# **Chapter 9: Examining the Point Data Objects**

The Site, Pedon, Site Association, and Transect Objects contain numerous tables for entering and maintaining site and point data in NASIS. In NASIS, the Site, Pedon, Site Association, and Transect tables can be populated independently of the legend, map unit, and component data. However, the site/pedon is linked to the legend/mapunit/component data. The site is linked to the legend and map unit, and the pedon is linked to the component.

Point data can be entered directly into NASIS6, imported from PedonPC, or imported from approved spreadsheets. Importing pedon data is discussed in Chapter 10.

This chapter provides a scenario-based exercise designed to explore the point data objects. The user can follow along exactly as written or can utilize data from their survey area.

#### Loading Existing Site and Pedon Records

1. The first step is to populate the local database with pedon data. Choose the national query "Pedon by author, series, and user pedon id" and run it against the national database. Select "Pedon" as the target table. In this example, the query is pinned to the Favorites list.



2. Choose "Pedon" as the target table. In the parameter fields, enter the describer's name (use wildcards if necessary) and use an asterisk for both the Soil Name as Sampled and the User Pedon ID fields. This loads all pedons associated with the describer "\*finnell\*."

Selections for Running Query P	edon/Site/Transect by author, series, and user pedon id	
Target Tables:	Site Pedon Transect	<u>R</u> un Cancel
Describer's Name (MATCHES):	*finnell*	
Soil Name As Sampled (MATCHES):	*	
User Pedon ID (MATCHES):	*	
Description:	Use this query to select pedons by the authors name, and soil sampled as name. Target the Pedon, and either the Site or Site observation tables to load the related data. Also prompts for user pedon_id. If pedonid has been used consistently this field can also be used to limit the selected	
Query:	1       FROM site, siteobs, pedon, outer tran         2       WHERE pedon.describers_name IMATCHES         3       pedon.soil_name_as_sampled IMATCHES          ••••••••••••••••••••••••••••••••••••	

3. The local database setup appears. It identifies those sites, pedons, and transects that are available to download from the national database. View the Status Messages Panel to verify the number of pedons, sites, and transects. Then click "Accept."

	Local Da	atabase									
	Run queries database to	against the national select more data			Accept						
Ľ		Taskaisel Gail Gamias		it City Dadap Turnersh City A							
G	Project	Technical Soil Service Le	gend    Mapunit    Data Mapun	it Site Pedon Transect Site A:	ssociation PDistribution Metadata						
	Location	User Pedon ID	Pedon Record Origin	Describer's Name	Soil Name As Sampled 🛧 Correlat						
	National	99KS161007	Converted from PDP 3.x	W. Wehmueller, M.D. Ransom, J.C	Benfield						
	National	94MO197008	Converted from PDP 3.x	Henry Ferguson Kenneth Gregg Jam	Bevier						
	National	92K5129002	Converted from PDP 3.x	Jim McNowell, Chad Remley, Bob Tri	Bigbow						
	National	05NE111010		R. HAMMER, A. PEREZ, C.MARKLEY	Birdwood						
National         05NE111010         R. HAMMER, A. PEREZ, C.MARKLEY         Birdwood											
	National	01KS161006	NASIS	B. Evans, B. Plinsky, L. Sabata, J.C	Bismarckgrove						
	National	01KS177005	NASIS	B. Evans, B. Plinsky, L. Miller, J.C. R	Bismarckgrove						
	National	01KS177010	NASIS	B. Evans, B. Plinsky, L. Miller, J.C. R	Bismarckgrove						
	National	02KS087003	NASIS	Bruce Evans, Bill Wehmueller, Chad	Bismarckgrove						
	National	01KS177010	NASIS	B. Evans, B. Plinsky, L. Miller, J.C. R	Bismarckgrove						
	National	01KS177005	NASIS	B. Evans, B. Plinsky, L. Miller, J.C. R	Bismarckgrove						
	National	02K5087003	NASIS	Bruce Evans, Bill Wehmueller, Chad	Bismarckgrove						
	•••••	Record 33 of 769 🕨 🕨	₩<	III							
	Status M	essanes									
ł	<sup>o</sup> reparing qu	ery "Pedon by author, series	s, and user pedon id"								
ļ	Running nati	onal query for target table "F	Pedon''								
ľ	Site: 270	ste objects round.									
	Pedon: 27 Transect: 5	Number to	download								
			ata l 🤗 Dala a d Castline l 👁 e	ushdattaa Daasika l							
	🖂 Status I	Messages 🛛 😷 Local Confli	cts   🛷 Upload Conflicts   🔯 🕻	validation Results							

4. The query is run a second time against the local database using the same parameters. This loads pedon data from the local database into the selected set.

>		Local Database					
		<u>в · · ·</u>		_	7		
		🔽 🍐 View Ready	to Use Only				
		🗖 🖑 View Check	ed Out Only		Data Mapun	it 🛛 Site	e Pedon Tran
				_	Drigin		Describer's Nam
		Area(1m	apupit (Mapupit (DMU by Map	4		W. We	hmueller
		Area2/Ln	apunit/Mapunit/DMU for ma		P 3.x	Henry	Ferguson Kenneth
8		- 🧭 Pedon by	author, series, and user pe	=	P 3.x	Jim Mcl	Nowell, Chad Remie
ler		- 🥠 W - I 🗾	Open		Ctrl+Shift+	0	MER, A. PEREZ, C
ð		2W-18	Check Out		Ctrl+Shift+	к	MER, A. PEREZ, C
			Mark for Deletion		Ctrl+Shift+I	м	is, B. Plinsky, L. Sa
		- 🥁 w - I 🌚	Remove Deletion Mark		Ctrl+Shift+I	м	is, B. Plinsky, L. Mil
		- 🦢 🕹 w - F 🧟	Discard Changes				is, B. Plinsky, L. Mil
		🔁 🧰 NSSC Pa 🏹	Check In		Ctrl+Shift+	J	vans, Bill Wehmuel
		MLRA01	View Check Out Status		Ctrl+Shift+	G	is, B. Plinsky, L. Mil
					and the attention		is, B. Plinsky, L. Mil
Q			Run Against Local Database		Ctrl+Shift+	·L	vans, Bill Wehmuel
Т	П	🛏 🕘 Re 🚩	Run Against National Database	9	Ctrl+Shift+	N	

Note the additional target tables, which now include the Pedon, Site, and Transect tables.

Selections for Running Query P	edon/Site/Transect by author, series, and user pedon id	
Target Tables:	<ul> <li>✓ Site</li> <li>✓ Site Observation</li> <li>✓ Pedon</li> <li>✓ Transect</li> </ul>	Run Cancel
Describer's Name (MATCHES):	*finnell*	⊡≌ <sup>™</sup> Out
Soil Name As Sampled (MATCHES):	*	
User Pedon ID (MATCHES):	*	
Description:	Use this query to select pedons by the authors name, and soil sampled as name. Target the Pedon, and either the Site or Site observation tables to load the related data. Also prompts for user pedon_id. If pedonid has been used consistently this field can also be used to limit the selected	
Query:	<pre>1 FROM site, siteobs, pedon, outer trar 2 WHERE pedon.describers_name IMATCHES 3 pedon.soil_name_as_sampled IMATCHES : </pre>	



- 5. Click "Yes" to accept the results.
- 6. From the Tables Explorer Panel, open the Site, Pedon, and Transect tables.

Loss Diverties
Long Disables
Long. Direction
.28 west
.28 west
.43 west
.43 west
.89 west
.89 west
.00 west
28 28 3 56 56 20

## **Examining the Site Tables**

The Site table describes the location and characteristics of that particular geographic location. A site may be a specific location, such as a point where a soil profile description is taken, or it may have some spatial area that is chosen to be treated as a single point. Various kinds of data, such as soil profile descriptions, lab data, vegetative data, and so forth, may be linked to a site in this database.

- 1. Open the Site tab.
- 2. Use the "View Information" option to obtain information about the Site table. This option is located on the Table Editor Menu or the Table Editor Toolbar.

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T Si	te 🚺	🕻 Pedon 🗍 🎞 Tran	sect				Uiou Inf	overstign
							VIEW III	ormacion
		User Site ID 🛧	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long. Degrees	Long, Minu
•	÷	01KS161006						
	Ð	01KS177005	39	7	14.62	north	95	
Р	Ð	01KS177005	39	7	14.62	north	95	
	Ð	01KS177010	39	7	0.45	north	95	
Р	Ð	01KS177010	39	7	0.45	north	95	
	Ð	02KS087003	39	4	1.01	north	95	
Р	Ð	02KS087003	39	4	1.01	north	95	
Р	Ð	91KS155007	38	0	40.00	north	97	

- 3. Scroll to the right and examine the various columns in the Site table. Use the "View Information" option for an explanation of each column.
- 4. Click on the plus sign (+) or choose the choice list to open the child tables.

T Si	te 🚺	C Pedon 🔳 Tran:	sect 🚺 Site A	ssociation								
		User Site ID 🔺	RaCA Site ID	RaCA Soil Group ID	DSP Plot ID	Plot Configuration	Plot Baselin	ne Azimuth	Plot Basel	ine Length	Plot Width	Plot Radius
Р	÷	• 00KS027007										
<i>0</i> . P	Ξ	<ul> <li>01KS061001</li> </ul>										
		Site Observation Site Area Overlap Site Associated Soi	ils	Site Associated Soi	s Site Geom	orphic Description Si	ite Mapunit O	verlap Site	e Other Veg	etative Class	ification Site	Parer >
		Site Geomorphic De	escription	rvation Date	r	Observation Date Kind		Air Phot	o ID	Surface	Water Kind	Surf
		Site Mapunit Overl	ap	01	actual site	observation date		10				
		Site Other Vegetat	tive Classification al									>
Р	Đ	Site Text										

NOTE: The Site Observation table records the date that the various observation or analytical data were collected for the specific site or location. Soil or site properties that may change with time are also recorded here. If a site is revisited at a later date for additional data collection, a new row with the appropriate date is entered in this table. Child tables exist for properties that may have multiple entries. Click on the plus sign to open and view all the child tables.

There are six child tables under the Site Observation table. These tables allow the user to revisit a site and collect additional or ongoing data by date.

T Sit	e 🗍	Pedon	T	Fransect	T	Site Ass	sociatio	n												
		User Sit	e ID	A RaC	A Site	ID F	RaCA S	5oil Group ID	DS	P Plot ID	Plot Configu	ration	Plot Baselin	ne Azimuth	Plot Ba	aseline I	Length	Plot Width	P	ot Radius
▶ P	Θ.	• 88KS061	1323																	
		Site Obse	ervatio	on Site	Area C	Overlap	Site	Associated Soil	ls	Site Geomo	rphic Descrip	ion Si	e Mapunit O	verlap	5ite Other '	er Vegetative Classification			ite Par	rer < >
		۹		Seq		Ob:	serval	tion Date - Observation Da						Air Pl	noto ID		Surface V	Vater Kind		Surf
		<i>0</i> . P	Θ.			02/28/	1988	actual site observation date												
				Site Soi	l Moisti	ure		on Accelerated	1	Site Existing	Vegetation	Site Ob	servation Te	xt Site	Soil Tempe	rature	Site Wo	ody Basal A	rea	
				Site Ero Site Exi	ision Ai stina V	ccelerati 'egetatio	ea In			Local P.	lant									
				Site Ob	servati	ion Text		Scientific Nam	e 🔺	Nationa	al Vernacular I	Vame 🔺	Common	Name 🔺	Vegetat	ion Stra	ata Level	Order of	Domir	ance
				Site Soi	l Temp	erature		Andropogon g	erar	dii big blue	stem		big bluest	em						
				Site Wo	ody Ba	asal Are	3	Sorghastrum n	nuta	ns Indiang	rass		Indiangra	55						
				P	SPPE	:		Spartina pectir	nata	prairie d	ordgrass		prairie co	rdgrass						
				<																>
		<																		>

NOTE: The Site Soil Moisture table describes the soil moisture profile at this site at the time of observation. A soil moisture profile may be recorded on different dates. Each observation date is a new row that has the observation recorded for that specific date. This same concept is used for the Site Erosion Accelerated, Site Existing Vegetation, Site Observation Text, and the Site Soil Temperature tables.

- 5. Use the "View Information" menu option or toolbar button to examine the information on each table or other columns in these tables.
- 6. Click on the Site Area Overlap tab. This table is used to record the geographic spatial area overlaps, such as MLRA, county, State, or soil survey area in which the specific site occurs. This choice list comes from the Area Type Object.

T Sit	e 1	Pedon	T Tran	sect													
																	[
		User Sib	e ID 🛧	Lat. Degrees	Lat. M	inutes	Lat. Seconds	Lat.	Direction	Long.	Degrees	Long, Minut	es	Long. Seco	onds	Long.	Directio
•	⊡	01KS029	006	39		35	2.05	nort	h		97	7	34		57.22	west	
		Site Area	a Overlap	Site Associated	d Soils	Site Geo	omorphic Descriptio	n	Site Mapuni	t Overla	ap Site C	ther Vegetativ	/e Clas	sification	Site P	arent M	
				u			Area	,									Recc
		۹	Area Ty	pe NASIS Site Na	me 🛧	Are	a Type Name	<b>^</b>	Area Symb	ol 🛧	Ar	ea Name	<b>^</b>	Record L	ast Upo	dated	NAS
		۱.	NSSC Pa	ngaea		Non-ML	RA Soil Survey Are	a	K5029		Cloud Cou	inty, Kansas					
			NSSC Pa	ngaea		County	or Parish		KS029		Cloud						
			NSSC Pa	ngaea		MLRA			74		Central Ka	ansas Sandstor	ne Hills				
			NSSC Pa	ngaea		State or	<sup>r</sup> Territory		KS		Kansas						
			NSSC Pa	ngaea		USGS 7	5 Minute Quadran	gles	39097-E5		Rice, Kans	as					
			NSSC Pa	ngaea		Physiog	raphic Division		IN		Interior Pl	ains					
			NSSC Pa	ngaea		Physiog	raphic Province		GP		Great Plai	ns Province					
			NSSC Pa	ngaea		Physiog	raphic Section		PLB		Plains bor	der					
			MLRA05	_Office		State Pl	nysiographic Area		SH		Smoky Hill	s					
		<															

7. Click on the Site Geomorphic Description tab. This table is populated with the various geomorphic feature types used to describe the site. The choice lists come from the Geomorphic Feature Type Object.

T Sit	e 🗍	C Pedon	T Tran	sect												
		User Site	e ID 🛧	Lat. Degr	ees	Lat. Minutes	Lat. Se	conds	Lat. Directi	ion	Long. De	egrees	Long, N	1inutes	Long. Seconds	Long. Direction
1	•	01KS029	006		39	35		2.05	north			97		34	57.22	west
		Site Geor	morphic D	escription	Site	Mapunit Overlap	Site C	ther Veg	etative Clas	sificati	ion Site	e Parent M	laterial	Site Tex	t	
				Geon	orph	ic Feature										Record La
		۹	Feature	Туре 🛧	Feat	ure Name (singul	ar) 🛧	Feature	Modifier	Feat	ure ID	Exists or	n Feature	e ID 🛛 🛛	ecord Last Update	d NASIS Us
		F	Landforn	n	flood	plain					2			1		
			Landscap	ре	river	valley					1					
		<														>

8. Click on the Site Parent Material tab. This table is populated with the various parent materials that form the soil at the site. Multiple parent materials can be recorded using "Vertical Order."

	T Site	e 🔳	Pedon	T Tran	sect												
ſ																	
			User Site	e ID 🛧	Lat. Degre	ees	Lat, Min	iutes	Lat. Seco	onds	Lat. Direction	Lo	Long. Degrees Long.		Minutes	Long. Seconds	Long. Directio
	Þ	□ 01K5029006				39			2.05	north	9.		7 34		4 57.	22 west	
		Site Geomorphic Description Site				Site	Site Mapunit Overlap Site (				etative Classifi	cation	Site Parent	Material	Site Te	×t	• •
			۹	Vertical	Order 🛧	Тор	Depth	Botton	n Depth	Textu	ural Modifier	General Modifier		Kind	Origin	Weathering	Record Last Upr
			▶ 1							coarse	e-silty			alluvium			
		<															>

9. Click on the remaining tables, scrolling through each table to view the columns associated with a specific table. Use the "View Information" menu option or toolbar button to examine the information on each table. Use the "View Information" option on the right-click menu for individual columns to examine the information on each column.

#### **Examining the Link Between Sites and Map Units**

Click on the Site Mapunit Overlap tab. This table links the site to the specific map unit from the soil survey in which the site was described. Scroll through the table and view the various columns.

The first few columns identify the legend in which the site is linked.

T Site	e ӏ	Pedon	T Tran	sect									
		User Site	e ID 🛧	Lat. Degrees	Lat. Minutes	Lat. Seco	onds L	at. Direction Long. Degrees		Long. Minutes		Long. Seconds	Long. Directio
۱.	Θ	01KS029	006	39	) :	35	2.05 ne	orth	97		34	57	.22 west
	Site Geomorphic Description Site				Mapunit Overla	ap Site Oth	ner Vegeta	ative Classificat	ion Site Parent M	laterial (	Site Text		••
		۹	Area Ty	pe NASIS Site Na	ime 🛧 🛛 Ar	ea Type Nam	ne 🛧	Area Symbol	Area Name	e 🛧	Survey S	Status 🛧 🛛 Ge	ographic Applicat
	NSSC Pangaea				Non-I	MLRA Soil Sur	vey Area	K5029	Cloud County	, Kansas lu	update n	needed current wherever m	
													>

Scrolling to the right, the table identifies the map unit, within the specific legend, where the site was described.

🖉 T Si	te 🚺	C Pedon	T Tran	sect										
		User Site	e ID 🛧	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	Long.	Degrees	Long. Min	utes	Long. Second	ds L	ong. Direction
1	•	01KS029	006	<b>β</b> 9	35	2.05	north		97		34	5	7.22 W	vest l
		Site Asso	Site Associated Solls Site Geomorphic Description Site Mapunit Overlap Site Other Vegetative Classification Site Parent Material											ext I
		٩	م المعامنة من معامنة من الم										Reco	rd Last Updated
		) E	1wwq CARR FINE SANDY LOAM, OCCASIONALLY FLOODED additional CA											
		<												>

The choices in this table are controlled by the local database. The local database must be populated with the legend(s) and the map unit(s) in order to link the site to a map unit.

# **Examining the Pedon Tables**

1. Click on the Pedon tab.

T Sit	T	Pedon T Tra	insect T	Site Association					
				Site/Sil	e Observation				
		User Site ID	Site Rec ID	Observation Date	Observation Date Kind	Site Observation Rec ID	User Pedon ID	Pedon Record Origin	Describer's I
►P	+ 🔻	89KS061559	136392	12/04/1989	actual site observation date	135784	89KS061559	Converted from PDP 3.x	H. Campbell
Р	± 🔻	01KS061002	32688	03/29/2001	actual site observation date	32635	01KS061002	NASIS	W. Wehmueller
Р	± 🔻	01KS061001	32687	03/29/2001	actual site observation date	32634	01KS061001	NASIS	W. Wehmueller
Р	± 🔻	85KS061526	12249	05/09/1985	actual site observation date	12194	85KS061526	Converted from PDP 3.x	M. Horsch
Р	± -	85KS061413	12245	05/09/1985	actual site observation date	12190	85KS061413	Converted from PDP 3.x	M. Horsch
Р	± -	92KS061011	10932	08/12/1992	actual site observation date	10877	92KS061011	Converted from PDP 3.x	W. Wehmueller
Р	± 🔻	92KS061008	10929	03/17/1992	actual site observation date	10874	92K5061008	Converted from PDP 3.x	W. Wehmueller
Р	± 🔻	92KS061006	10927	03/02/1992	actual site observation date	10872	92KS061006	Converted from PDP 3.x	W. Wehmueller
Р	± 🔻	92KS061001	10922	03/02/1992	actual site observation date	10867	92KS061001	Converted from PDP 3.x	W. Wehmueller
Р	± 🔻	91KS061992	10694	08/07/1991	actual site observation date	10639	91KS061992	Converted from PDP 3.x	W. Wehmueller, M.D. I
Р	± -	91KS061002ksu	10692	02/22/1991	actual site observation date	10637	91KS061002ksu	Converted from PDP 3.x	W. Wehmueller
Р	± -	91KS061001ksu	10691	02/22/1991	actual site observation date	10636	91KS061001ksu	Converted from PDP 3.x	W. Wehmueller

2. The Pedon table contains soil profile information collected at the time it was described. The first few columns in the Pedon table contain the lineage link to the Site and Site Observation tables. The Pedon table is linked to the Site table through the Site Observation table. Scroll to the right to view the remaining columns found in the Pedon table.

T Si	e T	Pedon T Transect T Site Associ	iation					
		Describer's Name	Soil Name As Sampled	Correlated Soil Name	Taxon Kind	d Pedon Type	Pedon Purpose	Pedon #
►P	+ -	H. Campbell	Reading			2↓ Sort Ascending	pedon description	
Р	± 🔻	W. Wehmueller	Konza	Konza	series	Z Sort Descending	pedon description	
Р	+ -	W. Wehmueller	Irwin	Irwin	series	Clear Sorting	pedon description	
Р	± 🔻	M. Horsch	Konza		series		pedon description	
Р	+ -	M. Horsch	Konza		series	Group By This Column	pedon description	
Р	± 🔻	W. Wehmueller	Konza		series	Show Group By Box	pedon description	
Р	+ -	W. Wehmueller	Konza		series	Remove This Column	pedon description	
Р	± -	W. Wehmueller	Benfield			Freeze column	d note	
Р	+ -	W. Wehmueller	Konza		series	Hide Column	pedon description	
Р	± -	W. Wehmueller, M.D. Ransom, C. Watts	Konza		series	Hidden Columns	pedon description	
Р	+ -	W. Wehmueller	Hobbs			Best Fit	pedon description	
Р	± 🔻	W. Wehmueller	Kahola			Best Fit (all columns)	pedon description	
Р	+ -	R. Plinsky	Konza		series	Descrite (all coldinity)	— pedon description	
Р	+ -	R. Plinsky	Ladysmith			ү Filter Editor	pedon description	
Р	+ -	W. Wehmueller	Konza	Konza	series	Find/Replace	pedon description	
Р	+ -	W. Wehmueller	Crete			1 View Information	pedon description	

- 3. Use the "View Information" menu option or toolbar button to examine the information on each table. Use the "View Information" option on the right-click menu for individual columns to examine the information on each column.
- 4. After examining the Pedon table, click the plus sign (+) button or the choice list to open the Pedon child tables. The child tables open to the Pedon Horizon table.

T Si	ie 1	Pedon T Transect T Site Associ	iation													
		Describer's Name	Soil Name	As Sam	pled	Correlated	Soil Name	Tax	on Kind	P	edon Type	Pedon	Purpose	e F	edon #	Exp
Р	+	r H. Campbell	Reading							modal p	edon for series	full pedor	n descrij	ption		
<i>0</i> . P	Θ	W. Wehmueller	Konza			Konza		serie	s	within r	ange of map unit	full pedor	n descrij	ption		
		Pedon Horizon Pedon Diagnostic Features	Pedo	n Field I	Measure	ed Property	Pedon H	lydric Fie	eld Indicat	or Pe	don Penetration Res	sistance	Pedor	n Restric	ctions	
		Pedon Field Measured Property											Thickne	ss		
		Pedon Hydric Field Indicator	Designa	ation	Disc	Master	Prime	Sub	Top Dep	th 🔺	Bottom Depth 🔺	Low	RV	High	Tex Mo	id & 1
		Pedon Penetration Resistance	Ap	С		A				0	11	3			SICL	
		Pedon Restrictions	Bt1	С		в		1		18	50	5			SIC	
		Pedon Surface Fragments	Bt2	С		в		2		56	70	5			SIC	
		Pedon Taxonomic Family Mineralogy	BCk	С		BC				76	11:	2			SICL	
		Pedon Taxonomic Family Other Criteria	2Bt3	С		2 B		3		112	20	5			SIC	
		Pedon Taxonomic Moisture Class														>
		Pedon Text														

- 5. The Pedon Horizon table identifies the described horizons. Scroll through the table to review the many fields available for population. Use the "View Information" option to identify population needs for specific columns.
- 6. Horizons that have two distinct parts, such as E/B or E & Bt, are recorded twice. The characteristics of the first part are populated in one record. Then in a second row, using the same horizonation, depths, and thicknesses, the characteristics of the second part are populated. This is the only location and the only time this population rule is used. This population rule is NOT used in the Component Horizon table.
- 7. Click through the remaining Pedon child tables and scroll through each table to become familiar with the columns. In NASIS 6, new columns have been placed in the Pedon Horizon table. Use the "View Information" menu option or toolbar button to examine the information on each table or column.
- 8. Return to the Pedon Horizon table. Use the plus sign (+) or choice list button to open the Pedon Horizon child tables. The child tables open to the Pedon Horizon Texture table; however, the choice list can be used to select a specific child table.

T Sit	e 1	Pedon	Т	ransect 🔲 🍸 Site Associal	ion														
			Des	riber's Name	Soil Name As Sam	pled	Cor	rrelated :	5oil Name	Tax	on Kind	F	edon Type		Pedon P	urpose	Pe	don #	Exp
Р	± •	H. Camp	bell	F	Reading							modal	pedon for serie:	s fu	ull pedon	descript	ion .		
▶ P	Θ.	W. Weh	mueller		(onza		Kona	za		serie	:5	within (	range of map u	hit fu	ull pedon	descript	ion		
	ſ	De des 11		Dadaa Diamantia Castuma	- De des Gield B		und Du		De des 11	udula El	- 1 - 1			. Danis		Dedaa	D a abulabi		5
		Pedon Ho	nzon	Pedon Diagnostic Feature	s Pedon Field I	rieasi	Jrea Pro	opercy	Pedon H	yaric Hi	elo Indica	tor Pe	don Penetratio	1 Resis	scance	Pedon	Restrict		y
											_				T	hicknes:	5		
		۹		Observation Method	Designation	Disc	: Ma	aster	Prime	Sub	Top De	pth 🔺	Bottom Depth	*	Low	RV	High	Tex Mo	id & I
		<i>0</i> . P	⊟ -	push tube	Ap C		A					0		18				SICL	
				Pedon Horizon Texture		en	sity	Pedon H	lorizon Cei	mentina	Agent	Pedon H	Horizon Color	Pedor	n Horizor	n Concer	ntrations	F	
				Pedon Horizon Bulk Density	,		· .									Record	Last Lin	dated By	٦
				Pedon Horizon Cementing	Agent			Telli				a courd 1 a	et Undeted			MACT	C Lloov N	lama	-111
				Pedon Horizon Color Pedon Horizon Concentrati	0.00	H		TUTE	30	-	R	ecora La:	si opualeu			IVADI	o user n	Jame	-
				Pedon Horizon Cracks	ons										_				_111
				Pedon Horizon Designation	Suffix														2
		Р	Ð	Pedon Horizon Features			в			1		18		56				SIC	
		Р	Đ	Pedon Horizon Field Measu	red Property		в			2		56		76				SIC	
		Р	Đ	Pedon Horizon Fragments			BC					76		112				SICL	
		Р	Đ	Pedon Horizon Human Artif	acts	E	2 B			3		112		205				SIC	
		<		Pedon Horizon Mottles															
			_	Pedon Horizon Ped Void Su Dedon Horizon Peros	rrace Features	E							,						
Р	ι.	w.wen	mue	Pedan Horizon Redaximorn	bic Features		Irwi	n		serie	\$5	WITHIN	range of map u	nit ru	ul pedon	descrip	:ion		
Р	÷	M. Horse	:h	Pedon Horizon Roots						serie	s			fu	ull pedon	descript	ion		
Р	± •	M. Horse	:h	Pedon Horizon Sample						serie	s	map ur	nit inclusion	fu	ull pedon	descript	ion		
Р	+	r W. Weh	mue	Pedon Horizon Soil Structu	re -					serie	s			fu	ull pedon	descript	ion		
Р	÷	r W. Weh	mue	Pedon Horizon Text						serie	s			fu	ull pedon	descript	ion		
Р	÷ •	W. Weh	mue	Pedon Horizon VNIR Scan										fi	eld note				

NOTE: Textures or the terms used *in lieu* of texture are populated in the Pedon Horizon Texture table.

- 9. Click through the remaining Pedon Horizon child tables, scrolling through each table to become familiar with the columns. Use the "View Information" menu option or toolbar button or the right-click menu to examine the information in each table or column.
- 10. After examining the Pedon Horizon child tables, return to the Pedon Horizon Texture table and click the plus sign (+) or choice list button to open the Pedon Horizon Texture child table. The child tables open to the Pedon Horizon Texture Modifier table.



11. The Pedon Horizon Texture Modifier table is displayed. The texture modifier and class column ("Tex Mod & Class") in the Pedon Horizon table (see red arrow in the image above) is a calculated field based on the texture term in the Pedon Horizon Texture table and the textural modifier in the Pedon Horizon Texture Modifier table.

#### **Examining the Link Between Pedons and Components**

Pedons are linked to a component. The component should be within the data mapunit where the pedon was described. The following steps require the linked component to be in the local database. The pedon is linked to a component through the Component Pedon table.

1. Load the component into the selected set.

_	T Site	• 1	Pedon	T	Transect	T Site	Associa	ation	T Data Ma	puni	it T N	ASIS S	ite									
			DMU	Descript	ion 🔺	HEL (obso	lete)	HEL W	ater (obsolet	e)	HEL Win	id (obso	olete)	Inter	pretive Focus	Orde	r of Mapping	Prod Inc	lex C	T Septi	: Potentia	al IA
Þ	E	•	061BE	61BEwaw highly erodible				highly e	erodible		not highl	y erodi	ble									
			Compo	nent	Data Ma	punit Certif	listory	Data Mapur	nit Cr	op Yield	Data	Mapunit	Text									
				Component Data Mapunit Certification															Slo	pe Grad	ient	Slo
			۹		Low	RV 🔻	High	Comp	onent Name	*	Local Ph	ase	Taxon H	Kind	Major Compon	ient	SIR phase - o	bsolete	Low	RV	High	Low
			⊧Ε	•	•	28		Floren	ice	С			series						5.0	10.0	15.0	

2. Verify that the data mapunit is checked out and open the Component Pedon child table.

	ite 🚺	C Pedon	T	Transect	T Sit	e Associa	tion T C	Data Mapuni	t T 🛚	JASIS Si	te										
		DMU De	escrip	tion 🔺	HEL (obs	olete)	HEL Water	r (obsolete)	HEL Wir	nd (obsa	olete)	Inter	pretive Fo	ocus	Order of Map	ping Prod	Index	: C	T Septi	ic Potenti	al IA
►E	Θ	<ul> <li>061BEw</li> </ul>	aw		highly ero	dible	highly erodi	lible	not high	ly erodit	ble										
		Compone	ent	Data Ma	punit Certi	fication H	istory Da	ata Mapunit Cro	op Yield	Data I	Mapunit	Text									
					Comp %	,												Slop	be Grad	lient	Slo
		٩		Low	RV 🔻	High	Componer	ent Name 🔺	Local Ph	nase	Taxon	Kind	Major Co	Componer	nt SIR ph	ase - obsolete	e L	ow	RV	High	Low
	► □ ▼			-	20	3	Florence	С			series			$\checkmark$				5.0	10.0	15.0	
	E Comp					Com	onent Pote	ential Windbrea	k Com	ponent	Restrict	ions	Compone	ent Surfa	ace Fragment	Compone	nt Ta×	onomi	ic Famil	y Miner	
																Pedon					
				۹	User S	ite ID	Site Rec II	D Observatio	n Date	Obser	vation D	)ate Kin	id Sit	te Obser	vation Rec II	User Pedor	n ID	Des	criber's	Name	Soil
				<i>0</i> . E	88KS06	1139 🔽	1028	34 03/07/1988		actual si	ite obse	rvation	date		1022	9 88KS06113	9	w. v	Vehmur	eller	Flor
						Site NAS	IS Site Nam	ne User	Site ID			Site Re	c ID		Observa	ion Date	^				
					•	MLRA05	_Office	88KS	061139					102	84 03/07/19	38					>
						MLRA05	Office	88KS(	061140					102	85 03/01/19	38					
						MLRA05	Office	88KS(	061144					102	89 07/13/19	38					

3. Use the choice list to select the appropriate pedon(s) to be linked to the component. This choice list is controlled by the pedons stored in the local database. After selecting the pedons, identify the one pedon that is the "representative" pedon for the taxonomic unit description. All other pedons are documentation supporting the component ranges.

## **Examining the Transect Tables**

The Transect table is used to capture and manage the transect information (kind, selection method, delineation size, and direction). The Transect Text table allows entry of related notes. Transects are created in the Transect Object table but the individual transect stops are recorded in the Pedon table. Enter the information in the Transect table then populate the Pedon table. Enter the interval in the Pedon table.

1. Open the Transect table to view this table and its child tables. Notice the child tables named Transect Estimated Composition and Transect Text.

T Sib	e	Ľ	Pedon	T Transe	ct									
														T
			User Tra	nsect ID 🛧	Transect Aut	hor	Transect Kind	Trans	ect Selec	tion Method	Transect	Delineation Size	Transect Direct	tion N
►N	Ξ	1	TX622-PH	nantom	Paul R. Finnell and Re	ex A. Cochran	regular interval	biased	ł					NS
	Transect Estimated Composition Transect Text													
		1						Slope (	Gradient			Record Last Upda		
		٩		Seq 🛧	Component Name	Local Phase	Comp %	Low	High	Record Last I	Jpdated	NASIS User Name	Rec ID	
		N	I		Phantom		30			10/08/2009 1	1:49:54	Finnell, Paul R.	10001	
		►	N		Barlite		70			10/08/2009 1	1:49:57	Finnell, Paul R.	10002	
							·		1	1 1 1		1		

2. Use the "View Information" menu option or toolbar button to examine the information in each table or column.

The "Load Related for Selected Rows" function can be used to load the pedons from the local database into the selected set for those pedons linked to the specific transect. If the pedons are in the selected set, then the "Find Related for Selected Rows" function can be used to find the specific pedons in the Pedon table.

3. Highlight a transect record in the Transect table and choose either function. Choose the Pedon table from the "Load Related" choice list.

<b>&gt;&gt;</b>	ЪX	B	M	) 👇	s 🖉	7	57 🛅 🤗 🕅 🕏	) 🗈 🛍 á	💖 % 🖓	<u>.</u> 9	1 🗗   1				
	🖊 🍸 Sib	e 🗍	C	Pedon	T Trans	ect					Delete d G				
									1	Load	Related ro	or Selected Ri	JWS		Tra
				User Tra	nsect ID 🛧		Transect Aut	hor	Transect Kind	Trans	ect Selecti	ion Method	Transect Delineation Size	Transect Direction	NA
	►N	Ξ		TX622-Ph	hantom		Paul R. Finnell and Re	ex A. Cochran	regular interval	biased	i				NSS
			ſ	Transect	Estimated	Com	position Transect	Text							
			ſ				u			Slope	Gradient	Load Rel	ated	×	
<u>8</u> .			9		Seq 🛧	Со	mponent Name	Local Phase	Comp %	Low	High	Please	elect a Target Table:		
ller			P	J		Pha	antom		30				ciccita raigot rabio.		
Ō			•	N		Bar	lite		70			Pedon		~	
													ОК	Cancel	

#### **NASIS User Guide**

#### 4. Return to the Pedon table.

	C Site	T Ped	on T Transec	t						
				Transect						
		Us	er Transect ID	Transect Author	Transect Rec ID	Transect Stop Nu 🛧	Transect Interval	User Pedon ID	Soil Name As Sampled	(
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	1	161.0	582-TX622-001	Phantom	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	2	161.0	582-TX622-002	Phantom-like	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	3	161.0	582-TX622-003	Phantom	
► P	Ð	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	4	161.0	582-TX622-004	Barlite	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	5	161.0	582-TX622-005	Barlite	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	6	161.0	582-TX622-006	Barlite	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	7	161.0	582-TX622-007	Barlite	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	8	161.0	582-TX622-008	Barlite	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	9	161.0	582-TX622-009	Barlite	
Р	÷	TX6	22-Phantom	Paul R. Finnell and Rex A. Cochran	70259	10	161.0	582-TX622-010	Barlite	

NOTE: This view of the Pedon table has been modified. The Transect band was moved to the left side of the table. The Transect band includes the three columns from the Transect table identifying the "User Transect ID," authors, and "Transect RecID." In addition, the "Transect Stop Number" and the "Transect Interval" found in the Pedon table were moved to columns in association with the soil name.

### **Examining the Site Association Tables**

The Site Association table is used to record natural or artificial groupings of sites (e.g., research sites, project sites, RaCA sites, etc.). The purpose of the Site Association table is to efficiently query a set of sites. Types of association may be created as needed by the user. The Site Association Site table records the identifier of a site that is a member of a particular site association. A site association may contain any number of sites, and a site may be a member of more than one site association.

To explain the use of the Site Association Object:

1. In the Queries Explorer, choose the national query "Site Association by Site Association ID" and run it against the national database. Choose the parameters in the following image.

Selections for Running	Query Site Association by Site Association ID	
Target Tables:	Site Association	Run
	Pedon	Cancel
User Site Association ID:	*irrigation*	

2. The local database setup appears. Change to the Site Association tab.

T Site	T Pedon T Transect Local Database			×
Run querie: database to	s against the national p select more data.		Accept Cance	el 🛛 Clear Local Database
Project	Technical Soil Service Legend Mapunit Da	ata Mapunit Site Pedon Transect Site A	Association Distribution Metadata System	Domain Group
Location	User Site Association ID 🛛 🔶	NASIS Site Name	NASIS Group Name	Object Last Updated
▶ National	PRF Irrigation Study	MLRA05_Office	Kansas Pedons	07/13/2004 06:20:43
National	PRF Irrigation Study Pits	MLRA05_Office	Kansas Pedons	07/13/2004 06:20:43
National	WW MMA-Irrigation Project	MLRA09_Office	Woodward, OK MSSO - PEDON	02/29/2008 00:43:03
	_			

- 3. Choose "Accept" to download the results to the local database.
- 4. Run the query on the local database to load the results into the selected set. Use the parameters in the following image to verify proper results.

Selections for Running (	Query Site Association by Site Association ID	
Target Tables:	Site Association	 Run
	Site	 Cancel
	Site Association Site	
Lines City Association TD.	Site Observation	Out
User Site Association ID:	*irrigation*	

5. From the Table Explorer Panel, open the Site Association table. Then open the child table to view the Site Association Site table.

T Site T Pedan T Transect T Site Association														
			Iser Site Association ID 🛧 🕴		Site Associal	te Association		ASIS Group				: Upda		Rec
		User Site			NASIS Site Name		NASIS Group Name		Object Last Updated		NASIS User Name		Record Last Updated	NAS
<u>۲</u>	Ξ	PRF Irrig	ation Study	MLRA05_Off	fice Kansas Pedons			07/13/2004 06:20:43		Wehmueller, Bill				
		Site Association Site Site Association Text												
	1		Associate			d Site			Record I		Last Upda			^
		۹	Associated	Site Use	r Site ID 🛧	Assoc	iated Site Rec ID 🛧	Record L	ast Updated	NASIS User Name		Rec ID		
		۱.	S00KS05500	01-pit			27144					52616	16	
			S00KS055006-pit				27145						L	
			S00KS05500	05			27146					52620	20	
			S00KS05500	0KS055004			27147				5261	9		
			S00KS055003 S00KS055002 S00KS055010			27148 27149 27150						52618	3	
											52617	17 25		
														52625
			S00KS055009				27151					52624	ŀ	
			S00KS055008				27152					52623	}	
			S00KS05500	07			27153					52622	22	
			500KS19300	01-pit			27154					52646	5	
			S00KS08100	01-pit			27159					52636		
			S00KS08100	02			27160					52637	·	$\sim$
	ŧ	PRF Irrigation Study Pits		MLRA05_Off	ILRA05_Office Kansas Pedons		07/13/2004 06:20:43		Wehmueller, Bill					

This example presents one method in using the Site Association table to group sites within a similar management project. This particular site association groups those pedons that were collected during the study of the influence of irrigation on soil development. Using a site association manages all the sites for quick access.

#### **Process Steps for Entering Point Data**

- 1. Open the Site table and populate a row.
- 2. Open the Site Observation table and populate a row (date must be entered).
- 3. Open the Pedon table, insert a row, and use the choice list to link it to the site and site observation that was created in steps 1 and 2.
- 4. Populate the Pedon table.
- 5. Open the Pedon Horizon table and enter all horizons before leaving the table.
- 6. Open a Pedon Horizon child table and populate all horizons before moving to the next child table.

If the pedon is part of a transect, populate the Transect table first. This allows each pedon to be linked to the transect as the pedon is entered.

If the point data is part of a site association, create the site association after the sites are complete. Either copy all sites and paste into the Site Association Site table or populate the sites using the choice list found in the Site Association Site table.

"User Site ID" and "User Pedon ID" are populated using the format set forth on page 2 of the "Soil Survey Laboratory Information Manual" (available at <a href="http://ftp-fc.sc.egov.usda.gov/NSSC/Lab\_Info\_Manual/ssir45.pdf">http://ftp-fc.sc.egov.usda.gov/NSSC/Lab\_Info\_Manual/ssir45.pdf</a>).