NASIS 6.0

How did we get here?

United States Department of Agriculture
Natural Resources Conservation Service

USDA NRCS

Pre - 1972 – Soil Survey Interpretation Record

Mimosa Series

3

SOIL SURVEY INTERPRETATIONS

MLRA 123
JAS, KKY
12-68

The Mimosa series consists of well drained soils on rolling to hilly uplands. These soils have dark brown loamy surface layers and strong brown or yellowish brown clay subsoils overlying phosphatic limestone rock. Slopes range from 2 to 35 percent.

ESTIMATED PHYSICAL AND CHEMICAL PROPERTIES 1/

General Soil Profile (inches)	Classification			% of Material Passing Seive No.				LL	PI	Permeability in/hr.	Avail. Water Cap. in/in.	Soil Reaction	Shrink Swell Potential
	USDA Texture	Unified	AASHO	#4	#10	#40	#200						
0 - 8	Silt loam	ML or CL	A6, A7	95-100	95-100	90-100	80-95	25-45	8-20	.63-2.0	.17	5.0-5.5	Low
8 - 50	Clay	MH	A7	95-100	95-100	90-100	90-100	50-80	10-30	0.2-.63	.14	4.5-5.5	Mod

Flood hazard: None
Wetness: Not wet

Depth to rock: 2½ to 5 feet (hard) Hydrologic group: C

SUITABILITY OF SOIL AS RESOURCE MATERIAL 2/

Topsoil	Poor; clayey texture
Sand	Not suitable
Gravel	Not suitable
Roadfill	Poor; traffic supporting capacity

DEGREE OF LIMITATIONS AND MAJOR SOIL FEATURES AFFECTING SELECTED USE

Highway location 4/	0 to 25% slopes: Moderate; depth to hard rock Over 25% slopes: Severe; slope
Pond reservoir 4/	0 to 10% slopes: Moderate; depth to rock (possible sepage) Over 10% slopes: Severe; slope (restricted reservoir area)
Pond embankments 4/	Moderate; depth to rock
Excavated ponds 4/	Severe; depth to rock, deep water table
Corrosivity - Uncoated steel 2/	Slight
Corrosivity - Concrete 2/	Slight
Foundations for low buildings 3/	0 to 25% slopes; Moderate; shrink-swell Over 25% slopes: Severe; slope
Septic tank filter fields 2/	Severe; permeability
Sewage lagoons 2/	0 to 2% slopes: Slight 2 to 7% slopes: Moderate; slope Over 7% slopes: Severe; slope
Streets and low-cost roads 3/	0 to 25% slopes: Moderate; depth to rock Over 25% slopes: Severe; slope
Light industries 3/	0 to 12% slopes: Moderate; depth to rock Over 12% slopes: Severe; slope

U. S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, FORT WORTH, TEXAS

WORK SHEET 12-68 4-N-27413-1 of 2

SCS-Soils-4
5-71
File Code Soils-12

SOIL SURVEY INTERPRETATIONS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Otero Series

MLRA : 69

LSL 3/26/71

Deep, well drained to somewhat excessively drained, calcareous soils formed in coarse textured, wind modified alluvium. Typically, Otero soils have light brownish gray, very friable sandy loam A horizons, and very pale brown sand loam C horizons.

ESTIMATED SOIL PROPERTIES SIGNIFICANT TO ENGINEERING

Major soil horizons (inches)	Classification			Coarse fract. >3 in. %	Percentage less than 3 inches passing sieve No. --				LL	PI	Permeability in./hr.	Avail. water capac. in./in.	Soil reaction	Shrink-swell potential
	USDA texture	Unified	AASHO		4	10	40	200						
0-60	sandy loam	SM	A-2	< 1	95-100	85-100	50-80	20-35	5-16	0-10	6.0-20.0	.11-.13	7.4-8.4	Low

Flood hazard: Rare
Wetness: Seasonal high water table at 5 to 7 feet
Corrosivity – uncoated steel: Low
Corrosivity – concrete: Low
Hydrologic group: B
Depth to rock: >60"

SUITABILITY OF SOIL AS SOURCE OF SELECTED MATERIAL AND FEATURES AFFECTING USE

Topsoil	Good
Sand	Poor-excessive fines
Gravel	Unsuited-No gravel
Roadfill	Good

DEGREE OF SOIL LIMITATION AND MAJOR FEATURES AFFECTING SELECTED USES

Septic tank absorption fields	Slight: 0-8 percent slopes Moderate: 8-15 percent slopes
Sewage lagoons	Severe: Rapid permeability
Dwellings w/basements	Slight: 0-8 percent slopes Moderate: 8-15 percent slopes
Dwellings w/no basements	Slight: 0-8 percent slopes Moderate: 8-15 percent slopes
Shallow excavations	Slight: 0-8 percent slopes Moderate: 8-15 percent slopes
Sanitary land fills (trench type)	Severe: Rapid permeability
Local roads and streets	Slight: 0-8 percent slopes Moderate: 8-15 percent slopes
Pond reservoir areas	Rapid permeability
Embankments, dikes, and levees	Piping hazard

DEGREE OF SOIL LIMITATION AND MAJOR FEATURES AFFECTING RECREATION USES

Camp areas	Slight: 0-8 percent slopes Moderate: 8-15 percent slopes
Picnic areas	Slight: 0-8 percent slopes Moderate: 8-15 percent slopes
Playgrounds	Slight: 0-2 percent slopes Severe: >6 percent slopes Moderate: 2-6 percent slopes
Paths and trails	Slight

CAPABILITY, SOIL LOSS FACTORS, AND POTENTIAL YIELDS—(High level management)

Phases of series	Capability	Soil loss K	Soil loss T				
Otero sandy loam, 1 to 9 percent slopes	VIe						

WILDLIFE HABITAT SUITABILITY

Phases of series	Potential for --							Potential for --		
	Grain and seed crops	Grasses, legumes	Wild herbaceous plants	Hardwood trees and shrubs	Coniferous plants	Wetland food and cover	Shallow water devel.	Openland wildlife	Woodland wildlife	Wetland wildlife

WOODLAND SUITABILITY

Phases of series	Ordination	Potential productivity		Woodland management hazards					Suitable species	
		Important trees	Site index	Erosion hazard	Equipment limitations	Seedling mortality	Windthrow hazard	Plant competition	To favor	To plant

Show here, ratings for other management hazards; supplementary woodland products; air-dry herbage per acre under medium canopy; etc.

RANGE

Phases of series	Range site name	Climax veg. and potential yields of air-dry herbage (lbs./ac.)
Otero sandy loam	Sandy plains	Blue gramma, sand dropseed, sand reedgrass, little bluestem, sedge, buckwheat, galetta.

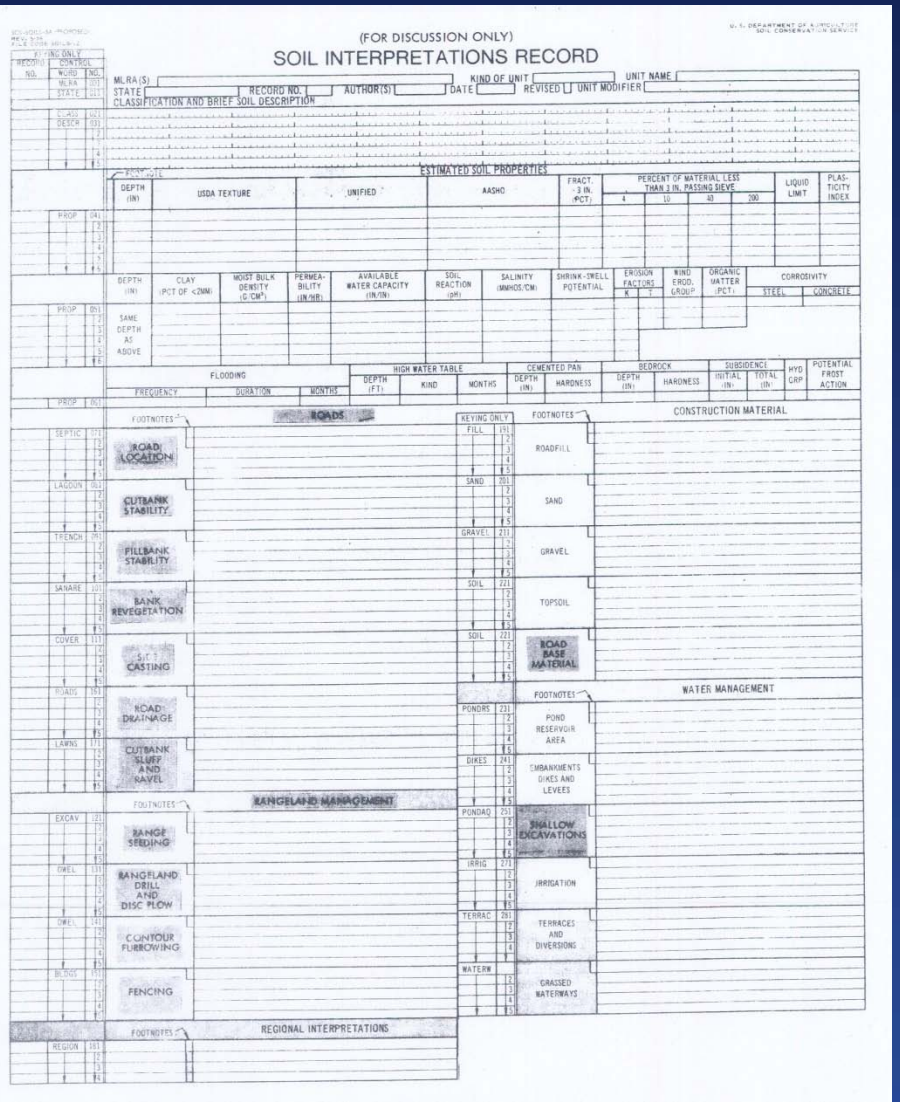
OTHER

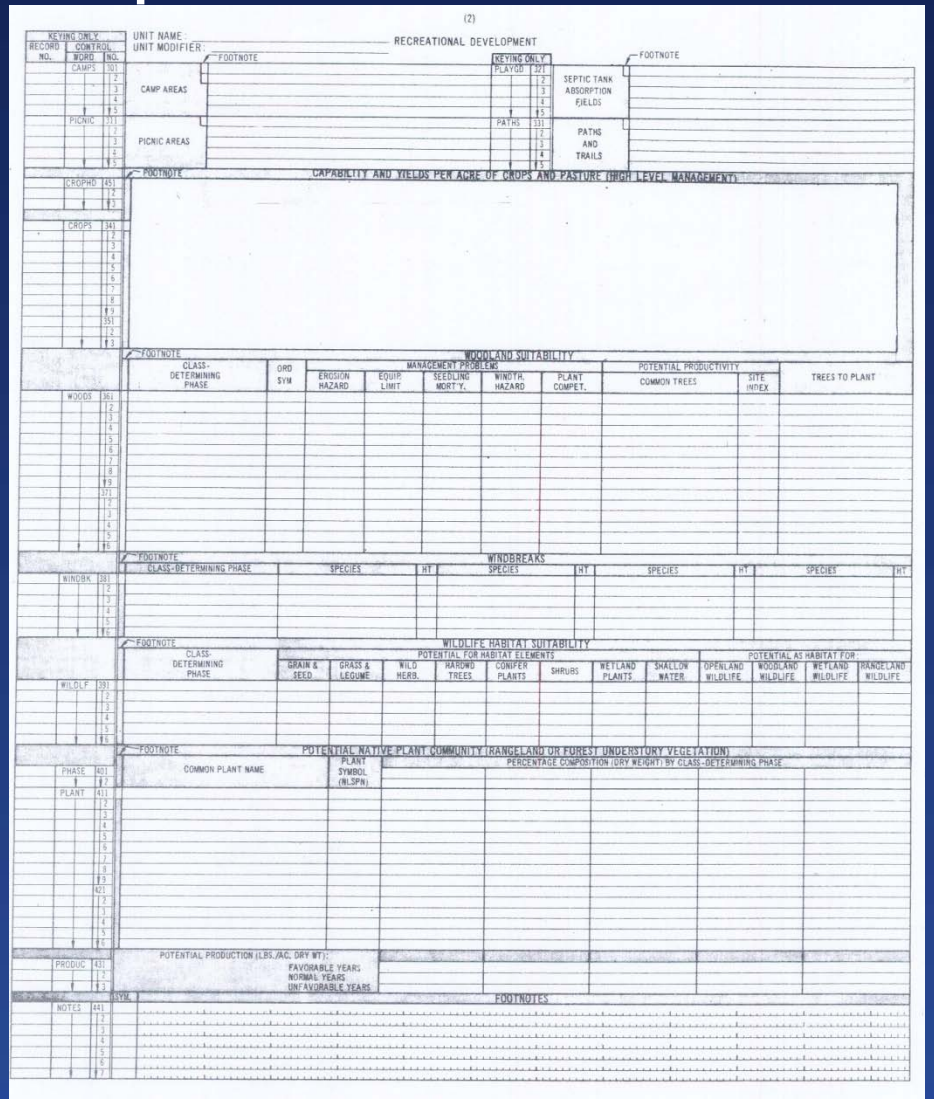
1972 Soil Survey enters the Computer Age

- Entry forms created
  - SOI-5
  - SOI-6
- Data stored in mainframe at the Statistical Laboratory at Iowa State University
- In 1974, the generation of manuscript tables of soil properties for inclusion in soil survey reports was introduced. Initially, all data processing was done locally at ISU, and hard copy was sent through the mail. The SOI-5 forms and the SOI-6 forms, used to enter map unit information for the soil surveys, were mailed from SCS offices to ISU for processing. Printed copies of revised records and generated tables were mailed back to SCS.

United States Department of Agriculture
Natural Resources Conservation Service

1972 - SOI-5 “Series Interpretation Record”





United States Department of Agriculture
Natural Resources Conservation Service

USDA NRCS

1972 - SOI-5 “Series Interpretation Record”

Later version with 4 pages

TX0249 SOIL INTERPRETATIONS RECORD VERNON SERIES

MLRA(S): 78C, 78D, 80A
REV. ALL,ACT, 2-91
TYPIC USTOCHREPTS, FINE, MIXED, THERMIC

THE VERNON SERIES CONSISTS OF MODERATELY DEEP, WELL DRAINED GENTLY SLOPING TO STRONGLY SLOPING SOILS ON UPLANDS. THE SOIL FORMED IN RESIDUUM WEATHERED FROM SHALE. IN A REPRESENTATIVE PROFILE, THE SURFACE LAYER IS REDDISH BROWN CLAY ABOUT 5 INCHES THICK. THE SUBSOIL IS RED CLAY AND EXTENDS TO A DEPTH OF 25 INCHES. THE SUBSTRATUM IS DARK RED CLAY. SLOPES RANGE FROM 1 TO 20 PERCENT.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
61-67	210-240	20-30	1000-2500	W	1-20

ESTIMATED SOIL PROPERTIES (A)

DEPTH (IN.)	USDA TEXTURE	UNIFIED	FRACT.	FRACT.	PERCENT OF MATERIAL LESS	CLAY
0-5	C, SIC	CL, CH				
0-5	CL, SICL	CL				
5-25	C, SIC	CL, CH				
25-63	SH-C, C	CL, CH				
63-80	SH-C, SHV-C, SHX-C	CL, CH				

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)
0-5	38-60	20-38	1.35-1.55	<0.06
0-5	35-50	17-30	1.40-1.60	0.06-0.2
5-25	38-60	20-40	1.50-1.65	<0.06
25-63	30-60	15-38	1.60-1.75	<0.06
63-80	30-60	15-38	1.70-2.00	<0.06

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	Kf	T	WIND EROD. GROUP	WIND ERODI INDE
0-5	.5-2	HIGH	.32	.32	3	4	86
0-5	.5-2	HIGH	.37	.37	3	4	86
5-25	<1	HIGH	.37	.37			
25-63	<1	HIGH	.37	.37			
63-80	<1	HIGH	.32	.32			

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)
NONE			>6.0

VERNON SERIES TX0249

RECREATIONAL DEVELOPMENT (B)

CAMP AREAS	1-8%CL,SICL:MODERATE-PERCS SLOWLY 8-15%CL,SICL:MODERATE-SLOPE,PERCS SLOWLY 8-15%C,SIC:MODERATE-PERCS SLOWLY,TOO CLAYEY 8-15%C,SIC:MODERATE-SLOPE,PERCS SLOWLY 15+%:SEVERE-SLOPE	PLAYGROUNDS	1-2%CL,SICL:MODERATE-PERCS SLOWLY 2-6%CL,SICL:MODERATE-SLOPE,PERCS SLOWLY 1-2%C,SIC:MODERATE-TOO CLAYEY,PERCS SLOWLY 2-6%C,SIC:MODERATE-SLOPE,TOO CLAYEY 6+%:SEVERE-SLOPE
PICNIC AREAS	1-8%CL,SICL:MODERATE-PERCS SLOWLY 8-15%CL,SICL:MODERATE-SLOPE,PERCS SLOWLY 1-8%C,SIC:MODERATE-TOO CLAYEY,PERCS SLOWLY 8-15%C,SIC:MODERATE-SLOPE,TOO CLAYEY 15+%:SEVERE-SLOPE	PATHS AND TRAILS	1-15%C,SIC:SLIGHT 15-20%C,SIC:MODERATE-SLOPE CL,SICL:SEVERE-ERODES EASILY

REGIONAL INTERPRETATIONS

CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

CLASS-DETERMINING PHASE	CAPABILITY NIRR	CAPABILITY IRR.	WHEAT (BU) NIRR	WHEAT (BU) IRR.	GRAIN SORGHUM (BU) NIRR	GRAIN SORGHUM (BU) IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
1-3%	4E	4E	15	30	17	40										
3-5%	4E	4E														
5-12%	6E	-														
2-5 ERODED	4E	-														
3-8% SEV ER	6E	-														
12-20%	6E	-														

CLASS-DETERMINING PHASE	ORD SYM	EROS'N HAZARD

VERNON SERIES TX0249

SANITARY FACILITIES (B)

SEPTIC TANK ABSORPTION FIELDS	1-15%:SEVERE-PERCS SLOWLY 15+%:SEVERE-PERCS SLOWLY,SLOPE	
SEWAGE LAGOON AREAS	1-2%:SLIGHT 2-7%:MODERATE-SLOPE 7+%:SEVERE-SLOPE	
SANITARY LANDFILL (TRENCH)	1-15%:SEVERE-TOO CLAYEY 15+%:SEVERE-SLOPE,TOO CLAYEY	
SANITARY LANDFILL (AREA)	1-8%:SLIGHT 8-15%:MODERATE-SLOPE 15+%:SEVERE-SLOPE	
DAILY COVER FOR LANDFILL	1-15%:POOR-TOO CLAYEY,HARD TO PACK 15+%:POOR-TOO CLAYEY,HARD TO PACK,SLOPE	

CONSTRUCTION MATERIAL (B)

ROADFILL	POOR-SHRINK-SWELL,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	1-15%:POOR-TOO CLAYEY 15+%:POOR-TOO CLAYEY,SLOPE

WATER MANAGEMENT (B)

POND RESERVOIR AREA	1-3%:SLIGHT 3-8%:MODERATE-SLOPE 8+%:SEVERE-SLOPE
EMBANKMENTS DIKES AND LEVEES	MODERATE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	1-3%CL,SICL:DROUGHTY 3+%CL,SICL:SLOPE,DROUGHTY 1-3%C,SIC:DROUGHTY,SLOW INTAKE 3+%C,SIC:SLOPE,DROUGHTY,SLOW INTAKE
TERRACES AND DIVERSIONS	1-8%:ERODES EASILY,PERCS SLOWLY 8+%:SLOPE,ERODES EASILY,PERCS SLOWLY
GRASSED WATERWAYS	1-8%:ERODES EASILY,DROUGHTY 8+%:SLOPE,ERODES EASILY,DROUGHTY

BUILDING SITE DEVELOPMENT (B)

SHALLOW EXCAVATIONS	1-8%:MODERATE-TOO CLAYEY 8-15%:MODERATE-TOO CLAYEY,SLOPE 15+%:SEVERE-SLOPE	
DWELLINGS WITHOUT BASEMENTS	1-15%:SEVERE-SHRINK-SWELL 15+%:SEVERE-SHRINK-SWELL,SLOPE	
DWELLINGS WITH BASEMENTS	1-15%:SEVERE-SHRINK-SWELL 15+%:SEVERE-SLOPE,SHRINK-SWELL	
SMALL COMMERCIAL BUILDINGS	1-8%:SEVERE-SHRINK-SWELL 8+%:SEVERE-SHRINK-SWELL,SLOPE	
LOCAL ROADS AND STREETS	1-15%:SEVERE-SHRINK-SWELL,LOW STRENGTH 15+%:SEVERE-SHRINK-SWELL,LOW STRENGTH,SLOPE	
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	1-8%CL,SICL:MODERATE-DROUGHTY 8-15%CL,SICL:MODERATE-DROUGHTY,SLOPE 15+%CL,SICL:SEVERE-SLOPE 1-15%C,SIC:SEVERE-TOO CLAYEY 15+%C,SIC:SEVERE-SLOPE,TOO CLAYEY	

VERNON SERIES TX0249

WINDBREAKS (E)

CLASS-DETERMIN'G PHASE	SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
MAAT>60	BLACK LOCUST	-	OSAGEORANGE	-	EASTERN REDCEDAR	10	ONESEED JUNIPER	
MAAT<60	EASTERN REDCEDAR	12	ROCKY MT. JUNIPER	12	AUSTRIAN PINE	16	HONEYLOCUST	16
	HACKBERRY	13	GREEN ASH	14	SIBERIAN ELM	27	RUSSIAN OLIVE	13
	RUSSIAN MULBERRY	16	AMUR HONEYSUCKLE	16	SIBERIAN PEASHRUB	6	PEKING COTONEASTER	6

WILDLIFE HABITAT SUITABILITY (C)

CLASS-DETERMINING PHASE	POTENTIAL FOR HABITAT ELEMENTS: GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	POTENTIAL AS HABITAT FOR: OPENLD WILDLF	WOODLD WILDLF	WETLAND WILDLF	RANGELD WILDLF
1-5% CL,SICL	FAIR	FAIR	FAIR	-	-	FAIR	POOR	V. POOR	FAIR	-	V. POOR	FAIR
5-12% CL,SICL	FAIR	FAIR	POOR	-	-	FAIR	POOR	V. POOR	FAIR	-	V. POOR	FAIR
1-12% C,SIC	FAIR	FAIR	POOR	-	-	FAIR	POOR	V. POOR	FAIR	-	V. POOR	FAIR

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION) (D)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT) BY CLASS DETERMINING PHASE: ALL
SIDEOATS GRAMA	BOCU	25
BUFFALOGRASS	BUDA	15
VINE MESQUITE	PAOB	5
TOBOSA	HIMU2	15
HAIRY GRAMA	BOHI2	5
SILVER BLUESTEM	BOSA	5
ARIZONA COTTONTOP	DICA8	5
BLUE GRAMA	BOGR2	5
OTHER PERENNIAL GRASSES	PPGG	10
OTHER PERENNIAL FORBS	PPFF	5
OTHER SHRUBS	SSSS	5

POTENTIAL PRODUCTION (LBS./AC. DRY WT):	
FAVORABLE YEARS	2500
NORMAL YEARS	1700
UNFAVORABLE YEARS	1000

FOOTNOTES

A ESTIMATES BASED ON ENGINEERING TEST DATA OF 8 PEDONS FROM ARCHER, COTTLE, GARZA, HASKELL, NOLAN AND WICHITA COS., TX
B RATINGS BASED ON NSH, SECTION 603.
C WILDLIFE RATINGS BASED ON SOILS MEMORANDUM-74, JAN. 1972.
D RANGE SITE: SHALLOW CLAY.
E MAAT<60 - WINDBREAK GROUP 4C IN KANSAS

1972 - SOI-5 “Series Interpretation Record”

Maximum of 3 surface horizons

Maximum of 6 total horizons

Minimal Properties with Low and Highs

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
61-67	210-240	20-30	1000-2500	W	1-20

ESTIMATED SOIL PROPERTIES (A)

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. 3-10IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-5	C, SIC	CL, CH	A-6, A-7-6	0	0	95-100	90-100	90-100	80-98	40-60
0-5	CL, SICL	CL	A-6, A-7-6	0	0	95-100	90-100	90-100	70-95	35-40
5-25	C, SIC	CL, CH	A-6, A-7-6	0	0	95-100	90-100	90-100	80-98	40-60
25-63	SH-C, C	CL, CH	A-6, A-7-6	0	0-5	90-100	85-100	65-100	65-96	40-60
63-80	SH-C, SHV-C, SHX-C	CL, CH	A-6, A-7-6	0	0-5	90-100	85-100	65-100	65-96	40-60

DEPTH (IN.)	LIQUID LIMIT	PLAS-TICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEA-BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-5	38-60	20-38	1.35-1.55	<0.06	0.10-0.17	7.9-8.4	-	0-2	15-25	5-15	-
0-5	35-50	17-30	1.40-1.60	0.06-0.2	0.12-0.17	7.9-8.4	-	0-2	15-25	5-15	-
5-25	38-60	20-40	1.50-1.65	<0.06	0.10-0.15	7.9-8.4	-	2-15	20-35	15-30	0-2
25-63	30-60	15-38	1.60-1.75	<0.06	0.06-0.10	7.9-8.4	2-8	5-15	20-35	5-20	-
63-80	30-60	15-38	1.70-2.00	<0.06	0.01-0.06	7.9-8.4	2-8	10-25	15-25	5-20	-

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	Kf	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-5	.5-2	HIGH	.32	.32	3	4	86	HIGH	LOW
0-5	.5-2	HIGH	.37	.37	3	4	86		
5-25	<1	HIGH	.37	.37					
25-63	<1	HIGH	.37	.37					
63-80	<1	HIGH	.32	.32					

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT. (IN)	TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		>60		-		D	-

1974 – SOIL-6 Map Unit Record

Used to retrieve data for manuscript development

Maximum of 3 components

Component layer depth adjusted for county TP

PARTMENT OF AGRICULTURE
servation Service

SCS-SS-6
7-79

MAP UNIT RECORD

Type Num	NAME OF SOIL SURVEY AREA	SURVEY ACREAGE BY COUNTIES: COUNTY 1 IN AREA	COUNTY 1 TOTAL	COUNTY 2 IN AREA	COUNTY 2 TOTAL
A 1	VA FAIRFAX COUNTY, VIRGINIA	264960	264960		
A 2					
A 3					

	FIELD SYMBOL	KIND	FIELD MAP UNIT NAME	MAP UNIT ACREAGE COUNTY 1	MAP UNIT ACREAGE COUNTY 2
B 1	121C3	CS	APPLING GRITTY LOAM, ERODED UNDULATING PHASE	1994	
B 2					
B 3					

RECOM SYMBOL	MLRA	RECOMMENDED MAP UNIT NAME
AaB	153A	APPLING LOAM, 2 TO 7 PERCENT SLOPES

PUBLICA SYMBOL	DATE MO	DATE YR	APPROVED MAP UNIT NAME
Aa	06	82	APPLING SANDY LOAM 2 TO 7 PERCENT SLOPES

	PER-CENT OF UNIT	INTERPRETATION RECORD NUMBER	CRITICAL PHASE CRITERIA (use first line for single-taxon unit or first taxon of multi-taxa unit, second line for second unit, etc.) SLOPE	USDA TEXTURE	FLOODING	OTHER (growing season rainfall, erosion, aspect, etc.)
E 1		NC0032	2-7	SL	NONE	
E 2						
E 3						

KEYPUNCH OPERATOR DUPLICATE FIELD SYMBOL ON ALL CARDS

ADDITIONAL SYMBOLS ON FIELD SHEETS (if more than 14, use second line)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
F 1	121B2	121C2												
F 2														

ADJUSTED LAYER DEPTH FOR MAP UNIT OR COMPONENTS OF MULTI-TAXA UNITS

MAP UNIT OR FIRST TAXON LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5	LAYER 6	SECOND TAXON (use second line for third taxon) LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5	LAYER 6
0-7	7-32	32-40	–								

RANGE SITE NAME (use first line for single-taxon unit or first taxon of multi-taxa unit, second line for second unit, etc.)

ARKS:

NASIS Foundation

- 1985 – Release of State Soil Survey Database
  - State control of data
  - Streamlined Database Management
  - Database created from Soi-5 and Soi-6
  - Database allowed printing of survey manuscript reports locally
  - Prelude database (flat files)

SOI-5 + SOI6 = MUIR

– Map Unit Information Record - SSSD

Query2

S5ID	COMP	STA	SSA	MUS	SEQ	COMPPCT	SLOPEL	SLOPEH	SURFTEX	OTHERF	COMPACR	CLASCODI	ANFLOOD	WTDEPL	WTDEPH	ROCKDEP
TX0249	Vernon	KS	7	VN	1	100	3	5	CL	MAAT<60	2500	IOCUSAA 12	NONE	6	6	2
TX0249	Vernon	KS	7	VR	1	100	5	15	CL	MAAT<60	82430	IOCUSAA 12	NONE	6	6	2
TX0249	Vernon	KS	7	VS	1	50	1	5	CL	MAAT<60	9885	IOCUSAA 12	NONE	6	6	2
TX0249	Vernon	KS	77	RC	2	35	1	3	CL		539	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	KS	77	VR	1	60	2	6	CL		222	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	NM	21	VS	1	70	1	5	SICL	MAAT>60	3915	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	Bk	1	50	5	12	C	MAAT>60	9566	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	Es	2	30	3	8	C	SEV ER, M	2792	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	VeC	1	80	3	5	C	MAAT>60	16839	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	VeD	1	60	5	12	C	MAAT>60	24779	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	TX	9	KvD	2	25	2	12	C		4990	IOCUSAA 12	NONE	6	6	6

Record: 2 of 90 Filtered Search

Query3

S5ID	STA	SS	MUS	SE	LAYERNUM	LAYERIC	LAYDEPL	LAYDEPH	TEXTURE	KFACT	KFFACT	TFACT	WEG	INCH10L	INCH10H	INCH3L	INCI
TX0249	KS	7	VR	1	1	11	0	5	CL	0.37	0.37	4	4			0	
TX0249	KS	7	VR	1	2	2	5	22	SIC CL C	0.37	0.37			0	0	0	
TX0249	KS	7	VR	1	3	4	22	60	WB								
TX0249	KS	7	VS	1	1	11	0	5	CL	0.37	0.37	4	4			0	
TX0249	KS	7	VS	1	2	2	5	22	SIC CL C	0.37	0.37			0	0	0	
TX0249	KS	7	VS	1	3	4	22	60	WB								
TX0249	KS	77	RC	2	1	12	0	7	CL	0.37	0.37	4	4	0	0	0	
TX0249	KS	77	RC	2	2	2	7	24	C SIC	0.37	0.37			0	0	0	
TX0249	KS	77	RC	2	3	4	24	28	SH-C SHV-C	0.32	0.32			0	0	0	
TX0249	KS	77	VR	1	1	12	0	7	CL	0.37	0.37	4	4	0	0	0	
	KS	77	VR	1	2	2	7	24	C SIC	0.37	0.37			0	0	0	
	KS	77	VR	1	3	4	24	28	SH-C SHV-C	0.32	0.32			0	0	0	
	NM	21	VS	1	1	12	0	3	SICL	0.37	0.37	3	4	0	0	0	
	NM	21	VS	1	2	2	3	10	C SIC	0.37	0.37			0	0	0	
	NM	21	VS	1	3	3	10	14	SH-C C	[illegible]	[illegible]			0	0	0	
	OK	31	Bk	1	1	11	0	4	C	0.32	0.32	3	4	0	0	0	
	OK	31	Bk	1	2	2	4	17	C SIC	0.37	0.37			0	0	0	
	OK	31	Bk	1	3	3	17	50	SH-C C	0.37	0.37			0	0	0	
	OK	31	Bk	1	4	4	50	80	SH-C SHV-C	0.32	0.32			0	0	0	
	OK	31	Es	2	1	11	0	3	C	0.32	0.32	2	4	0	0	0	
	OK	31	Es	2	2	2	3	17	C SIC	0.37	0.37			0	0	0	
	OK	31	Es	2	3	3	17	50	SH-C C	0.37	0.37			0	0	0	
	OK	31	Es	2	4	4	50	80	SH-C SHV-C	0.32	0.32			0	0	0	
TX0249	OK	31	VeC	1	1	11	0	4	C	0.32	0.32	3	4	0	0	0	
TX0249	OK	31	VeC	1	2	2	4	17	C SIC	0.37	0.37			0	0	0	
TX0249	OK	31	VeC	1	3	3	17	50	SH-C C	0.37	0.37			0	0	0	

Record: 1 of 365 Filtered Search

Same S5id number for the various map units

Slight variations of Layer ID

SOI-5 + SOI6 = MUIR

– Map Unit Interpretation Record - SSSD

Query2

S5ID	COMP	STA	SSA	MUS	SEQ	COMPPCT	SLOPEL	SLOPEH	SURFTEX	OTHERF	COMPACR	CLASCODI	ANFLOOD	WTDEPL	WTDEPH	ROCKDEP
TX0249	Vernon	KS	7	VN	1	100	3	5	CL	MAAT<60	2500	IOCUSAA 12	NONE	6	6	2
TX0249	Vernon	KS	7	VR	1	100	5	15	CL	MAAT<60	82430	IOCUSAA 12	NONE	6	6	2
TX0249	Vernon	KS	7	VS	1	50	1	5	CL	MAAT<60	9885	IOCUSAA 12	NONE	6	6	2
TX0249	Vernon	KS	77	RC	2	35	1	3	CL		539	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	KS	77	VR	1	60	2	6	CL		222	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	NM	21	VS	1	70	1	5	SICL	MAAT>60	3915	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	Bk	1	50	5	12	C	MAAT>60	9566	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	Es	2	30	3	8	C	SEV ER, M	2792	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	VeC	1	80	3	5	C	MAAT>60	16839	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	OK	31	VeD	1	60	5	12	C	MAAT>60	24779	IOCUSAA 12	NONE	6	6	6
TX0249	Vernon	TX	9	KvD	2	25	2	12	C		4990	IOCUSAA 12	NONE	6	6	6

Record: 8 of 90 Filtered Search

Query3

S5ID	SE	LAYE	LAYDI	LAY	TEX	KFA	KFFA	TFA	WEG	INC	INC	INC	IP	NC	N	NC	NO	NO4	NO4	NO	NO	CLA	CL	LLL	LLI	PIL	PIH	UNIFIED
TX0249	1	11	0	4	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
TX0249	2	11	0	3	C	0.32	0.32	2	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
TX0249	1	11	0	4	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
TX0249	1	11	0	4	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
TX0249	2	11	0	4	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
[illegible]	1	11	0	5	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
[illegible]	1	11	0	4	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
[illegible]	1	11	0	5	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
[illegible]	2	11	0	7	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
[illegible]	2	11	0	7	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
[illegible]	1	11	0	7																								
[illegible]	1	11	0	7																								
[illegible]	1	11	0	6																								
[illegible]	1	11	0	6																								
TX0249	1	11	0	6																								
TX0249	1	11	0	6																								
TX0249	2	11	0	6																								
TX0249	1	11	0	6																								
TX0249	2	11	0	5																								
TX0249	1	11	0	5																								
TX0249	1	11	0	6																								
TX0249	1	11	0	5																								
TX0249	1	11	0	10																								
TX0249	1	11	0	6	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
TX0249	1	11	0	6	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH
TX0249	1	11	0	6	C	0.32	0.32	3	4	0	0	0	0	95	100	90	100	90	100	80	98	40	60	38	60	20	38	CL CH

Record: 4 of 57 Filtered Search

Only LayerID "11"

ESTIMATED SOIL PROPERTIES (A)

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. 3-10IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-5	C, SIC	CL, CH	A-6, A-7-6	0	0	95-100	90-100	90-100	80-98	40-60
0-5	CL, SICL	CL	A-6, A-7-6	0	0	95-100	90-100	90-100	70-95	35-40
5-25	C, SIC	CL, CH	A-6, A-7-6	0	0	95-100	90-100	90-100	80-98	40-60
25-63	SH-C, C	CL, CH	A-6, A-7-6	0	0-5	90-100	85-100	65-100	65-96	40-60
63-80	SH-C, SHV-C, SHX-C	CL, CH	A-6, A-7-6	0	0-5	90-100	85-100	65-100	65-96	40-60

NASIS Timeline

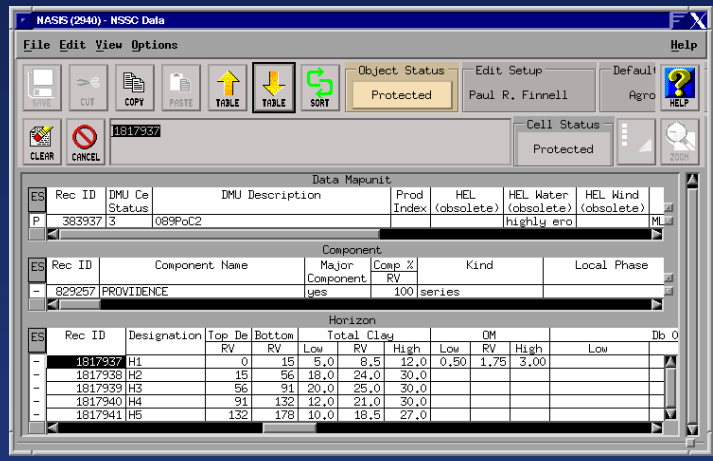
- 1989 – Planning SSSD replacement Needed:
  - Easier to use and more flexible database
  - New Data Elements
  - Interpretations run against actual soil properties
  - Data capture at field level ("bottom up" instead of "top down")
  - New customizable Reports and Products
  - Multiple Components (S6 limit was 3)
  - Multiple Horizons (S5 limit was 6)
  - "RV"s - Representative Values for Modeling

NASIS Timeline

- 1994 - NASIS 1.0
  - Conversion of data from SSSD
  - Basic editing capabilities
  - NASIS database in each state office
- 1995 - NASIS 2.0 (100 years of soil survey - $50B db)
  - Added query and report capability
  - Cut/copy/paste
  - Global edits
- 1996 - NASIS 3.0
  - Interpretation Generator added
  - Rules, Evaluations and Properties
  - Calculations and validations added
  - Geomorphic description tables

NASIS Timeline

- 1998 - NASIS 4.0
  - Site and Pedon data structure
  - Edit setups added
  - Replicated central database at ISU
  - Soil Survey Schedule integrated
- 2000 - NASIS 4.1
  - Finalized Site/pedon data structure to accommodate converting PDP data into NASIS
  - PDP pedon data converted into NASIS – November 2000
- 2001 - NASIS 5.0
  - Added SSURGO export capability
  - Consolidated database to central server

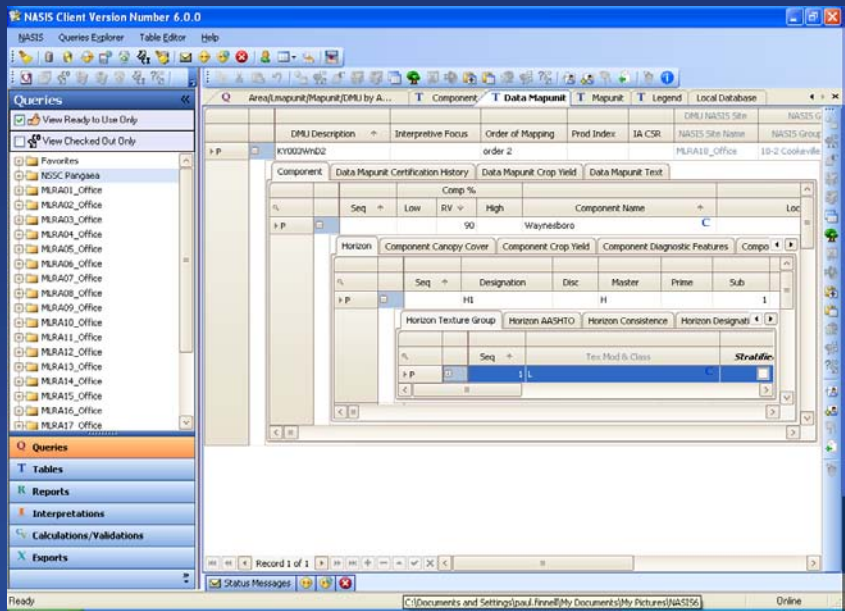


NASIS Timeline

- 2002 - NASIS 5.1
  - Added Null Hedges to interpretation generator
  - Link to ESIS for ecological sites – converted Component Ecosystem table data to Ecological Site and Component Ecological Site tables
  - Added Metadata Repository tables to manage NASIS data dictionary
- 2003 - NASIS 5.2
  - Staging Server, Soil Data Warehouse, Soil Data Mart implemented
  - SSURGO2 data model implemented
- 2005 - NASIS 5.3
  - Access to NASIS via eAUTH and Citrix
- 2007 – NASIS 5.4

NASIS Timeline

- 2010 – NASIS 6.0
  - The goal was to have full functionality of previous versions 1.0 to 5.4
  - Migrated from Unix to .Net (Microsoft environment)
  - Migrated from Informix to SQL Server 2005
  - Converted from Server application to Client/Server application
  - Outlook/Access/Excel



United States Department of Agriculture
Natural Resources Conservation Service

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NASIS Foundation

NASIS Client Version Number 6.0.0

NASIS Queries Explorer Table Editor Help

Legend | Mapunit | Data Mapunit | Component | Horizon

			Co...						Slope Gradient			Slope Length USLE											Range Prod			
		SIR ...	.	Component...	Taxon Kind	Major...	SIR phase ...	..	RV	High	Low	RV	High	Local R...	T	WEI	WEG	Drainage Class	Nirr LCC	Nirr Subcl	Low	RV	High	Hydrologic G...
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	VERNON P	series	☑		1.0	5.0	8.0		49			P	3	86	4	well	4	e	1000	1700	2500	d P
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑	MAAT>60	1.0	3.0	5.0		61			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	VERNON P	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d P
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	3.0	5.0		61			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	TILVERN P	series	☑	MAAT>60	1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d P
P		TX0249	100	Vernon C	series	☑		1.0	3.0	5.0		61			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑	ERODED	1.0	3.0	5.0		61			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	taxadjunct	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	3.0	5.0		61			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	2.0	3.0		91			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249	100	Vernon C	series	☑		1.0	3.0	5.0		61			P	3	86	4	well	4	e	1000	1700	2500	d C
P		TX0249		Vernon C	series	☐	MAAT>60	1.0	3.0	5.0		91			P	3	86	4	well	4	e	1000	1700	2500	d P
P		TX0249		Vernon C	series	☐	MAAT>60	1.0	3.0	5.0		15			P	3	86	4	well	4	e	1000	1700	2500	d P
P		TX0249	5	Vernon C	series	☐	MAAT>60	3.0	4.0	5.0	15	68	122	very high P	P	3	86	4	well	4	s	1000	2000	3000	d P
P		TX0249	6	Vernon C	series	☐	ERODED,MA...	3.0	4.0	5.0	15	68	122	very high P	P	3	86	4	well	4	s				d P
P		TX0249	6	Vernon C	series	☐	MAAT>60	3.0	4.0	5.0	15	68	122	very high P	P	3	86	4	well	4	s	1000	2000	3000	d P
P		TX0249	6	Vernon C	series	☐	MAAT>60	3.0	4.0	5.0	15	68	122	very high P	P	3	86	4	well	4	s	1000	2000	3000	d P
P		TX0249	10	Vernon C	series	☐	MAAT>60	3.0	4.0	5.0	15	68	122	very high P	P	3	86	4	well	4	s				d P

Record 108 of 111

Status Messages

Ready

Online

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NASIS Client Version Number 6.0.0

NASIS Queries Explorer Table Editor Help

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		Design...	Top ...	Bot...	Rock >10 Low	Rock >10 RV	Rock >10 High	Rock 3-10 Low	Rock 3-10 RV	Rock 3-10 High	#4 Low	#4 RV	#4 High	#10 Low	#10 RV	#10 High	#40 Low	#40 RV	#40 High	#200 Low	#200 RV	#200 High	Total ... RV	vcos RV	cos RV	ms RV	fs RV	vfs RV	Tota... RV	Total Clay Low	Total Clay RV	Total Clay High
P		H1	0	8	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P70.0	P82.5	P95.0	C 18.5	C1.3	C2.0	C2.9	C5.9	C6.4	C 44.0	35.0	37.5	40.0
P		H1	0	8	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P70.0	P82.5	P95.0	C 18.5	C1.3	C2.0	C2.9	C5.9	C6.4	C 44.0	35.0	37.5	40.0
P		H1 C	0	8	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P70.0	P82.5	P95.0	C 18.5	C1.3	C2.0	C2.9	C5.9	C6.4	C 44.0	35.0	37.5	40.0
P		A C	0	8	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	10	P 0																									40.0	50.0	60.0
P		A C	0	10	P 0																									40.0	50.0	60.0
P		A C	0	10	P 0																									40.0	50.0	60.0
P		A C	0	10	P 0																									40.0	50.0	60.0
P		A C	0	10	P 0																									35.0	37.5	40.0
P		H1 C	0	10	P 0																									35.0	37.5	40.0
P		A C	0	10	P 0																									40.0	50.0	60.0
P		A C	0	10	P 0																									40.0	50.0	60.0
P		A C	0	10	P 0																									40.0	50.0	60.0
P		A C	0	10	P 0																									40.0	50.0	60.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P70.0	P82.5	P95.0	C 31.5	C2.8	C3.3	C6.0	C10.7	C8.7	C 31.0	35.0	37.5	40.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P70.0	P82.5	P95.0	C 31.5	C2.8	C3.3	C6.0	C10.7	C8.7	C 31.0	35.0	37.5	40.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P70.0	P82.5	P95.0	C 31.5	C2.8	C3.3	C6.0	C10.7	C8.7	C 31.0	35.0	37.5	40.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P80.0	P89.0	P98.0	C 22.1	C3.0	C3.5	C4.1	C6.2	C5.3	C 27.9	40.0	50.0	60.0
P		H1 C	0	13	P 0	P 0	P 0	P 0	P 0	P 0	P95.0	P97.5	P100.0	P90.0	P95.0	P100.0	P90.0	P95.0	P100.0	P70.0	P82.5	P95.0	C 31.5	C2.8	C3.3	C6.0	C10.7	C8.7	C 31.0	35.0	37.5	40.0

Record 133 of 419

ESTIMATED SOIL PROPERTIES (A)

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. 3-10IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-5	C, SIC	CL, CH	A-6, A-7-6	0	0	95-100	90-100	90-100	80-98	40-60
0-5	CL, SICL	CL	A-6, A-7-6	0	0	95-100	90-100	90-100	70-95	35-40
5-25	C, SIC	CL, CH	A-6, A-7-6	0	0	95-100	90-100	90-100	80-98	40-60
25-63	SH-C, C	CL, CH	A-6, A-7-6	0	0-5	90-100	85-100	65-100	65-96	40-60
63-80	SH-C, SHV-C, SHX-C	CL, CH	A-6, A-7-6	0	0-5	90-100	85-100	65-100	65-96	40-60

Status Messages

Ready Online

Project Planning

- SOI-5 “Series concept” – NASIS – “Component Concept”
- NASIS 6.0 was designed to assist the updating by MLRA concept
- Soil Surveys are managed using “Projects”.
- Soil Surveys are published using “Legends”
- The goal of update is to update the mapunits to a common standard

Updating Soil Surveys

- Soil Survey Manuscript - Historical product
- Soil Databases – Modern product

MLRA Update Process

- NSSH 610 procedure
  - Soil survey update activities are conducted as a series of prioritized projects that are agreed upon by the Soil Survey Area Management Team.
  - Update projects are generally based on associated soils on natural landforms over a broad physiographic area.
  - Priorities are established by the MLRA Soil Survey Area Management Team.
  - Bring soil survey maps and data up-to-date within the MLRA Soil Survey Area.

Manuscript and NASIS Review

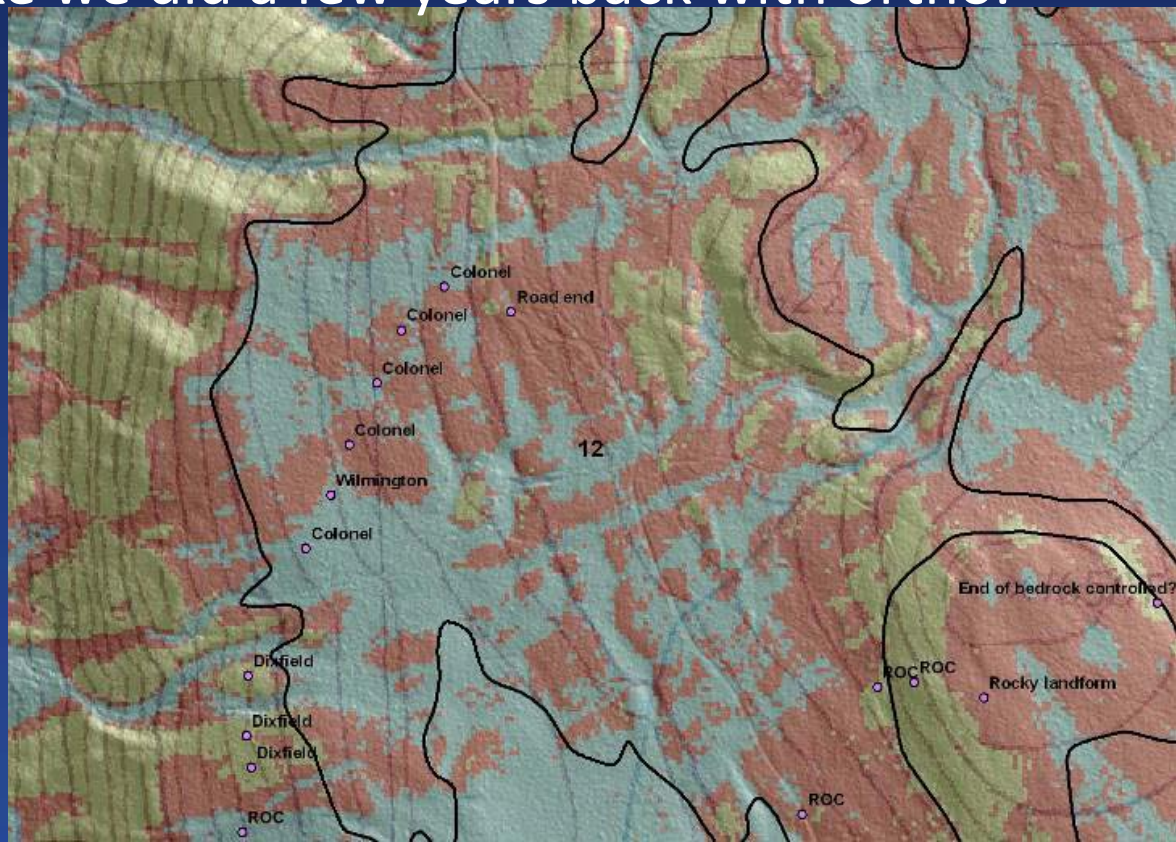
- Manuscripts and NASIS data should be critically and dependently reviewed
- Update projects are to be designed to improve the existing product
- Re-correlations, with sufficient historical and current data (pedon, transect, lab data, correlation documents, manuscripts), will be acceptable form of update

Update Vision

- First Update is Attribute Database
  - Reconcile map units across political boundaries
  - Assign new national symbols for similar map unit concepts
  - All map unit evaluations are to be completed before development of Projects
  - Fully populate the Major components and all “strongly contrasting” Minor components
  - Many projects will be office re-correlations
- Second Update is Spatial Database
  - Spatial update will use a fully populated attribute database
  - Spatial tools will be available in the future to improve the spatial product

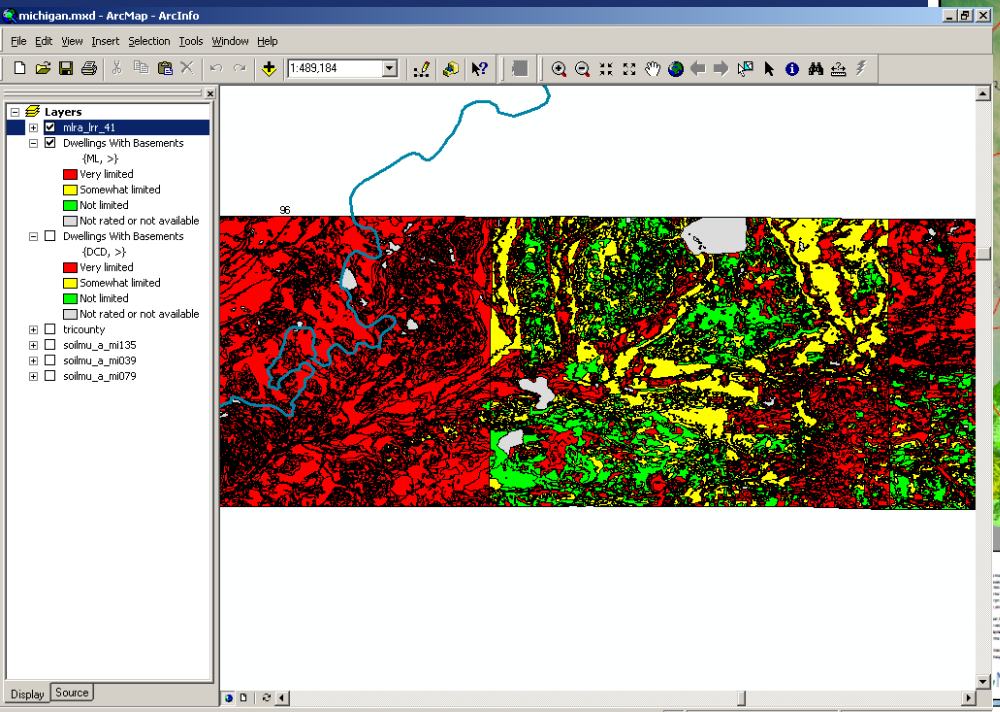
Why Tabular First?

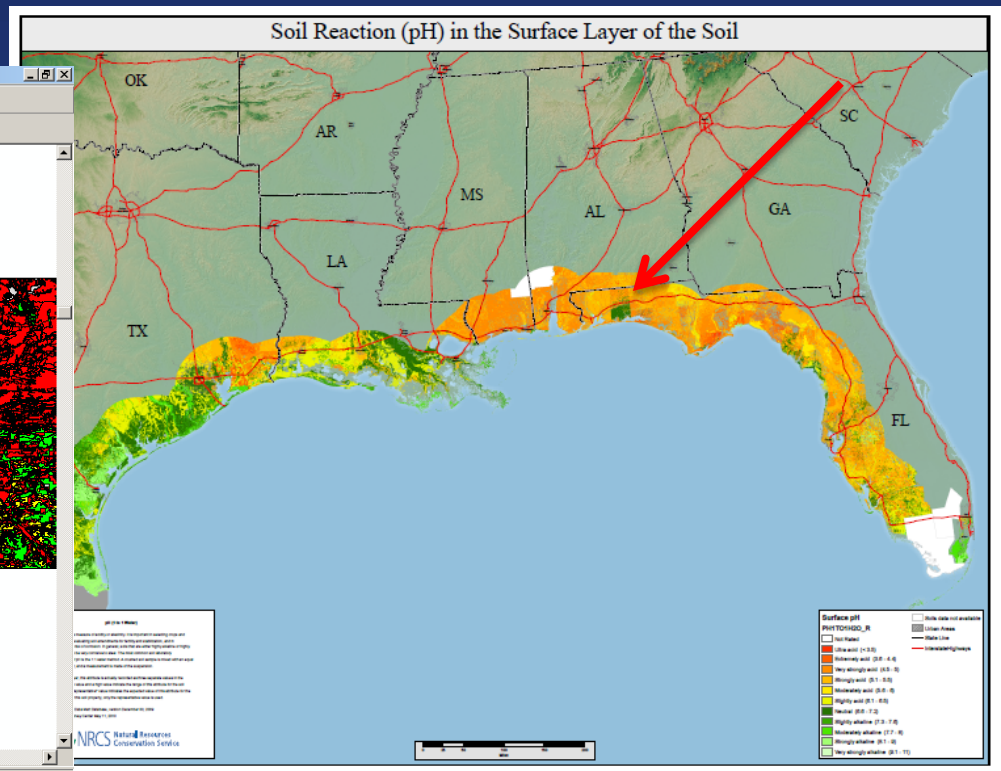
- Spatial (Hyperspectral or LiDAR) should be available for the entire USA in 5-7 years. The agency is pursuing national coverage of LiDAR like we did a few years back with ortho.



Why Tabular First?

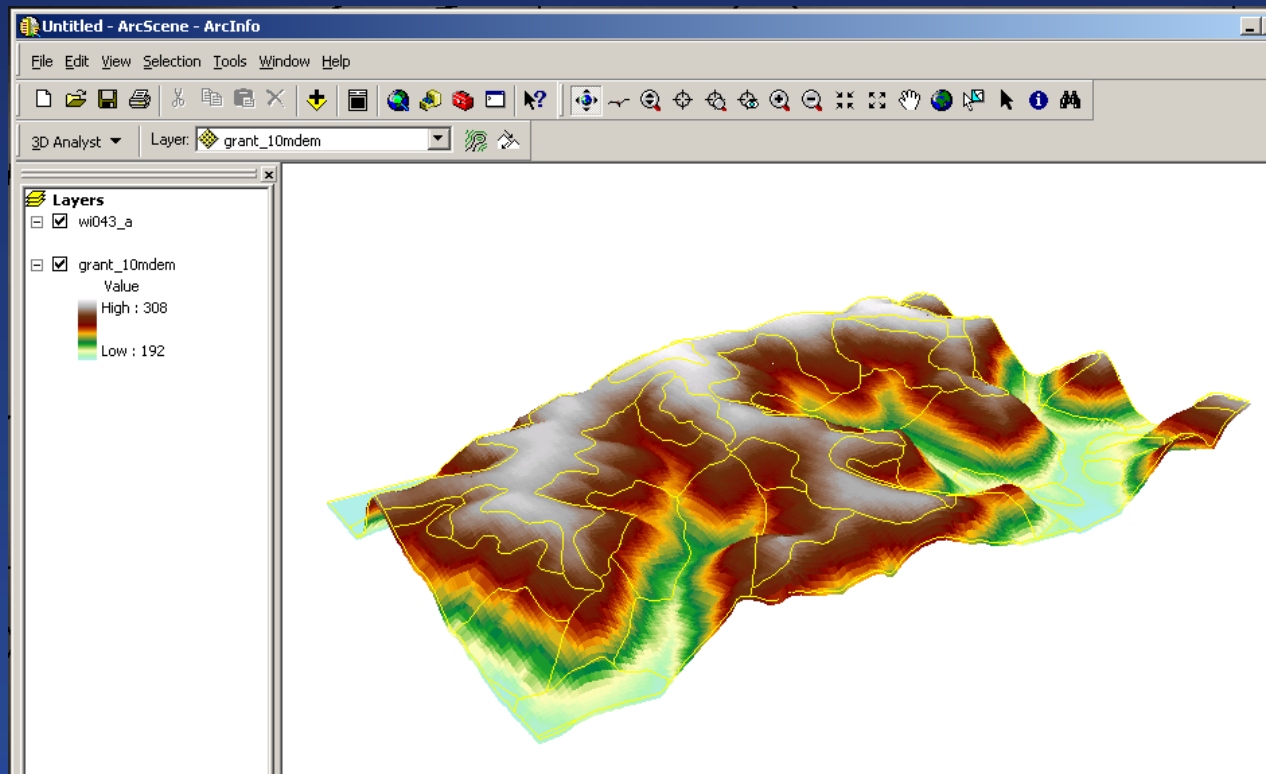
- We now have the tools to easily identify where the “Frankensteins” located along county and state boundaries. All users see the issue of making a soil survey for over 110 years. They want the discrepancies dealt with and it will make a great way to show improvement in the products.

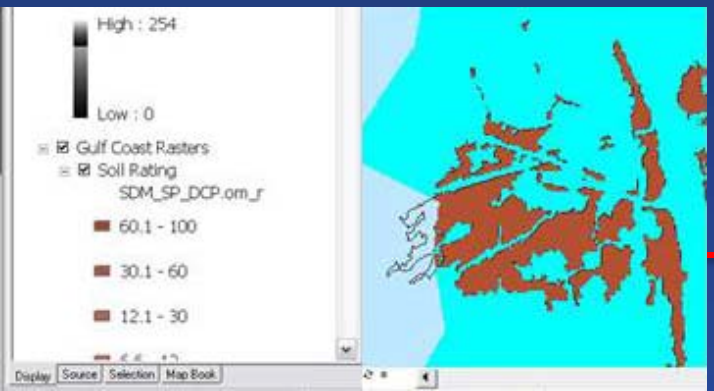
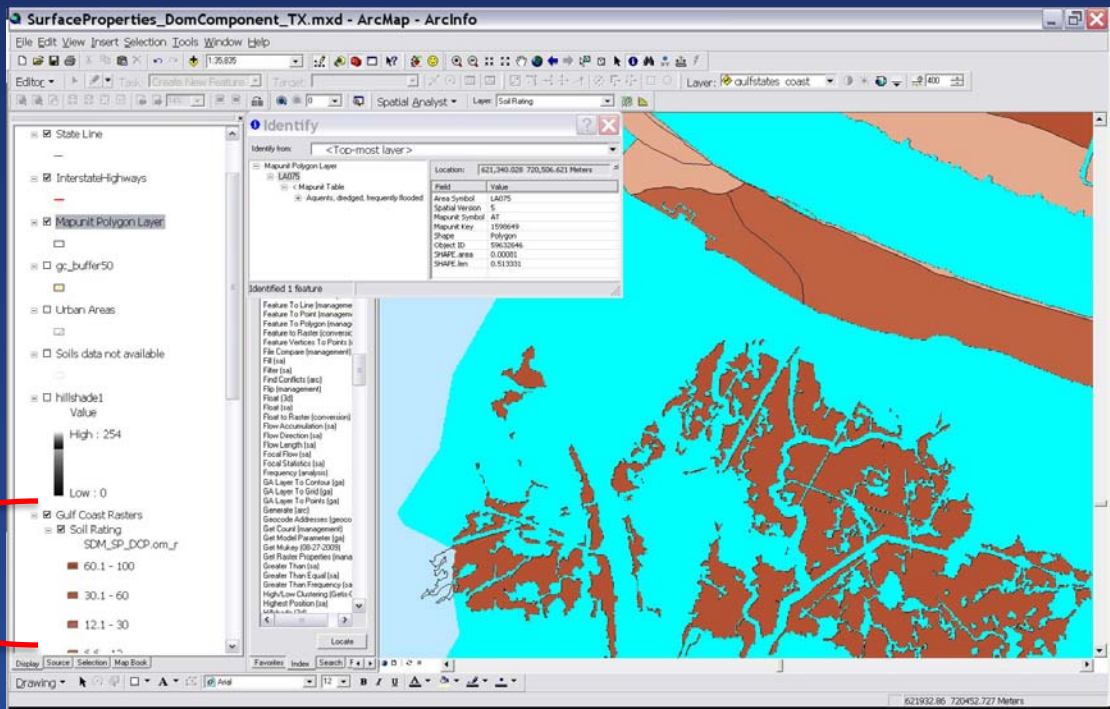




Why Tabular First?

- Geospatial mapping tools that use the traditional vector/polygon soil lines hopefully will be fully developed so a model will be used to drape the existing soil lines more accurately along the soil-scape without having to use manual GIS and do it more automatically.



Why Tabular First?

- During the next 5 years we will be looking at how to start using raster based soil survey information. We are already doing the 30 meter resolution of existing SSURGO and soon with 10 meter resolution of SSURGO. So we now need to decide how to manage raster soil survey with new soil interpretations and how to serve this new product to our customers.