIS - MLRA14 Office

File Edit View Options Help

Object Status: Unchanged | Edit Setup: Default | Default Group: Virginia

Cell Status: -

Site											
Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long. Minutes	Long. Seconds	Long. Direction	Datum	Location Description
98424	Craven	37	9	1.00	north	76	52	54.00	west	NAD27	Text...

Site Area Overlap				
Seq	Area Type Name	Area Symbol	Area Name	Rec ID
-	Working Legends	VA181	Surry County, VA	236302

Update Report

Choice List

Area Symbol	Area Name
NC171	Surry County, North Carolina
VA181	Surry County, Virginia

Total Number of Choices: 3415 Choices Displayed: 2

Match on Area Name:

surry*

Apply Search Description Cancel Help

LINKING A SITE TO A MAP UNIT

1. From the **Site Overlap** table, table down to the **Site Mapunit Overlap** table.
2. Click **F8** to open a new row and position the cursor in the **Legend ID** field.
3. 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.)
4. Position the cursor in the **Mapunit Symbol** column.
5. Click the **Choice** button. All the map units in your legend are displayed.
6. 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.

The screenshot shows the NASIS - MLRA14_Office application window. The main window contains three tables: Site, Site Area Overlap, and Site Mapunit Overlap. The Site Mapunit Overlap table has columns: Seq, Legend ID, Legend Description, Survey Status, Correlation Date, Mapunit Symbol, and Mapunit Name. The row for Seq 1 shows Legend ID 11167, Legend Description Detailed Soil Map Legend, Survey Status initial, Correlation Date 12/1997, Mapunit Symbol 10B, and Mapunit Name Craven fine sandy loam. Red circles highlight the Legend ID and Mapunit Symbol fields.

The Choice List dialog box shows a table with columns: Legend ID, Legend Description, Survey Status, and Correlation Date. The row for Legend ID 11167 is selected. The table shows: 11167, Detailed Soil Map Legend, project, 12/1997. Below the table, it says: Total Number of Choices: 1, Choices Displayed: 1, Match on Legend ID: . Buttons: Apply, Search, Description, Cancel.

The Choice List dialog box shows a table with columns: Mapunit Symbol, Mapunit Name. The row for Mapunit Symbol 10B is selected. The table shows: 10B, Craven fine sandy loam, 2 to 6 percent slopes. Below the table, it says: Total Number of Choices: 324, Choices Displayed: 5, Match on Mapunit Symbol: 10B. Buttons: Apply, Search, Description, Cancel, Help.

7. With your cursor in the **Site Mapunit Overlap** table, click **File, Load Related**.
8. Click **Mapunit** to load the related map unit.
9. Only link one mapunit to the site. In version 1.0 of the document, multiple map units were linked. If multiple map units are linked, the Taxonomic Unit Descriptions will not print correctly.

ADDING A PEDON

You're almost ready to enter your pedon description.

1. On the **View** menu, select **Pedons, Pedon**.
2. Click **F8** to open a row.
3. At the **User Site ID** column (not the User Pedon ID column), click the **Choice** button, select the *User Site ID* associated with the pedon. Click **Apply**.
4. Complete the remaining columns of the Pedon table. You must enter a **User Pedon ID**. Make sure it is descriptive enough for you and others viewing your data to understand. For example, use the soil name, soil phase, mapunit ID, sample number...

The screenshot shows the NASIS - MLRA14_Office application window. The menu bar includes File, Edit, View, and Options. The toolbar contains icons for Save, Cut, Copy, Paste, Table (up/down arrows), Sort, Object Status (Unchanged), Edit Setup (Default), Default Group (Virginia), Cell Status (-), and Help. Below the toolbar is a text entry field with a Choice button and a Zoom button. The main data area displays a table titled "Pedon" with the following data:

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
- Craven	NASIS	P.J. Thomas	Craven

OTHER PEDON TABLES

Pedon Diagnostic Features

The screenshot shows the NASIS - MLRA14_Office application window with the Pedon Diagnostic Features table displayed. The table has the following data:

Seq	Kind	Top Depth	Bottom Depth	Thickness			Rec ID
				Low	RV	High	
1	ochric epipedon	0	15		15		124243
2	argillic horizon	15	137		122		124244

Pedon Restrictions

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL Cell Status -

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
Burrowsville	NASIS	R.L. Hodges	Burrowsville

Pedon Restrictions

Seq	Kind	Hardness	Top		Bottom		Thickness			Rec ID
			Depth	Depth	Low	RV	High			
-	fragipan	weakly	81	150			69		2419	

Pedon Surface Fragments

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL Cell Status -

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
Burrowsville	NASIS	R.L. Hodges	Burrowsville

Pedon Surface Fragments

Seq	Cover %	Spacing	Kind	Size			Shape	Roundness	Hardness	Rec ID
				Low	RV	High				
-	5.00		quartz	2	5	10	nonflat	rounded	very strongly	12473

Pedon Taxonomic Family Mineralogy

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL Cell Status -

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
- Craven	NASIS	P.J. Thomas	Craven

Pedon Taxonomic Family Mineralogy

Seq	Mineralogy	Rec ID
-	mixed	73001

Pedon Taxonomic Family Other Criteria

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL Cell Status -

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
- Lakeland	NASIS	R.L. Hodges	Lakeland

Pedon Taxonomic Family Other Criteria

Seq	Family Other	Rec ID
-	coated	3122

Pedon Taxonomic Moisture Class

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL Cell Status -

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
- Craven	NASIS	P.J. Thomas	Craven

Pedon Taxonomic Moisture Class

Seq	Moisture Class	Rec ID
-	udic	89456

ADDING PEDON HORIZON DATA

1. Click the **Down table** to open the **Pedon Horizon** table.
2. Now you are ready to enter your pedon description.
3. Click **F8** to open a new row.
4. Move cursor to **the Observation Method**, click **Choice** and select the observation method. Click **Apply**.
5. Enter data for remaining columns in this table. At a minimum for a full pedon description you should enter horizon designation (not H1, H2...), depths, texture, rupture resistance, stickiness, plasticity, and boundary.

The screenshot shows the NASIS - MLRA14_Office software interface. The main window has a menu bar (File, Edit, View, Options) and a toolbar with icons for Save, Cut, Copy, Paste, Table (up), Table (down), Sort, Object Status (Unchanged), Edit Setup (Default), Default Group (Virginia), Cell Status (-), and Help. A text input field contains "auger, bucket". Below this is a table with columns: User Pedon ID, Pedon Record Origin, Describer's Name, and User Site ID. The table contains one row with values: Craven, NASIS, P.J. Thomas, and Craven. Below this is the **Pedon Horizon** table with columns: Seq, Observation Method, Designation, Disc, Master, Prime, Sub, Top Depth, Bottom Depth, Thickness (Low, RV, High), and Tex Mo. The table contains five rows of data:

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness Low	RV	High	Tex Mo
-	auger, bucket	Ap	C	A			0	15				FSL
-	auger, bucket	Bt	C	B			15	64				C
-	auger, bucket	Btg	C	B			64	97				C
-	auger, bucket	BC	C	BC			97	137				SR- CL C
-	auger, bucket	C	C	C			137	163				SCL

6. Click **Pedon Horizons** and view the table selections.
7. For full pedon descriptions, enter data in as many of these tables as possible. Examples of these tables are shown below and on the next few pages.

Pedon Horizon
Pedon Horizon Cementing Agent
Pedon Horizon Color
Pedon Horizon Concentrations
Pedon Horizon Concentrations Color
Pedon Horizon Designation Suffix
Pedon Horizon Features
Pedon Horizon Field Measured Property
Pedon Horizon Fragments
Pedon Horizon Mottles
Pedon Horizon Ped Void Surface Features
Pedon Horizon Ped Void Surface Features Color
Pedon Horizon Pores
Pedon Horizon Redoximorphic Features
Pedon Horizon Redoximorphic Features Color
Pedon Horizon Roots
Pedon Horizon Sample
Pedon Horizon Soil Structure
Pedon Horizon Text
Pedon Horizon Texture
Pedon Horizon Texture Modifier

Pedon Horizon Color

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Unchanged Edit Setup Default HELP

CLEAR CANCEL

Cell Status -

200H

User Pedon ID	Pedon Record Origin	Descriptor's Name
- Craven	NASIS	P.J. Thomas

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth
-	auger, bucket	Ap	S	C	A		0	15

Pedon Horizon Color

Seq	Color %	Phys State	Hue	Value	Chroma	Moist State	Rec ID
-			10YR	5	3	moist	609006

Update Report

Pedon Horizon Concentrations

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Unchanged Edit Setup Default Group Virginia HELP

CLEAR CANCEL

Cell Status -

200H

User Pedon ID	Pedon Record Origin	Descriptor's Name	User Site ID
- Ackwater	NASIS	R.L. Hodges	Ackwater

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness	Texture
-	auger, bucket	Btg2	S	B		2	97	147	Low RV High	SIC

Pedon Horizon Concentrations

Seq	Percent	Size	Contrast	Hardness	Shape	Kind	Location
-	10	fine				mica flakes	

Pedon Horizon Designation Suffix

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
Craven	NASIS	P.J. Thomas	Craven

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			Te
									Low	RV	High	
1	auger, bucket	Btg	S	B			64	97				C

Pedon Horizon Designation Suffix

Seq	Suffix	Rec ID
1	g	9040
2	t	9039

Pedon Horizon Fragments

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
Emporia gravelly	NASIS	R.L. Hodges	Emporia gravelly

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			Te
									Low	RV	High	
1	auger, bucket	Bt1	S	B			1	23	46			GR-SCL

Pedon Horizon Fragments

Seq	Vol %	Kind	Size			Shape	Roundness	Hardness	Rec ID
			Low	RV	High				
1	25	quartz		5		rounded	strongly		173719

Pedon Horizon Ped Void Surface Features and Ped Void Surface Features Color

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Modified Edit Setup Default Default Group Virginia

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
M Craven	NASIS	P.J. Thomas	Craven

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			Te
-	auger, bucket	Bt	S	C	B		15	64	Low	RV	High	C

Pedon Horizon Ped Void Surface Features

Seq	Percent	Distinctness	Continuity	Kind	Location	Rec ID
-	25	distinct	continuous	clay films	on all faces of peds	170214

Pedon Horizon Ped Void Surface Features Color

Seq	Color %	Hue	Value	Chroma	Moist State	Rec ID
N		7.5YR	5	8		98763

Pedon Horizon Redoximorphic Features

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Modified Edit Setup Default Default Group Virginia

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
M Craven	NASIS	P.J. Thomas	Craven

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			Te
-	auger, bucket	Bt	S	C	B		15	64	Low	RV	High	C

Pedon Horizon Redoximorphic Features

Seq	Percent	Size	Contrast	Hardness	Shape	Kind
1	25	coarse	prominent			masses of oxidized iron
2	2	medium	prominent			masses of oxidized iron
3	5	medium	prominent			iron depletions

Ped Horizon Redoximorphic Features Color

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Modified Edit Setup Default Default Group Virginia

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
M Craven	NASIS	P.J. Thomas	Craven

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			Te
-	auger, bucket	Bt	S	C	B		15	64	Low	RV	High	C

Pedon Horizon Redoximorphic Features

Seq	Percent	Size	Contrast	Hardness	Shape	Kind
-	1	25	coarse	prominent		masses of oxidized iron

Pedon Horizon Redoximorphic Features Color

Seq	Color %	Hue	Value	Chroma	Moist State	Rec ID
-		5YR	5	6		44132

Pedon Horizon Roots

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Modified Edit Setup Default Default Group Virginia

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
M Craven	NASIS	P.J. Thomas	Craven

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			Te
-	auger, bucket	Ap	S	C	A		0	15	Low	RV	High	FSL

Pedon Horizon Roots

Seq	Quantity	Size	Location	Rec ID
-	10.0	fine		194185

Pedon Horizon Soil Structure

NASIS - MLRA14_Office

File Edit View Options Help

SAVE CUT COPY PASTE TABLE TABLE SORT Object Status Modified Edit Setup Default Default Group Virginia

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
M Craven	NASIS	P.J. Thomas	Craven

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			Te
									Low	RV	High	
-	auger, bucket	Bt	S	C	B		15	64				C

Pedon Horizon Soil Structure

Seq	Grade	Size	Type	Structure ID	Parts to Structure ID	Rec ID
-	1 strong	medium	angular blocky			416515
-	2 strong	medium	subangular blocky			416516

Pedon Horizon Texture and Pedon Horizon Texture Modifier

NASIS - MLRA14_Office

File Edit View Options Help

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

CLEAR CANCEL

Cell Status -

HELP

Pedon

User Pedon ID	Pedon Record Origin	Describer's Name	User Site ID
- Emporia gravelly	NASIS	R.L. Hodges	Emporia gravelly

Pedon Horizon

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	Thickness			
									Low	RV	High	
-	auger, bucket	Ap	C	A			0	23				GR-FS

Pedon Horizon Texture

Seq	Texture	In Lieu	Rec ID
-	fsl		453233

Pedon Horizon Texture Modifier

Seq	Modifier	Rec ID
-	gr	70170

LINKING A PEDON TO A COMPONENT

1. On the **View** menu, select **Legends**, then click Correlation.
2. Highlight **DMU ID** number, e.g., DMU ID 392791

The screenshot shows the NASIS - MLRA14_Office application window. The 'Object Status' is 'Unchanged'. The 'Cell Status' is '-'. The 'Legend' table is visible, showing 'Working Legends' with 'VA181' as the 'Area Symbol' and 'Surry County, VA' as the 'Area Name'. The 'Mapunit' table shows '10A' as the 'Mapunit Symbol' and 'Craven fine sandy loam, 0 to 2' as the 'Mapunit Name'. The 'Correlation' table is highlighted, showing the following data:

Seq	DMU ID	DMU Description	Rep DMU	Constituent Acres	Rec ID
-	88023	181010ACraven fsl, 0-2%	no		174427
-	88156	83A	no		174428
-	88157	83A1	no		174429
-	392791	VA181010ACraven fsl, 0-2%	yes	384	683388

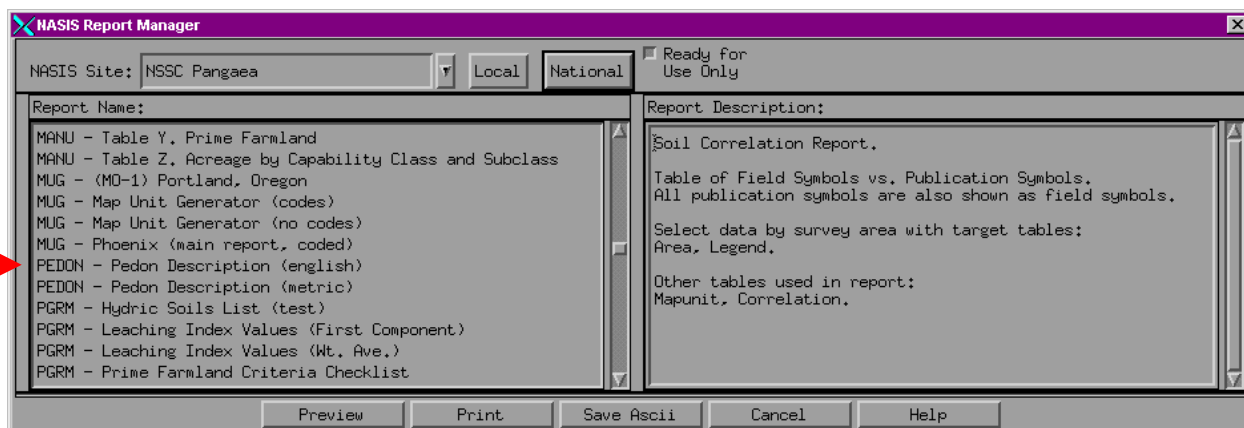
3. On the **File** menu, select **Load Related**, then click **Data Mapunit**.
4. On the **View** menu, select **Components**, then click **Component**.
5. Click the Component. E.g., *Craven*
6. On the **View** menu, select **Components**, then click **Component Pedon**.
7. Click **F8** to insert row.
8. At the **User Pedon ID** field, click the **Choice** button.
9. Highlight the **User Pedon Site ID** (e.g., Craven), then click **Apply**.

The screenshot shows the NASIS - MLRA14_Office application window. The 'Object Status' is 'Unchanged'. The 'Cell Status' is '-'. The 'Data Mapunit' table is visible, showing '392791' as the 'DMU ID' and 'VA181010ACraven fsl, 0-2%' as the 'DMU Description'. The 'Component' table shows '70' as the 'Comp %' and 'Craven' as the 'Component Name'. The 'Component Pedon' table is highlighted, showing the following data:

Seq	User Pedon ID	Descriptor's Name	Soil Name As Sampled	Pedon ID	Rep Pedon?	Rec ID
-	Craven	P.J. Thomas	Craven	98325	yes	2386

PEDON DESCRIPTION GENERATORS FROM NASIS

From the National Site



USDA - NATURAL RESOURCES CONSERVATION SERVICE PEDON DESCRIPTION

Print Date: 06/15/2001
Description Date: 04/25/1991
Describer: P.J. Thomas

Site ID: Craven
Site Note:
Pedon ID: Craven
Lab Pedon #:
Lab Source ID:

Soil Name as Described/Sampled: Craven
Soil Name as Correlated: Craven
Classification:

Pedon Type: modal pedon for series
Pedon Purpose: full pedon description
Taxon Kind: series

Location Information:
County:
State:
MLRA:
Soil Survey Area:
Map Unit: --

Location Description: Craven fine sandy loam, 2 to 6 percent slopes, 2.7 miles northwest of Surry, 1.2 miles north-northeast of the junction of Highways VA-10 and VA-618, 0.3 mile west of the junction of Highways VA-618 and VA-619, 350 north of Highway VA-619, in an idle field; Claremont VA 7.5-minute topographic quadrangle; elevation 102 feet.

Legal Description: of Section , Township , Range

Latitude: 37 degrees 9 minutes 1.00 seconds north
Longitude: 76 degrees 52 minutes 54.00 seconds west
Datum: NAD27

UTM Zone:
 UTM Easting:
 UTM Northing:

Physiographic Division:
 Physiographic Province:
 Physiographic Section:
 State Physiographic Area:
 Local Physiographic Area:

Geomorphic Setting: None Assigned
 Upslope Shape:
 Cross Slope Shape:

Primary Earth Cover:
 Secondary Earth Cover:

Parent Material: clayey marine sediments
 Bedrock Kind:
 Bedrock Depth: inches
 Bedrock Hardness:
 Bedrock Fracture Interval:

Surface Fragments:

Particle Size Control Section:

Diagnostic Features: ochric epipedon 0.0 to 5.9 in.
 argillic horizon 5.9 53.9

Top Depth (in)	Bottom Depth (in)	Restriction Kind	Restriction Hardness

Slope (%)	Elevation (feet)	Aspect (deg)	MAAT (F)	MSAT (F)	MWAT (F)	MAP (in)	Frost- Free Days	Drainage Class	Slope Length (feet)	Upslope Length (feet)
4.0	102		61			47		moderately well		

Ap--0.0 to 5.9 inches; brown (10YR 5/3), fine sandy loam; moderate medium granular structure; friable, slightly sticky, slightly plastic; many fine roots; moderately acid, pH 5.7; abrupt smooth boundary.

Bt--5.9 to 25.2 inches; yellowish brown (10YR 5/6), clay; strong medium angular blocky and strong medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; 25 percent continuous distinct strong brown (7.5YR 5/8) clay films on all faces of peds; 2 percent medium prominent red (2.5YR 4/8) masses of oxidized iron and 5 percent medium prominent light brownish gray (10YR 6/2) iron depletions and 25 percent coarse prominent yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid, pH 4.7; gradual smooth boundary.

Btg--25.2 to 38.2 inches; light gray (10YR 7/1), clay; moderate medium angular blocky and moderate medium subangular blocky structure; firm,

moderately sticky, moderately plastic; common fine roots; 25 percent continuous distinct clay films on all faces of peds; 25 percent coarse prominent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/8) and yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid, pH 4.7; gradual smooth boundary.

BC--38.2 to 53.9 inches; strong brown (7.5YR 5/6), stratified clay loam to clay; weak coarse angular blocky structure; firm, moderately sticky, moderately plastic; 10 percent continuous distinct clay films on all faces of peds; 10 percent coarse prominent light gray (10YR 7/1) iron depletions and 20 percent coarse prominent yellowish red (5YR 4/6) and yellowish brown (10YR 5/8) masses of oxidized iron; very strongly acid, pH 4.7; clear smooth boundary.

C--53.9 to 64.2 inches; strong brown (7.5YR 5/6), sandy clay loam; structureless massive; friable, moderately sticky, moderately plastic; 10 percent medium prominent light gray (N 7/0) iron depletions; extremely acid, pH 4.2.

From MO8 Site

USDA - NATURAL RESOURCES CONSERVATION SERVICE PEDON DESCRIPTION

Print Date: 06/15/2001

Description Date: 04/25/1991

Soil Name as Described/Sampled: Craven

Location Description: Craven fine sandy loam, 2 to 6 percent slopes, 2.7 miles northwest of Surry, 1.2 miles north-northeast of the junction of Highways VA-10 and VA-618, 0.3 mile west of the junction of Highways VA-618 and VA-619, 350 north of Highway VA-619, in an idle field; Claremont VA 7.5-minute topographic quadrangle; elevation 102 feet.

Legal Description: of Section , Township , Range

Latitude: 37 degrees 9 minutes 1.00 seconds north

Longitude: 76 degrees 52 minutes 54.00 seconds west

Ap--0.0 to 5.9 inches; brown (10YR 5/3), fine sandy loam; moderate medium granular structure; friable, slightly sticky, slightly plastic; many fine roots; moderately acid, pH 5.7; abrupt smooth boundary.

Bt--5.9 to 25.2 inches; yellowish brown (10YR 5/6), clay; strong medium angular blocky and strong medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; 25 percent continuous distinct strong brown (7.5YR 5/8) clay films on all faces of peds; 2 percent medium prominent red (2.5YR 4/8) masses of oxidized iron and 5 percent medium prominent light brownish gray (10YR 6/2) iron depletions and 25 percent coarse prominent yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid, pH 4.7; gradual smooth boundary.

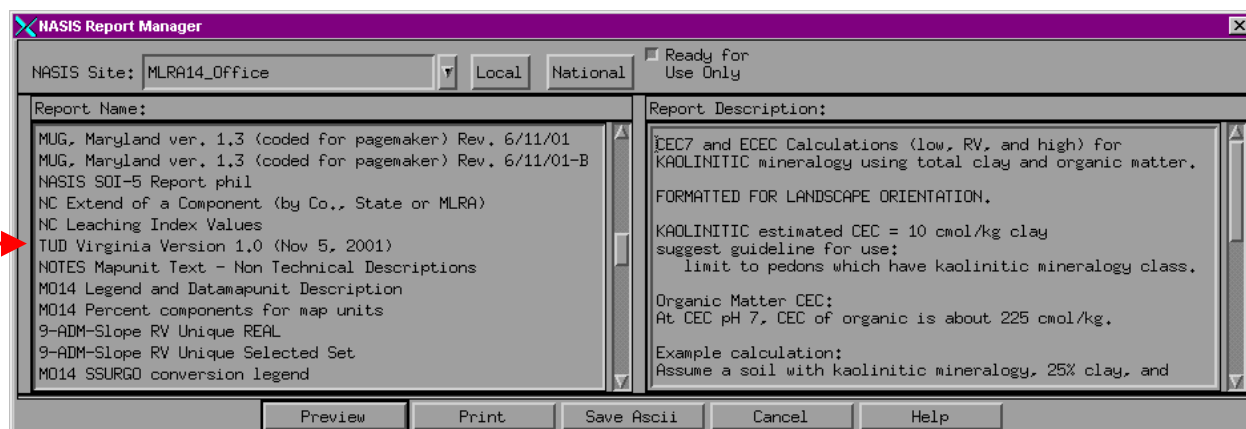
Btg--25.2 to 38.2 inches; light gray (10YR 7/1), clay; moderate medium angular blocky and moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; 25 percent continuous distinct clay films on all faces of peds; 25 percent coarse prominent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/8) and

yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid, pH 4.7; gradual smooth boundary.

BC--38.2 to 53.9 inches; strong brown (7.5YR 5/6), stratified clay loam to clay; weak coarse angular blocky structure; firm, moderately sticky, moderately plastic; 10 percent continuous distinct clay films on all faces of peds; 10 percent coarse prominent light gray (10YR 7/1) iron depletions and 20 percent coarse prominent yellowish red (5YR 4/6) and yellowish brown (10YR 5/8) masses of oxidized iron; very strongly acid, pH 4.7; clear smooth boundary.

C--53.9 to 64.2 inches; strong brown (7.5YR 5/6), sandy clay loam; structureless massive; friable, moderately sticky, moderately plastic; 10 percent medium prominent light gray (N 7/0) iron depletions; extremely acid, pH 4.2.

From MO14 Site



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, 12.00 seconds N.
Longitude: 76 degrees, 47 minutes, 35.00 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