

<b>Table of Contents</b> <b>Section II – Soil and Site Information</b>
---

	Issue Date	Date of Last Review	Responsible Staff
<i>Use and Explanation of Soil Interpretations</i>			
<i>Explanation of Key Phrases Used in Soil Interpretations</i>			
<b>Soils Legends</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>* Acreage and Proportionate Extent of the Soils</i>			
<b>Soil Descriptions - Nontechnical</b>	<b>1/02</b>	<b>1/93</b>	<b>SOI</b>
<i>Use and Explanation of Nontechnical Descriptions</i>			
<i>*Nontechnical Soils Description Report</i>			
<b>Soil Descriptions - Technical</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>*Map Unit Description Report</i>			
<b>Cropland Interpretations - Technical</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>*Prime Farmland Report</i>			
<i>* Kansas Soil Rating for Plant Growth Index</i>			
<i>*Soil Properties for Conservation Planning</i>			
<b>Rangeland, Grazed Forestland, Native Pastureland Interpretations</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>*Rangeland Productivity Report</i>			
<i>*Range Site Descriptions</i>			
<b>Forestland Interpretations</b>	<b>1/93</b>	<b>1/93</b>	<b>SOI</b>
<i>Use and Explanation of Forestland Interpretations</i>			
<i>*Woodland Management and Productivity</i>			
<b>Nonagricultural Interpretations</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>*Building Site Development Report</i>			
<i>*Construction Materials Report</i>			
<b>Recreation Interpretations</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>*Recreational Interpretations</i>			
<b>Wildlife Interpretations</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>*Wildlife Interpretations Report</i>			
<b>Pastureland and Hayland Interpretations</b>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<i>*Yields Per Acre of Pasture and Hayland</i>			

	<b>Issue Date</b>	<b>Date of Last Review</b>	<b>Responsible Staff</b>
<b>Mined Land Interpretations</b> <i>Use and Explanation of Mined Land Interpretations</i>	<b>1/93</b>	<b>1/93</b>	<b>SOI</b>
<b>Windbreak Interpretations</b> <i>*Conservation Tree and Shrub Management Report</i>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<b>Engineering Interpretations</b> <i>*Engineering Index Properties</i> <i>*Physical Properties of the Soils</i> <i>*Chemical Properties of the Soils</i> <i>*Water Features</i> <i>*Soil Features</i> <i>*Water Management Report</i>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<b>Waste Disposal Interpretations</b> <i>*Sanitary Facilities Report</i> <i>*Agricultural Waste Management Report</i>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<b>Water Quantity and Quality Interpretations</b> <i>Use and Explanation of Water Quantity and Quality Interpretations</i> <i>*Appendix A – Soils Potential For Surface Loss and Leaching</i> <i>*Appendix B – Pesticide Selected Properties Database</i> <i>*Appendix C – Herbicide Selected Properties Database</i> <i>*Soil-Pesticide Interaction Screening Procedure Worksheet (Blank)</i> <i>*WIN-PST SPISP II Soil Sensitivity to Pesticide Loss Rating Report</i>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<b>Hydric Soil Interpretations</b> <i>Use and Explanation of Hydric Soil Interpretations</i> <i>*Hydric Soils List</i>	<b>1/02</b>	<b>1/02</b>	<b>SOI</b>
<b>HEL Interpretations</b> <i>Use and Explanation of Highly Erodible Land Interpretations</i> <i>*Highly Erodible Lands Report</i> <i>*LS and Supporting Data for 1990 Frozen HEL List</i> <i>*CRP 20 Soil Supporting Data for 1990 Frozen HEL List</i>	<b>7/95</b>	<b>1/00</b>	<b>SOI</b>

*\*County specific computer generated reports.*

## ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Pratt County, Kansas: Maintenance needed

Map symbol	Soil name	Acres	Percent
007AE	Albion And Shellabarger Soils, 4 To 15 Percent Slopes-----	5,265	1.1
007CC	Case-Clark Clay Loams, 2 To 6 Percent Slopes-----	360	*
007LN	Lincoln Soils, Frequently Flooded-----	191	*
007SB	Shellabarger Sandy Loam, 3 To 6 Percent Slopes-----	26	*
047PG	Pratt Loamy Fine Sand, 1 To 4 Percent Slopes-----	27	*
095AB	Albion Sandy Loam, 1 To 3 Percent Slopes-----	210	*
095DA	Dillwyn-Plevna Complex, Occasionally Flooded-----	301	*
097AS	Albion-Shellabarger Sandy Loams, 4 To 15 Percent Slopes-----	868	0.2
097CE	Case Clay Loam, 2 To 7 Percent Slopes-----	13	*
097CK	Clark Loam, 1 To 3 Percent Slopes-----	155	*
097CM	Clark Loam, 3 To 7 Percent Slopes-----	12	*
1005	Albion Sandy Loam, 1 To 3 Percent Slopes-----	1,876	0.4
1006	Albion Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	110	*
1017	Albion And Shellabarger Soils, 7 To 15 Percent Slopes-----	734	0.2
1324	Carway And Carbika Soils, 0 To 1 Percent Slopes-----	807	0.2
1340	Case-Clark Complex, 3 To 7 Percent Slopes-----	294	*
1341	Case-Clark Complex, 7 To 15 Percent Slopes-----	298	*
1725	Funmar And Farnum Loams, 0-1 Percent Slopes-----	7,069	1.5
1726	Funmar And Farnum Loams, 1 To 3 Percent Slopes-----	2,763	0.6
1985	Hayes Loamy Fine Sand, 1 To 5 Percent Slopes-----	42,581	9.0
1986	Hayes-Solvay Loamy Fine Sands, 0 To 5 Percent Slopes-----	6,327	1.3
1987	Hayes-Turon Complex, 0 To 5 Percent Slopes-----	3,507	0.7
1988	Hayes Loamy Fine Sand, 5 To 10 Percent Slopes-----	11,927	2.5
2110	Intermittent Water (aquolls)-----	473	0.1
2556	Langdon Fine Sand, 0 To 15 Percent Slopes-----	18,286	3.9
2948	Nalim Loam, 0 To 1 Percent Slopes-----	117	*
3051	Ost Loam, 0 To 1 Percent Slopes-----	2,071	0.4
3053	Ost Loam, 1 To 3 Percent Slopes-----	5,153	1.1
3180	Pratt Fine Sand, 5 To 10 Percent Slopes-----	884	0.2
3181	Pratt-Turon Fine Sands, 1 To 5 Percent Slopes-----	117	*
3445	Shellabarger Fine Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	146	*
3510	Saltcreek-Funmar-Farnum Complex, 1 To 3 Percent Slopes-----	1,741	0.4
3512	Saltcreek And Naron Fine Sandy Loams, 1 To 3 Percent Slopes-----	27,405	5.8
3533	Shellabarger Sandy Loam, 0 To 1 Percent Slopes-----	71	*
3534	Shellabarger Sandy Loam, 1 To 3 Percent Slopes-----	2,098	0.4
3540	Solvay Loamy Fine Sand, 0 To 2 Percent Slopes-----	11,677	2.5
3639	Taver Loam, 0 To 1 Percent Slopes-----	2,093	0.4
3640	Tivin Fine Sand, 10 To 30 Percent Slopes-----	10,308	2.2
3644	Turon-Carway Complex, 0 To 5 Percent Slopes-----	256	*
3926	Water-----	82	*
4005	Yaggy-Saxman Loamy Sand, 0 To 2 Percent Slopes, Occasionally Flooded-----	952	0.2
Ab	Albion Sandy Loam, 1 To 4 Percent Slopes-----	8,398	1.8
Ao	Albion Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	1,768	0.4
As	Albion And Shellabarger Soils, 7 To 15 Percent Slopes-----	23,140	4.9
Bc	Blanket Silty Clay Loam, 1 To 4 Percent Slopes, Eroded-----	8,827	1.9
Be	Blanket Silt Loam, 0 To 1 Percent Slopes-----	22,972	4.9
Bh	Blanket Silt Loam, 1 To 3 Percent Slopes-----	32,729	7.0
Br	Fluvents, Frequently Flooded-----	506	0.1
Ca	Carwile Fine Sandy Loam, 0 To 1 Percent Slopes-----	5,357	1.1
Cc	Case-Clark Complex, 3 To 7 Percent Slopes-----	14,572	3.1
Ck	Case-Clark Complex, 7 To 15 Percent Slopes-----	2,994	0.6
Cm	Clark Clay Loam, 1 To 4 Percent Slopes-----	21,820	4.6
Cn	Clark Fine Sandy Loam, 1 To 3 Percent Slopes-----	5,375	1.1
Co	Clark-Ost Clay Loams, 0 To 1 Percent Slopes-----	2,744	0.6
Cs	Lincoln Loamy Sand, Occasionally Flooded-----	2,817	0.6
Fa	Farnum Clay Loam, 3 To 6 Percent Slopes, Eroded-----	1,446	0.3
Fe	Farnum Fine Sandy Loam, 0 To 1 Percent Slopes-----	1,859	0.4
Fm	Farnum Loam, 0 To 1 Percent Slopes-----	6,045	1.3
Fn	Farnum Loam, 1 To 3 Percent Slopes-----	30,144	6.4
Fu	Farnum Loam, 3 To 6 Percent Slopes-----	641	0.1
Fw	Farnum-Carwile Complex, 0 To 1 Percent Slopes-----	115	*
GRP	Gravel Pit-----	119	*
INT	Aquolls-----	593	0.1
Kp	Kanza-Plevna Complex, Frequently Flooded-----	3,807	0.8
Ks	Elandco Silt Loam, Occasionally Flooded-----	172	*
Kw	Elandco Silt Loam, Frequently Flooded-----	2,237	0.5
Nd	Naron Fine Sandy Loam, 0 To 1 Percent Slopes-----	2,740	0.6
Nf	Naron Fine Sandy Loam, 1 To 3 Percent Slopes-----	18,967	4.0
Ng	Naron Fine Sandy Loam, 3 To 6 Percent Slopes-----	909	0.2
Nk	Naron Loam, 0 To 1 Percent Slopes-----	256	*
Nm	Naron Loam, 1 To 3 Percent Slopes-----	4,224	0.9
Nn	Naron-Farnum Complex, 0 To 3 Percent Slopes-----	1,094	0.2
Oc	Ost Clay Loam, 0 To 1 Percent Slopes-----	665	0.1
Os	Ost Clay Loam, 1 To 4 Percent Slopes-----	18,019	3.8
Pm	Pratt Loamy Fine Sand, 3 To 8 Percent Slopes-----	11,330	2.4
Pn	Pratt Loamy Fine Sand, 8 To 12 Percent Slopes-----	2,875	0.6
Po	Pratt-Carwile Complex, 0 To 8 Percent Slopes-----	3,753	0.8
PRR	Pratt Loamy Fine Sand, 1 To 5 Percent Slopes-----	427	*
PSS	Pratt Loamy Fine Sand, 5 To 10 Percent Slopes-----	147	*
Pt	Pratt-Tivoli Loamy Fine Sands, 8 To 15 Percent Slopes-----	1,894	0.4
PTT	Pratt-Tivoli Loamy Fine Sands, 5 To 15 Percent Slopes-----	117	*
Sa	Albion-Kaski Complex, 0 To 15 Percent Slopes-----	9,254	2.0
Sb	Shellabarger Fine Sandy Loam, 0 To 1 Percent Slopes-----	620	0.1
Se	Shellabarger Fine Sandy Loam, 1 To 4 Percent Slopes-----	11,337	2.4
Sf	Shellabarger Fine Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	1,848	0.4
Ta	Tabler Clay Loam, 0 To 1 Percent Slopes-----	4,408	0.9
Tf	Tivoli Fine Sand, 12 To 25 Percent Slopes-----	17	*
W	Water-----	269	*
Wa	Waldeck Fine Sandy Loam, Occasionally Flooded-----	1,591	0.3
Wd	Kingman Clay Loam, Occasionally Flooded-----	880	0.2
Ze	Zenda Clay Loam, Occasionally Flooded-----	1,522	0.3
Zs	Zenda-Drummond Complex, Occasionally Flooded-----	690	0.1

## ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

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Map symbol	Soil name	Acres	Percent
	Total-----	470,701	100.0

\* Less than 0.1 percent.

Nontechnical Soil Descriptions  
Pratt County, Kansas

Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units, shown in the NonTechnical Descriptions report. These descriptions are written in terminology that Non-technical users of soil survey information can understand. Nontechnical soil descriptions are a powerful tool for creating reports. These high quality, easy to read reports can be generated by conservation planners and other NRCS employees for distribution to land users. Soil map unit descriptions and National Soil Information System records are the basis for these descriptions.

007AE Albion And Shellabarger Soils, 4 To 15 Percent Slopes

Albion soil makes up 65 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe20-25) range site. It is in the nonirrigated land capability classification 6e.

Shellabarger soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe20-25) range site. It is in the nonirrigated land capability classification 6e.

007CC Case-Clark Clay Loams, 2 To 6 Percent Slopes

Case soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of calcareous, old alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

Clark soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

007LN Lincoln Soils, Frequently Flooded

Lincoln soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 66 inches. This soil is in the Sandy Lowland (pe20-25) range site. It is in the nonirrigated land capability classification 6w.

007SB Shellabarger Sandy Loam, 3 To 6 Percent Slopes

Shellabarger soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe20-25) range site. It is in the nonirrigated land capability classification 3e.

047PG Pratt Loamy Fine Sand, 1 To 4 Percent Slopes

Pratt soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is negligible. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

095AB Albion Sandy Loam, 1 To 3 Percent Slopes

Albion soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe24-32) range site. It is in the nonirrigated land capability classification 3e.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

095DA Dillwyn-Plevna Complex, Occasionally Flooded

Dillwyn soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on paleoterrace on river valley, dune on paleoterrace on river valley. The runoff class is negligible. The parent material consists of sandy eolian deposits. This soil is somewhat poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. This soil is in the Subirrigated (pe24-32) range site. It is in the nonirrigated land capability classification 4w.

Plevna soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 12 inches. This soil is in the Subirrigated (pe24-32) range site. It is in the nonirrigated land capability classification 5w.

097AS Albion-Shellabarger Sandy Loams, 4 To 15 Percent Slopes

Albion soil makes up 65 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe20-25) range site. It is in the nonirrigated land capability classification 6e.

Shellabarger soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe20-25) range site. It is in the nonirrigated land capability classification 6e.

097CE Case Clay Loam, 2 To 7 Percent Slopes

Case soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Limy Upland (pe20-25) range site. It is in the nonirrigated land capability classification 4e.

097CK Clark Loam, 1 To 3 Percent Slopes

Clark soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe20-25) range site. It is in the nonirrigated land capability classification 3e.

097CM Clark Loam, 3 To 7 Percent Slopes

Clark soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe20-25) range site. It is in the nonirrigated land capability classification 4e.

1005 Albion Sandy Loam, 1 To 3 Percent Slopes

Albion soil makes up 75 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

1006 Albion Sandy Loam, 3 To 7 Percent Slopes, Eroded

Albion soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

1017 Albion And Shellabarger Soils, 7 To 15 Percent Slopes

Albion soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is very high. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

Shellabarger, Eroded, soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is very high. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

1324 Carway And Carbika Soils, 0 To 1 Percent Slopes

Carway soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on depression on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

Carbika soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on depression on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

1340 Case-Clark Complex, 3 To 7 Percent Slopes

Case soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of calcareous, old alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

Clark soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 4e.

1341 Case-Clark Complex, 7 To 15 Percent Slopes

Case soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is very high. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

Clark soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is very high. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 4e.

1725 Funmar And Farnum Loams, 0-1 Percent Slopes

Funmar soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium over alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

Farnum soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

1726 Funmar And Farnum Loams, 1 To 3 Percent Slopes

Farnum soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Funmar soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium over alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

1985 Hayes Loamy Fine Sand, 1 To 5 Percent Slopes

Hayes soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over clayey alluvium. This soil is well drained. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

1986 Hayes-Solvay Loamy Fine Sands, 0 To 5 Percent Slopes

Hayes soil makes up 55 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over clayey alluvium. This soil is well drained. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Solvay soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

1987 Hayes-Turon Complex, 0 To 5 Percent Slopes

Hayes soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over clayey alluvium. This soil is well drained. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Turon soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits over alluvium. This soil is well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.



Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

1988 Hayes Loamy Fine Sand, 5 To 10 Percent Slopes

Hayes soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over clayey alluvium. This soil is well drained. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

2556 Langdon Fine Sand, 0 To 15 Percent Slopes

Langdon soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately steep dune on paleoterrace on river valley. The runoff class is medium. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

2948 Nalim Loam, 0 To 1 Percent Slopes

Nalim soil makes up 80 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe24-32) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

3051 Ost Loam, 0 To 1 Percent Slope

Ost soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2c.

3053 Ost Loam, 1 To 3 Percent Slopes

Ost soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2c.

3180 Pratt Fine Sand, 5 To 10 Percent Slopes

Pratt soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

3181 Pratt-Turon Fine Sands, 1 To 5 Percent Slopes

Pratt soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Turon soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits over alluvium. This soil is well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

3445 Shellabarger Fine Sandy Loam, 3 To 7 Percent Slopes, Eroded

Shellabarger, Moderately Eroded, soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

3510 Saltcreek-Funmar-Farnum Complex, 1 To 3 Percent Slopes

Saltcreek soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over alluvium. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 3e.

Funmar soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium over alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Farnum soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

3512 Saltcreek And Naron Fine Sandy Loams, 1 To 3 Percent Slopes

Saltcreek soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over alluvium. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 3e.

Naron soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

3533 Shellabarger Sandy Loam, 0 To 1 Percent Slopes

Shellabarger soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

3534 Shellabarger Sandy Loam, 1 To 3 Percent Slopes

Shellabarger soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

3540 Solvay Loamy Fine Sand, 0 To 2 Percent Slopes

Solvay soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

3639 Taver Loam, 0 To 1 Percent Slopes

Taver soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2s.

3640 Tivin Fine Sand, 10 To 30 Percent Slopes

Tivin soil makes up 95 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to steep dune on paleoterrace on river valley. The runoff class is medium. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

3644 Turon-Carway Complex, 0 To 5 Percent Slopes

Turon soil makes up 65 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits over alluvium. This soil is well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Carway soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on depression on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

4005 Yaggy-Saxman Loamy Sand, 0 To 2 Percent Slopes, Occasionally Flooded

Yaggy soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Saxman soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of sandy alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 30 inches. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Ab Albion Sandy Loam, 1 To 4 Percent Slopes

Albion soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe24-32) range site. It is in the nonirrigated land capability classification 3e.

Ao Albion Sandy Loam, 3 To 7 Percent Slopes, Eroded

Albion soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

As Albion And Shellabarger Soils, 7 To 15 Percent Slopes

Albion soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

Shellabarger soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

**Bc Blanket Silty Clay Loam, 1 To 4 Percent Slopes, Eroded**

Blanket soil makes up 100 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of clayey alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

**Be Blanket Silt Loam, 0 To 1 Percent Slopes**

Blanket soil makes up 100 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is low. The parent material consists of clayey alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 1.

**Bh Blanket Silt Loam, 1 To 3 Percent Slopes**

Blanket soil makes up 100 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of clayey alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

**Br Fluvents, Frequently Flooded**

Fluvents soil makes up 100 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a nearly level to steep flood plain. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is frequently flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. It is in the nonirrigated land capability classification 6w.

**Ca Carwile Fine Sandy Loam, 0 To 1 Percent Slopes**

Carwile soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level depression on paleoterrace on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is somewhat poorly drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

**Cc Case-Clark Complex, 3 To 7 Percent Slopes**

Case soil makes up 70 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of calcareous, old alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

Clark soil makes up 30 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

**Ck Case-Clark Complex, 7 To 15 Percent Slopes**

Case soil makes up 60 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is high. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

Clark soil makes up 40 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a strongly sloping paleoterrace on river valley. The runoff class is high. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

Cm Clark Clay Loam, 1 To 4 Percent Slopes

Clark soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

Cn Clark Fine Sandy Loam, 1 To 3 Percent Slopes

Clark soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 3e.

Co Clark-Ost Clay Loams, 0 To 1 Percent Slopes

Clark soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2c.

Ost soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2c.

Cs Lincoln Loamy Sand, Occasionally Flooded

Lincoln soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 66 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland (pe24-32) range site. It is in the nonirrigated land capability classification 6w.

Fa Farnum Clay Loam, 3 To 6 Percent Slopes, Eroded

Farnum soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 4e.

Fe Farnum Fine Sandy Loam, 0 To 1 Percent Slopes

Farnum soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2e.

Fm Farnum Loam, 0 To 1 Percent Slopes

Farnum soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

**Fn Farnum Loam, 1 To 3 Percent Slopes**

Farnum soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

**Fu Farnum Loam, 3 To 6 Percent Slopes**

Farnum soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

**Fw Farnum-Carwile Complex, 0 To 1 Percent Slopes**

Farnum soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1. It is in the nonirrigated land capability classification 2c.

Carwile soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level depression on paleoterrace on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is somewhat poorly drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

**INT Aquolls**

Aquolls soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level depression on terrace on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is very poorly drained. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is occasional ponded. The top of the seasonal high water table is at 0 inches. It is in the nonirrigated land capability classification 5w.

**Kp Kanza-Plevna Complex, Frequently Flooded**

Kanza soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 18 inches. It is in the nonirrigated land capability classification 5w.

Plevna soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 12 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5w.

**Ks Elandco Silt Loam, Occasionally Flooded**

Elandco soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

**Kw Elandco Silt Loam, Frequently Flooded**

Elandco soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is frequently flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 5w.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

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Nd Naron Fine Sandy Loam, 0 To 1 Percent Slopes

Naron soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level dune on paleoterrace on river valley. The runoff class is negligible. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2e.

Nf Naron Fine Sandy Loam, 1 To 3 Percent Slopes

Naron soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Ng Naron Fine Sandy Loam, 3 To 6 Percent Slopes

Naron soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 4e.

Nk Naron Loam, 0 To 1 Percent Slopes

Naron soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level dune on paleoterrace on river valley. The runoff class is negligible. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Nm Naron Loam, 1 To 3 Percent Slopes

Naron soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

Nn Naron-Farnum Complex, 0 To 3 Percent Slopes

Naron soil makes up 55 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Farnum soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Oc Ost Clay Loam, 0 To 1 Percent Slopes

Ost soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2c.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

Os Ost Clay Loam, 1 To 4 Percent Slopes

Ost soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Pm Pratt Loamy Fine Sand, 3 To 8 Percent Slopes

Pratt soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

Pn Pratt Loamy Fine Sand, 8 To 12 Percent Slopes

Pratt soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

Po Pratt-Carwile Complex, 0 To 8 Percent Slopes

Pratt soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

Carwile soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level depression on paleoterrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is somewhat poorly drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

PRR Pratt Loamy Fine Sand, 1 To 5 Percent Slopes

Pratt soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

PSS Pratt Loamy Fine Sand, 5 To 10 Percent Slopes

Pratt soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

Pt Pratt-Tivoli Loamy Fine Sands, 8 To 15 Percent Slopes

Pratt soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

Tivoli soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. It is in the nonirrigated land capability classification 7e.



Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

PTT Pratt-Tivoli Loamy Fine Sands, 5 To 15 Percent Slopes

Pratt soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

Tivoli soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. It is in the nonirrigated land capability classification 7e.

Sa Albion-Kaski Complex, 0 To 15 Percent Slopes

Albion soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

Kaski soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

Sb Shellabarger Fine Sandy Loam, 0 To 1 Percent Slopes

Shellabarger soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is negligible. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe24-32) range site. It is in the nonirrigated land capability classification 2e.

Se Shellabarger Fine Sandy Loam, 1 To 4 Percent Slopes

Shellabarger soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Sf Shellabarger Fine Sandy Loam, 3 To 7 Percent Slopes, Eroded

Shellabarger soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe24-32) range site. It is in the nonirrigated land capability classification 3e.

Ta Tabler Clay Loam, 0 To 1 Percent Slopes

Tabler soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Clay Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2s.

Tf Tivoli Fine Sand, 12 To 25 Percent Slopes

Tivoli soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately steep to steep dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is excessively drained. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands (pe21-28) range site. It is in the nonirrigated land capability classification 7e.

Nontechnical Soil Descriptions--Continued  
Pratt County, Kansas

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Wa Waldeck Fine Sandy Loam, Occasionally Flooded

Waldeck soil makes up 100 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil is in the Subirrigated (pe24-32) range site. It is in the nonirrigated land capability classification 3w.

Wd Kingman Clay Loam, Occasionally Flooded

Kingman soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain. The runoff class is negligible. The parent material consists of alluvium. This soil is poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 12 inches. This soil contains a very slightly saline horizon. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5w.

Ze Zenda Clay Loam, Occasionally Flooded

Zenda soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil contains a very slightly saline horizon. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

Zs Zenda-Drummond Complex, Occasionally Flooded

Zenda soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil contains a very slightly saline horizon. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 4s.

Drummond soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is very low. The parent material consists of clayey and/or loamy alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil contains a moderately saline horizon. This soil is in the Saline Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 6s.

## 007AE—Albion and Shellabarger Soils, 4 to 15 percent slopes

### Map Unit Composition

Albion: 65 percent  
Shellabarger: 35 percent

### Component Descriptions

#### Albion

*MLRA:* 79 - Great Bend Sand Plains, 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 4 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Moderate (About 6.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Sandy (pe20-25)

*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 11 inches; sandy loam  
H2—11 to 24 inches; sandy loam  
H3—24 to 60 inches; sand

#### Shellabarger

*MLRA:* 79 - Great Bend Sand Plains, 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 4 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.0 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Sandy (pe20-25)

*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 12 inches; sandy loam

H2—12 to 60 inches; sandy clay loam

### Minor Components

#### Unnamed Wet Soils

*Phase:* Sandy, Drainageway

## 007CC—Case-Clark clay loams, 2 to 6 percent slopes

### Map Unit Composition

Case: 50 percent

Clark: 50 percent

### Component Descriptions

#### Case

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Calcareous, old alluvium

*Slope:* 2 to 6 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.2 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe24-32)

*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 6 inches; clay loam  
H2—6 to 60 inches; clay loam

#### Clark

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 2 to 6 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe24-32)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 10 inches; clay loam

H2—10 to 60 inches; clay loam

## **007LN—Lincoln Soils, frequently flooded**

### **Map Unit Composition**

Lincoln: 100 percent

### **Component Descriptions**

#### **Lincoln**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat excessively drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Low (About 3.4 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Frequent

*Depth to seasonal water saturation:* About 60 to 72 inches

*Runoff class:* Negligible

*Ecological site:* Sandy Lowland (pe20-25)

*Land capability (nonirrigated):* 6w

*Typical Profile:*

H1—0 to 6 inches; fine sandy loam

H2—6 to 60 inches; stratified fine sand to clay loam

#### **Minor Components**

#### **Kanza**

## **007SB—Shellabarger sandy loam, 3 to 6 percent slopes**

### **Map Unit Composition**

Shellabarger: 100 percent

### **Component Descriptions**

#### **Shellabarger**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.4 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe20-25)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 14 inches; sandy loam

H2—14 to 48 inches; sandy clay loam

H3—48 to 60 inches; coarse sandy loam

## **047PG—Pratt loamy fine sand, 1 to 4 percent slopes**

### **Map Unit Composition**

Pratt: 100 percent

### **Component Descriptions**

#### **Pratt**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 1 to 4 percent

*Drainage class:* Well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Moderate (About 6.3 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Negligible

*Ecological site:* Sands (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

- H1—0 to 13 inches; loamy fine sand
- H2—13 to 30 inches; loamy fine sand
- H3—30 to 60 inches; loamy fine sand

**Minor Components****Carwile****Unnamed Wet Soils**

*Phase:* Sandy, Depression

## **095AB—Albion sandy loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Albion: 100 percent

### **Component Descriptions**

**Albion**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Low (About 5.8 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe24-32)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

- H1—0 to 8 inches; sandy loam
- H2—8 to 16 inches; sandy loam
- H3—16 to 26 inches; coarse sandy loam
- H4—26 to 60 inches; sand

## **095DA—Dillwyn-Plevna complex, occasionally flooded**

### **Map Unit Composition**

Dillwyn: 60 percent

Plevna: 40 percent

### **Component Descriptions**

**Dillwyn**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Interdune on paleoterrace on river valley, dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Low (About 4.9 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 12 to 36 inches

*Runoff class:* Negligible

*Ecological site:* Subirrigated (pe24-32)

*Land capability (nonirrigated):* 4w

*Typical Profile:*

- H1—0 to 8 inches; loamy fine sand
- H2—8 to 60 inches; loamy fine sand

**Plevna**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Moderate (About 6.5 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Frequent

*Depth to seasonal water saturation:* About 0 to 24 inches

*Runoff class:* Negligible

*Ecological site:* Subirrigated (pe24-32)

*Land capability (nonirrigated):* 5w

*Typical Profile:*

- H1—0 to 11 inches; fine sandy loam
- H2—11 to 36 inches; fine sandy loam
- H3—36 to 60 inches; sand

**Minor Components****Unnamed Wet Soils**

*Phase:* Sandy, Depression

**097AS—Albion-Shellabarger  
sandy loams, 4 to 15 percent  
slopes**

**Map Unit Composition**

Albion: 65 percent  
Shellabarger: 35 percent

**Component Descriptions**

**Albion**

*MLRA:* 79 - Great Bend Sand Plains, 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 4 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Moderate (About 6.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Sandy (pe20-25)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 11 inches; sandy loam  
H2—11 to 24 inches; sandy loam  
H3—24 to 60 inches; sand

**Shellabarger**

*MLRA:* 79 - Great Bend Sand Plains, 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 4 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.0 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Sandy (pe20-25)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 12 inches; sandy loam  
H2—12 to 60 inches; sandy clay loam

**Minor Components**

**Unnamed Wet Soils**

*Phase:* Sandy, Drainageway

**097CE—Case clay loam, 2 to 7  
percent slopes**

**Map Unit Composition**

Case: 100 percent

**Component Descriptions**

**Case**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 2 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.2 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe20-25)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 6 inches; clay loam  
H2—6 to 60 inches; clay loam

**097CK—Clark loam, 1 to 3 percent  
slopes**

**Map Unit Composition**

Clark: 100 percent

## Component Descriptions

### Clark

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.2 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Limy Upland (pe20-25)

*Land capability (nonirrigated):* 3e

### Typical Profile:

H1—0 to 5 inches; loam

H2—5 to 60 inches; clay loam

## 097CM—Clark loam, 3 to 7 percent slopes

### Map Unit Composition

Clark: 100 percent

## Component Descriptions

### Clark

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe20-25)

*Land capability (nonirrigated):* 4e

### Typical Profile:

H1—0 to 10 inches; loam

H2—10 to 60 inches; clay loam

## 1005—Albion sandy loam, 1 to 3 percent slopes

*Mapunit Information:* The Albion soils are generally located on the steeper upper portion of the side slopes.

### Map Unit Composition

Albion: 75 percent

Minor components: 25 percent

## Component Descriptions

### Albion

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Moderate (About 7.3 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (nonirrigated):* 3e

### Typical Profile:

Ap—0 to 9 inches; sandy loam

Bt1—9 to 16 inches; sandy loam

Bt2—16 to 27 inches; sandy loam

BC—27 to 48 inches; loamy coarse sand

C—48 to 80 inches; sand

*Component note:* Included with this soil in mapping are small areas with a gravelly sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand surface texture. Also included with this soil are soils that contain several discontinuous clay lenses occurring within the soil profile between 20 and 80 inches. The clay lenses range in thickness from 1 to 12 inches thick and in texture from silty clay to sandy clay loam. About 10 to 25 percent of the Albion soils

have been subject to moderate erosion, which results in thinner surface layers and low and very low organic matter content. The eroded soils generally have loamy sand, loamy coarse sand, or gravelly loamy coarse sand surface textures.

### Minor Components

#### Shellabarger

*Composition:* About 25 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21-28)

### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

### 1006—Albion sandy loam, 3 to 7 percent slopes, eroded

*Mapunit Information:* The Albion soils are generally located on the steeper upper portion of the side slopes.

### Map Unit Composition

Albion: 100 percent

### Component Descriptions

#### Albion

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Moderate (About 7.3 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 9 inches; sandy loam

Bt1—9 to 16 inches; sandy loam

Bt2—16 to 27 inches; sandy loam

BC—27 to 48 inches; loamy coarse sand

C—48 to 80 inches; sand

*Component note:* Included with this soil in mapping are small areas that have a gravelly sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand surface texture. Also included with this soil are soils that contain several discontinuous clay lenses occurring within the soil profile between 20 and 80 inches. The clay lenses range in thickness from 1 to 12 inches thick and in texture from silty clay to sandy clay loam.

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and



conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

## 1017—Albion and Shellabarger Soils, 7 to 15 percent slopes

*Mapunit Information:* The Shellabarger soils are located on the lower side slopes below the Albion soils.

### Map Unit Composition

Albion: 45 percent  
Shellabarger: 40 percent  
Minor components: 15 percent

### Component Descriptions

#### Albion

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 7.3 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Sandy (pe21-28)  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 9 inches; sandy loam  
Bt1—9 to 16 inches; sandy loam  
Bt2—16 to 27 inches; sandy loam  
BC—27 to 48 inches; loamy coarse sand  
C—48 to 80 inches; sand

*Component note:* Included with this soil in mapping are small areas that have a gravelly sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand surface texture. Also included with this soil are soils that contain several discontinuous clay lenses occurring within the soil profile between 20

and 80 inches. The clay lenses range in thickness from 1 to 12 inches thick and in texture from silty clay to sandy clay loam. Also included are small areas with slopes of less than 7 percent.

#### Shellabarger

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Sandy (pe21-28)  
*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 5 inches; sandy loam  
Bt1—5 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

*Component note:* This soil is on a similar landscape position as the Albion soils. These soils have a sandy loam or coarse sandy loam surface texture. The Shellabarger soils contain more clay in the subsoil than Albion soils. Also included are soils that contain several discontinuous clay lenses occurring between 30 to 80 inches within the soil profile. The lenses vary in thickness from 1 to 12 inches thick and range in texture from silty clay to sandy clay loam. Also included in this map unit are small areas with slopes of less than 7 percent.

### Minor Components

#### Clark

*Composition:* About 15 percent  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe21-28)

### Unnamed Wet Soils

*General Considerations:* Most areas are used for pasture or range. This map unit is poorly suited for cropland. The steep slopes of this map unit will limit most engineering practices for this soil.

## 1324—Carway And Carbika Soils, 0 to 1 percent slopes

*Mapunit Information:* Carway soils are in the interdunal areas which sit higher than the Carbika soils in the depressional areas on the paleoterrace.

### Map Unit Composition

Carway: 50 percent  
Carbika: 30 percent  
Minor components: 20 percent

### Component Descriptions

#### Carway

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Interdune on depression on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* High (About 9.0 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* Frequent

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21-28)

*Land capability (nonirrigated):* 2w

#### Typical Profile:

Ap—0 to 7 inches; fine sandy loam  
Bt1—7 to 10 inches; sandy clay loam  
Bt2—10 to 15 inches; sandy clay loam  
Bt3—15 to 22 inches; fine sandy loam  
Bt4—22 to 35 inches; fine sandy loam  
2Btb1—35 to 40 inches; clay loam  
2Btb2—40 to 54 inches; clay loam  
2Btb3—54 to 63 inches; clay loam  
2Btb4—63 to 72 inches; clay loam  
2Btkb—72 to 80 inches; clay loam

*Component note:* This soil was formerly mapped as Carwile. Included with this soil in mapping

are small areas with a loamy fine sand surface texture.

#### Carbika

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Interdune on depression on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* High (About 9.6 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* Frequent

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21-28)

*Land capability (nonirrigated):* 2w

#### Typical Profile:

A—0 to 11 inches; silt loam  
Bt1—11 to 15 inches; clay  
Bt2—15 to 22 inches; clay loam  
Bt3—22 to 34 inches; clay loam  
Bt4—34 to 41 inches; clay loam  
Bt5—41 to 60 inches; clay loam  
Btk—60 to 80 inches; clay loam

*Component note:* This soil was formerly mapped as Carwile.

### Minor Components

#### Solvay

*Composition:* About 20 percent

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in cropland but, some are in pasture or range. This mapunit is poorly suited for the most commonly grown crops. Wheat and grain sorghum are the predominant crops. The hazard for wind and water erosion is slight. The presence of water tables and potential for high shrink-swell limit most engineering uses for this mapunit.

### 1340—Case-Clark complex, 3 to 7 percent slopes

*Mapunit Information:* Case soils occur slightly higher on the paleoterrace than Clark soils.

#### Map Unit Composition

Case: 70 percent  
Clark: 30 percent

#### Component Descriptions

##### Case

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Calcareous, old alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.2 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe24-32)

*Land capability (nonirrigated):* 4e

##### Typical Profile:

Ap—0 to 6 inches; loam

Bk—6 to 20 inches; loam

Bk—20 to 35 inches; loam

Ck—35 to 80 inches; very fine sandy loam

##### Clark

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe21-28)

*Land capability (nonirrigated):* 4e

##### Typical Profile:

Ap—0 to 11 inches; loam

Bw—11 to 16 inches; loam

Bk1—16 to 28 inches; loam

Bk2—28 to 45 inches; fine sandy loam

Bck1—45 to 65 inches; fine sandy loam

Ck2—65 to 80 inches; very fine sandy loam

*Component note:* These soils are very deep, well drained, moderately permeable soils formed in loamy calcareous alluvium. Some areas may have a fine sandy loam surface texture. Some areas have inclusions of less than 3 percent slopes.

*General Considerations:* Most areas are used as pasture or rangeland. Some areas are used as cropland. This mapunit is moderately well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the predominant crops. The hazard of wind and water erosion is moderately severe. This mapunit is well suited for most engineering practices. The slopes and amount of calcium carbonates can limit some practices.

### 1341—Case-Clark complex, 7 to 15 percent slopes

*Mapunit Information:* Case soils occur slightly higher on the paleoterrace than Clark soils.

#### Map Unit Composition

Case: 60 percent  
Clark: 40 percent

#### Component Descriptions

##### Case

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 7 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.2 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Ecological site:* Limy Upland (pe24-32)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

Ap—0 to 6 inches; loam

Bk—6 to 20 inches; loam

Bk—20 to 35 inches; loam

Ck—35 to 80 inches; very fine sandy loam

**Clark**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 7 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Ecological site:* Limy Upland (pe21-28)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

Ap—0 to 11 inches; loam

Bw—11 to 16 inches; loam

Bk1—16 to 28 inches; loam

Bk2—28 to 45 inches; fine sandy loam

BCk1—45 to 65 inches; fine sandy loam

Ck2—65 to 80 inches; very fine sandy loam

*Component note:* These soils are very deep, well drained, moderately permeable soils formed in loamy calcareous alluvium. Some areas may have a fine sandy loam surface texture. Some areas have inclusions of less than 7 percent slopes.

*General Considerations:* Most areas are used as pasture or rangeland. The hazard of wind and water erosion is severe. This mapunit is well suited for most engineering practices. The slopes and amount of calcium carbonates can limit most practices.

## 1725—Funmar And Farnum loams, 0-1 Percent Slopes

*Mapunit Information:* The Funmar and Farnum soils are interfingering upon the landscape.

### Map Unit Composition

Funmar: 40 percent

Farnum: 40 percent

Minor components: 20 percent

### Component Descriptions

#### Funmar

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 6 inches; loam

A—6 to 12 inches; loam

Bt1—12 to 17 inches; loam

Bt2—17 to 26 inches; clay loam

Bt3—26 to 32 inches; loam

2Ab—32 to 38 inches; silty clay loam

2Btb—38 to 54 inches; silty clay loam

2Btkb1—54 to 66 inches; silty clay loam

2Btkb2—66 to 80 inches; silty clay loam

*Component note:* This soil was formerly mapped as Farnum and Tabler. Included with this soil are small areas with a surface texture of fine sandy loam. A buried soil occurs below a depth of 32 inches and varies in thickness. The texture of the buried soil varies from sandy clay loam to silty clay and increases in sand content with depth.

#### Farnum

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.7 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (irrigated):* 1  
*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 5 inches; loam  
 A—5 to 15 inches; loam  
 Bt1—15 to 21 inches; loam  
 Bt2—21 to 34 inches; sandy clay loam  
 Bt3—34 to 48 inches; loam  
 Bt4—48 to 61 inches; clay loam  
 Bt5—61 to 73 inches; clay loam  
 Btk—73 to 80 inches; loam

*Component note:* Included with this soil are small areas with a fine sandy loam surface texture.

**Minor Components**

**Naron**

*Composition:* About 20 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21-28)

**Carway**

*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21-28)

**Carbika**

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for the most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the predominant crops grown. The hazard for wind and water erosion is slight. The potential for high shrink-swell may limit some of the engineering practices of this mapunit.

**1726—Funmar and Farnum loams, 1 to 3 percent slopes**

*Mapunit Information:* The Funmar and Farnum soils are interfingering upon the landscape.

**Map Unit Composition**

Farnum: 40 percent  
 Funmar: 40 percent  
 Minor components: 20 percent

**Component Descriptions**

**Farnum**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.7 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (irrigated):* 1  
*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 5 inches; loam  
 A—5 to 15 inches; loam  
 Bt1—15 to 21 inches; loam  
 Bt2—21 to 34 inches; sandy clay loam  
 Bt3—34 to 48 inches; loam  
 Bt4—48 to 61 inches; clay loam  
 Bt5—61 to 73 inches; clay loam  
 Btk—73 to 80 inches; loam

*Component note:* Included with this soil are small areas with a fine sandy loam surface texture.

**Funmar**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium over alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.3 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 6 inches; loam

A—6 to 12 inches; loam

Bt1—12 to 17 inches; loam

Bt2—17 to 26 inches; clay loam

Bt3—26 to 32 inches; loam

2Ab—32 to 38 inches; silty clay loam

2Btb—38 to 54 inches; silty clay loam

2Btkb1—54 to 66 inches; silty clay loam

2Btkb2—66 to 80 inches; silty clay loam

*Component note:* This soil was formerly mapped as Farnum and Tabler. Included with this soil are small areas with a surface texture of fine sandy loam. A buried soil occurs below a depth of 32 inches and varies in thickness. The texture of the buried soil varies from sandy clay loam to silty clay and increases in sand content with depth.

**Minor Components**

**Naron**

*Composition:* About 20 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21-28)

**Carbika**

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21-28)

**Carway**

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for the most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the predominant crops grown. The hazard for wind and water erosion is slight. The potential for high shrink-swell may limit some of the engineering practices of this mapunit.

## 1985—Hayes loamy fine sand, 1 to 5 percent slopes

*Mapunit Information:* Hayes soils are usually located higher on the dune than the Attica soils.

### Map Unit Composition

Hayes: 60 percent

Minor components: 40 percent

### Component Descriptions

**Hayes**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over clayey alluvium

*Slope:* 1 to 5 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* Moderate (About 8.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sandy loam

Bt1—8 to 14 inches; fine sandy loam

Bt2—14 to 23 inches; fine sandy loam

Bt3—23 to 34 inches; fine sandy loam

Bt4—34 to 42 inches; fine sandy loam

Ab—42 to 47 inches; fine sandy loam

2Btb1—47 to 56 inches; sandy clay loam

2Btb2—56 to 69 inches; silty clay

2Btb3—69 to 80 inches; clay loam

*Component note:* This soil was formerly mapped as Naron or Pratt. A buried soil exists below 40 inches. The buried soil varies in thickness and the texture ranges from sandy clay loam to silty clay. The texture of the buried soil generally increases in sand content with increasing depth. Included in this unit are small areas of slopes greater than 2 percent.

**Minor Components**

**Attica**

*Composition:* About 25 percent

*Slope:* 1 to 5 percent

*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21-28)

### **Saltcreek**

*Composition:* About 15 percent  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21-28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is moderately well suited for most commonly grown crops. Wheat, grain sorghum, and irrigated corn are the predominant crops. The hazard for wind erosion is moderate and water erosion is slight. The high shrink-swell potential may limit some of the engineering uses of the soil.

## **1986—Hayes-Solvay loamy fine sands, 0 to 5 percent slopes**

*Mapunit Information:* Hayes soils occur on the mid to upper parts of the dunes. The Solvay soils are in interdunal positions on the paleoterrace.

### **Map Unit Composition**

Hayes: 55 percent  
 Solvay: 20 percent  
 Minor components: 25 percent

### **Component Descriptions**

#### **Hayes**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over clayey alluvium  
*Slope:* 0 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 7.8 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sandy (pe21-28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

Ap—0 to 8 inches; loamy fine sand  
 Bt1—8 to 14 inches; fine sandy loam  
 Bt2—14 to 23 inches; fine sandy loam  
 Bt3—23 to 34 inches; fine sandy loam  
 Bt4—34 to 42 inches; fine sandy loam  
 Ab—42 to 47 inches; fine sandy loam  
 2Btb1—47 to 56 inches; sandy clay loam  
 2Btb2—56 to 69 inches; silty clay  
 2Btb3—69 to 80 inches; clay loam

*Component note:* This soil was formerly mapped as Naron or Pratt. A buried soil exists below 40 inches. The buried soil varies in thickness and the texture ranges from sandy clay loam to silty clay. The texture of the buried soil generally increases in sand content with increasing depth. Included in this unit are small areas of slopes greater than 2 percent.

#### **Solvay**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Interdune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Moderate (About 9.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Subirrigated (pe21-28)  
*Land capability (nonirrigated):* 2e

#### *Typical Profile:*

A—0 to 5 inches; loamy fine sand  
 2Bt1—5 to 14 inches; fine sandy loam  
 2Bt2—14 to 23 inches; fine sandy loam  
 2Bt3—23 to 37 inches; fine sandy loam  
 2BC1—37 to 58 inches; fine sandy loam  
 2BC2—58 to 76 inches; loamy fine sand  
 2BC3—76 to 80 inches; loamy fine sand

*Component note:* This soil was formerly mapped as Carwile and Farnum. Included with this soil in mapping are small areas with a loamy fine sand surface texture.

### **Minor Components**

#### **Carway**

*Composition:* About 15 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21-28)

### **Farnum**

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe21-28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. The high water tables, high shrink-swell potential, and sandy textures will limit most engineering uses of this mapunit.

## **1987—Hayes-Turon complex, 0 to 5 percent slopes**

*Mapunit Information:* Hayes soils occur on the mid to upper parts of the dunes. The Turon soils usually occur higher on the dune. Naron soils occur on the flatter parts of the dune.

### **Map Unit Composition**

Hayes: 40 percent

Turon: 35 percent

Minor components: 25 percent

### **Component Descriptions**

#### **Hayes**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over clayey alluvium

*Slope:* 0 to 5 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* Moderate (About 7.8 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

Ap—0 to 8 inches; loamy fine sand

Bt1—8 to 14 inches; fine sandy loam

Bt2—14 to 23 inches; fine sandy loam

Bt3—23 to 34 inches; fine sandy loam

Bt4—34 to 42 inches; fine sandy loam

Ab—42 to 47 inches; fine sandy loam

2Btb1—47 to 56 inches; sandy clay loam

2Btb2—56 to 69 inches; silty clay

2Btb3—69 to 80 inches; clay loam

*Component note:* This soil was formerly mapped as Naron or Pratt. A buried soil exists below 40 inches. The buried soil varies in thickness and the texture ranges from sandy clay loam to silty clay. The texture of the buried soil generally increases in sand content with increasing depth. Included in this unit are small areas of slopes greater than 5 percent.

#### **Turon**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits over alluvium

*Slope:* 0 to 5 percent

*Drainage class:* Well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 7.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sands (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

Ap—0 to 8 inches; fine sand

Bt—8 to 28 inches; loamy fine sand

E&Bt—28 to 40 inches; stratified loamy fine sand to fine sandy loam

2Btb1—40 to 58 inches; silty clay

2Btb2—58 to 75 inches; silty clay

2Btb3—75 to 80 inches; silty clay

*Component note:* This soil was formerly mapped as Pratt. A buried soil occurs below a depth of 40 inches. The buried soil varies in thickness and in texture. The texture varies from sandy clay loam to silty clay. The texture of the buried soil generally increases in sand content with increasing depth.



**Minor Components****Naron**

*Composition:* About 15 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21-28)

**Solvay**

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21-28)

**Carway**

*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. The high shrink-swell potential, and sandy textures will limit most engineering uses of this mapunit.

**1988—Hayes loamy fine sand, 5 to 10 percent slopes**

*Mapunit Information:* Hayes soils are usually located higher on the dune than the Attica soils.

**Map Unit Composition**

Hayes: 70 percent  
 Minor components: 30 percent

**Component Descriptions****Hayes**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over clayey alluvium  
*Slope:* 5 to 10 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 8.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sandy loam  
 Bt1—8 to 14 inches; fine sandy loam  
 Bt2—14 to 23 inches; fine sandy loam  
 Bt3—23 to 34 inches; fine sandy loam  
 Bt4—34 to 42 inches; fine sandy loam  
 Ab—42 to 47 inches; fine sandy loam  
 2Btb1—47 to 56 inches; sandy clay loam  
 2Btb2—56 to 69 inches; silty clay  
 2Btb3—69 to 80 inches; clay loam

*Component note:* This soil was formerly mapped as Naron or Pratt. A buried soil exists below 40 inches. The buried soil varies in thickness and the texture ranges from sandy clay loam to silty clay. The texture of the buried soil generally increases in sand content with increasing depth. Included in this unit are small areas of slopes less than 5 percent.

**Minor Components****Pratt**

*Composition:* About 30 percent  
*Slope:* 5 to 10 percent  
*Drainage class:* Well drained  
*Ecological site:* Sands (pe21-28)

*General Considerations:* Most areas are used for pasture or range. The hazard for wind erosion is and and water erosion is moderate. The high shrink-swell potential and slope may limit some of the engineering uses of the soil.

**2556—Langdon fine sand, 0 to 15 percent slopes**

*Mapunit Information:* Langdon soils occur on mid to upper parts of the dunes. Tivin soils occur on the upper parts of the dunes. Turon soils occur on the lower part of the dune. Turon soils have a paleosol below 40 inches.

**Map Unit Composition**

Langdon: 50 percent

Minor components: 50 percent

### Component Descriptions

#### Langdon

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 0 to 15 percent

*Drainage class:* Somewhat excessively drained

*Slowest permeability:* Rapid (About 6.00 in/hr)

*Available water capacity:* Low (About 3.2 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Choppy Sands (pe21-28)

*Land capability (nonirrigated):* 6e

#### Typical Profile:

A—0 to 8 inches; fine sand

E&Bt—8 to 47 inches; stratified sand to loamy sand

C—47 to 64 inches; fine sand

E&Btb—64 to 80 inches; stratified sand to loamy sand

*Component note:* This soil was formerly mapped as Tivoli or Pratt. Typically, this map unit is not cropped, although, in some places the soils occurring on the lower dunes are cultivated.

### Minor Components

#### Turon

*Composition:* About 25 percent

*Slope:* 0 to 10 percent

*Drainage class:* Well drained

*Ecological site:* Sands (pe21-28)

#### Tivin

*Composition:* About 25 percent

*Slope:* 1 to 15 percent

*Drainage class:* Somewhat excessively drained

*Ecological site:* Choppy Sands (pe21-28)

#### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21-28)

#### Warnut

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. The sandy textures limit most engineering practices.

## 2948—Nalim loam, 0 to 1 percent slopes

### Map Unit Composition

Nalim: 80 percent

Minor components: 20 percent

### Component Descriptions

#### Nalim

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 6 inches; loam

Bt1—6 to 9 inches; loam

Bt2—9 to 13 inches; clay loam

Bt3—13 to 21 inches; clay loam

Bt4—21 to 31 inches; clay loam

Bt5—31 to 39 inches; sandy clay loam

Bt6—39 to 44 inches; gravelly sandy clay loam

Bt7—44 to 52 inches; sandy clay loam

BC—52 to 62 inches; loamy coarse sand

C1—62 to 72 inches; gravelly loamy coarse sand

C2—72 to 80 inches; stratified sand to gravelly loamy coarse sand

*Component note:* This soil was formerly mapped as Farnum in the southern third of Reno county. Included with this soil in mapping

are small areas with a fine sandy loam surface texture. Also included are a few small areas with slopes of greater than 1 percent and areas that contain several discontinuous clay lenses occurring within the soil profile between 40 and 80 inches. The clay lenses vary in thickness from 1 to 12 inches thick and range in texture from silty clay to sandy clay loam.

#### Minor Components

##### Farnum

*Composition:* About 20 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe21-28)

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water erosion is slight and wind erosion is moderate. This problem can be overcome by using conservation tillage and residue management. This mapunit is moderately well suited for most engineering uses.

### 3051—Ost loam, 0 to 1 percent slope

#### Map Unit Composition

Ost: 90 percent  
 Minor components: 10 percent

#### Component Descriptions

##### Ost

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.0 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 2c

##### Typical Profile:

Ap—0 to 8 inches; loam  
 Bt1—8 to 12 inches; loam  
 Bt2—12 to 18 inches; loam  
 Bk1—18 to 23 inches; clay loam  
 Bk2—23 to 38 inches; clay loam  
 BCk—38 to 54 inches; loam  
 C—54 to 80 inches; loam

*Component note:* Included with this soil in mapping are areas that may have a fine sandy loam surface texture.

#### Minor Components

##### Clark

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe21-28)

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the predominant crops. The hazard of wind and water erosion is slight. This mapunit is well suited for most engineering practices.

### 3053—Ost loam, 1 to 3 percent slopes

*Mapunit Information:* Ost soils occur slightly higher on the paleoterrace than Clark soils.

#### Map Unit Composition

Ost: 85 percent  
 Minor components: 15 percent

#### Component Descriptions

##### Ost

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.0 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 8 inches; loam

Bt1—8 to 12 inches; loam

Bt2—12 to 18 inches; loam

Bk1—18 to 23 inches; clay loam

Bk2—23 to 38 inches; clay loam

Bck—38 to 54 inches; loam

C—54 to 80 inches; loam

*Component note:* Included in mapping are small areas with a fine sandy loam surface texture. Also included are small areas that have slope of less than 1 percent.

### Minor Components

#### Shellabarger

*Composition:* About 15 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21-28)

### Unnamed Wet Soils

#### Clark

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Limy Upland (pe21-28)

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the predominant crops. The hazard of wind erosion is moderate and water erosion is slight. This mapunit is well suited for most engineering practices.

## 3180—Pratt fine sand, 5 to 10 percent slopes

### Map Unit Composition

Pratt: 85 percent

Minor components: 15 percent

## Component Descriptions

### Pratt

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 5 to 10 percent

*Drainage class:* Well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Moderate (About 6.3 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sands (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sand

Bt—8 to 24 inches; loamy fine sand

E&Bt—24 to 64 inches; stratified fine sand to loamy fine sand

C—64 to 80 inches; fine sand

*Component note:* Included with this soil in mapping are some areas with a loamy fine sand surface texture. Also included are small areas with slopes of less than 5 percent.

### Minor Components

#### Attica

*Composition:* About 15 percent

*Slope:* 5 to 10 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21-28)

*General Considerations:* Most areas are in pasture or range, but some are in cropland. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. This mapunit is poorly suited for most engineering practices due to the sandy textures.

## 3181—Pratt-Turon fine sands, 1 to 5 percent slopes

*Mapunit Information:* Pratt and Turon soils are on similar positions on dunes. Turon soils have a paleosol below 40 inches.

## Map Unit Composition

Pratt: 45 percent  
 Turon: 30 percent  
 Minor components: 25 percent

## Component Descriptions

### Pratt

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.3 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21-28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 8 inches; fine sand  
 Bt—8 to 24 inches; loamy fine sand  
 E&Bt—24 to 64 inches; stratified fine sand to loamy fine sand  
 C—64 to 80 inches; fine sand  
*Component note:* Included with this soil are small areas with a loamy fine sand surface texture.

### Turon

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits over alluvium  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.1 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21-28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 8 inches; fine sand  
 Bt—8 to 28 inches; loamy fine sand  
 E&Bt—28 to 40 inches; stratified loamy fine sand to fine sandy loam  
 2Btb1—40 to 58 inches; silty clay  
 2Btb2—58 to 75 inches; silty clay  
 2Btb3—75 to 80 inches; silty clay

*Component note:* This soil was formerly mapped as Pratt. A buried soil occurs below a depth of 40 inches. The buried soil varies in thickness and in texture. The texture varies from sandy clay loam to silty clay. The texture of the buried soil generally increases in sand content with increasing depth.

## Minor Components

### Hayes

*Composition:* About 25 percent  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21-28)

### Carway

*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21-28)

### Warnut

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in cropland, but some are in pasture and range. Some areas are also in the Conservation Reserve Program. This mapunit is somewhat poorly suited for the most commonly grown crops. Wheat, grain sorghum, and irrigated corn are the predominant crops. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. This mapunit is moderately well suited for most engineering practices.

## 3445—Shellabarger fine sandy loam, 3 to 7 percent slopes, eroded

## Map Unit Composition

Shellabarger: 100 percent

## Component Descriptions

### Shellabarger

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.5 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Sandy (pe21-28)

*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 6 inches; sandy loam  
Bt1—6 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

*Component note:* In some places, several laterally discontinuous clay lenses occur within the soil profile between 30 to 80 inches. The lenses range in thickness from 1 to 12 inches thick and also range in texture from silty clay to sandy clay loam. About 20 to 45 percent of Shellabarger soils have been severely eroded. These soils generally have coarser surface textures (coarse sandy loam, gravelly sandy loam, gravelly coarse sandy loam, gravelly loamy coarse sands); thinner surface horizons, and low or very low organic matter.

*General Considerations:* Most areas are used as cropland or hayland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is slight and water erosion is severe for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass

barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. These soils are moderately well suited for most engineering uses of these soils, except where steep slopes can limit the practice.

## 3510—Saltcreek-Funmar-Farnum complex, 1 to 3 percent slopes

*Mapunit Information:* Saltcreek soils are on convex dunes that are slightly higher on the landscape the Funmar and Farnum soils, which are on the level paleoterrace.

## Map Unit Composition

Saltcreek: 50 percent

Funmar: 30 percent

Farnum: 20 percent

## Component Descriptions

### Saltcreek

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.0 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 5 inches; fine sandy loam  
Bt1—5 to 10 inches; sandy clay loam  
Bt2—10 to 26 inches; sandy clay loam  
Bt3—26 to 39 inches; fine sandy loam  
2Btb—39 to 56 inches; silty clay  
2Btkb1—56 to 66 inches; silty clay loam  
2Btkb2—66 to 80 inches; silty clay loam

*Component note:* This soil was formerly mapped as Naron. A buried soil occurs from 25 to 60 inches. The buried soil varies in thickness and in texture. The texture ranges from sandy clay loam to silty clay generally increases in sand content with increasing depth. In some areas the buried soil has a higher content of sand.

### **Funmar**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium over alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### *Typical Profile:*

Ap—0 to 6 inches; loam

A—6 to 12 inches; loam

Bt1—12 to 17 inches; loam

Bt2—17 to 26 inches; clay loam

Bt3—26 to 32 inches; loam

2Ab—32 to 38 inches; silty clay loam

2Btb—38 to 54 inches; silty clay loam

2Btkb1—54 to 66 inches; silty clay loam

2Btkb2—66 to 80 inches; silty clay loam

*Component note:* This soil was formerly mapped as Farnum and Tabler. A buried soil occurs below a depth of 32 inches and varies in thickness. The texture of the buried soil varies from sandy clay loam to silty clay and increases in sand content with depth. Included with this soil are small areas with a the surface texture may be fine sandy loam.

### **Farnum**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.7 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### *Typical Profile:*

Ap—0 to 5 inches; loam

A—5 to 15 inches; loam

Bt1—15 to 21 inches; loam

Bt2—21 to 34 inches; sandy clay loam

Bt3—34 to 48 inches; loam

Bt4—48 to 61 inches; clay loam

Bt5—61 to 73 inches; clay loam

Btk—73 to 80 inches; loam

*Component note:* Included with this soil in mapping are small areas with a be fine sandy loam surface texture.

### **Minor Components**

#### **Carway**

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21-28)

#### **Carbika**

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight. The potential for high shrink-swell may limit some engineering practices for this mapunit.

## **3512—Saltcreek and Naron fine sandy loams, 1 to 3 percent slopes**

*Mapunit Information:* Saltcreek and Naron soils are interfingering upon the landscape. Both soils occur in similar positions.

### **Map Unit Composition**

Saltcreek: 50 percent

Naron: 50 percent

Minor components: 10 percent

## Component Descriptions

### Saltcreek

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.0 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 5 inches; fine sandy loam  
Bt1—5 to 10 inches; sandy clay loam  
Bt2—10 to 26 inches; sandy clay loam  
Bt3—26 to 39 inches; fine sandy loam  
2Btb—39 to 56 inches; silty clay  
2Btkb1—56 to 66 inches; silty clay loam  
2Btkb2—66 to 80 inches; silty clay loam

*Component note:* This series was formerly mapped as Naron. A buried soil varies laterally in thickness and in texture. The texture of the buried soil varies from sandy clay loam to silty clay and generally increases in sand content with depth. Some areas contain a higher content of sand.

### Naron

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.7 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 8 inches; fine sandy loam  
A—8 to 14 inches; fine sandy loam  
Bt1—14 to 28 inches; sandy clay loam  
Bt2—28 to 39 inches; sandy clay loam  
Bt3—39 to 55 inches; sandy clay loam  
BC—55 to 66 inches; fine sandy loam  
C—66 to 80 inches; loamy fine sand

## Minor Components

### Funmar

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe21-28)

### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21-28)

### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21-28)

### Taver

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Clay Upland (pe21-28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight. The depth to sand and potential for high shrink-swell may limit some engineering practices for this mapunit.

## 3533—Shellabarger sandy loam, 0 to 1 percent slopes

### Map Unit Composition

Shellabarger: 85 percent

Minor components: 15 percent

## Component Descriptions

### Shellabarger

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)



*Available water capacity:* Moderate (About 8.5 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21-28)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 7 inches; sandy loam  
Bt1—7 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

*Component note:* This soil is on a similar landscape position as the Nalim soils. The Nalim soils have a sandy loam or coarse sandy loam surface texture. The Shellabarger soils have a lower clay content in the subsoil than Nalim soils. Also included are soils that contain several discontinuous clay lenses occurring between 30 to 80 inches within the soil profile. The lenses vary in thickness from 1 to 12 inches thick and range in texture from silty clay to sandy clay loam.

### Minor Components

#### Nalim

*Composition:* About 15 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is slight. Wind erosion can be controlled by maintaining plant residue through the use of a conservation tillage system. The moderate water holding capacity can hurt production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil

reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of this soil.

## 3534—Shellabarger sandy loam, 1 to 3 percent slopes

*Mapunit Information:* The Albion soils are generally located on the steeper upper parts of the side slopes. The Shellabarger soils are generally located on the less steep lower side slopes.

### Map Unit Composition

Shellabarger: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Shellabarger

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.5 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 7 inches; sandy loam  
Bt1—7 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

*Component note:* This soil is on a similar landscape position as the Albion soils. The Albion soils have a sandy loam or coarse sandy loam surface texture. The Shellabarger soils have a higher clay content in the subsoil than Albion soils. Also

included in the soils are a few small areas of Nalim soils and soils that contain several discontinuous clay lenses occurring within the soil profile between 30 to 80 inches. The lenses vary in thickness from 1 to 12 inches thick and range in texture from silty clay to sandy clay loam. About 10 to 25 percent of the Shellabarger soils have been subject to moderate erosion. The eroded soils generally have coarse sandy loam, gravelly sandy loam, gravelly coarse sandy loam, gravelly loamy coarse sand surface textures, thinner surface layers and low or very low organic matter levels.

#### Minor Components

##### Albion

*Composition:* About 15 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21-28)

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

## 3540—Solvay loamy fine sand, 0 to 2 percent slopes

### Map Unit Composition

Solvay: 90 percent

Minor components: 10 percent

### Component Descriptions

#### Solvay

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Interdune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* Moderate (About 9.0 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21-28)

*Land capability (nonirrigated):* 2e

#### Typical Profile:

A—0 to 5 inches; loamy fine sand

2Bt1—5 to 14 inches; fine sandy loam

2Bt2—14 to 23 inches; fine sandy loam

2Bt3—23 to 37 inches; fine sandy loam

2BC1—37 to 58 inches; fine sandy loam

2BC2—58 to 76 inches; loamy fine sand

2BC3—76 to 80 inches; loamy fine sand

*Component note:* This soil was formerly mapped as Carwile and Farnum. Included with this soil in mapping are small areas with a fine sandy loam surface texture. These soils occur in depressions on the floodplain.

#### Minor Components

##### Hayes

*Composition:* About 10 percent

*Slope:* 0 to 2 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21-28)

##### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21-28)

**Carbika**

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in cropland, but some areas are used for pasture and range. Many areas are in the Conservation Reserve Program. This mapunit is somewhat poorly suited for the most commonly grown crops. Wheat, grain sorghum and irrigated corn are the predominant crops. The hazard for wind erosion is severe and water erosion is slight. Conservation tillage, residue management, and tall grass barriers are ways to control wind erosion. The depth to water tables will limit many engineering practices.

**3639—Taver loam, 0 to 1 percent slopes****Map Unit Composition**

Taver: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Taver**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.4 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Clay Upland (pe21-28)  
*Land capability (nonirrigated):* 2s

*Typical Profile:*

Ap—0 to 7 inches; loam  
 2Bt1—7 to 17 inches; silty clay loam  
 2Bt2—17 to 33 inches; silty clay  
 2Btk1—33 to 53 inches; silty clay loam  
 2Btk2—53 to 64 inches; clay loam  
 3Bt—64 to 80 inches; sandy clay loam

*Component note:* This series was formerly mapped as Tabler.

**Minor Components****Saltcreek**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21-28)

**Carbika**

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is well suited for the most commonly grown crops such as wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight. This mapunit is moderately well suited for most engineering practices. The potential for high shrink-swell may limit some practices.

**3640—Tivin fine sand, 10 to 30 percent slopes****Map Unit Composition**

Tivin: 95 percent  
 Minor components: 5 percent

**Component Descriptions****Tivin**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 10 to 30 percent  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 3.2 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Choppy Sands (pe21-28)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

A—0 to 7 inches; fine sand  
 AC—7 to 18 inches; fine sand  
 C—18 to 80 inches; fine sand

*Component note:* This series was formerly mapped as Tivoli.

**Minor Components****Langdon**

*Composition:* About 5 percent  
*Slope:* 10 to 30 percent  
*Drainage class:* Somewhat excessively drained  
*Ecological site:* Choppy Sands (pe21-28)

**Plev**

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. The sandy textures will limit most engineering practices.

**3644—Turon-Carway complex, 0 to 5 percent slopes**

*Mapunit Information:* Turon soils occur on the mid to upper parts of the dunes. The Solvay soils are in interdunal positions on the paleoterrace. The Carway soils are on interdunes and also in depressional areas on the paleoterrace.

**Map Unit Composition**

Turon: 65 percent  
 Carway: 20 percent  
 Minor components: 15 percent

**Component Descriptions****Turon**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits over alluvium  
*Slope:* 0 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sands (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sand  
 Bt—8 to 28 inches; loamy fine sand  
 E&Bt—28 to 40 inches; stratified loamy fine sand to fine sandy loam  
 2Btb1—40 to 58 inches; silty clay  
 2Btb2—58 to 75 inches; silty clay  
 2Btb3—75 to 80 inches; silty clay

*Component note:* This soil was formerly mapped as Pratt. A buried soil occurs below a depth of 40 inches. The buried soil varies in thickness and in texture. The texture varies from sandy clay loam to silty clay. The texture of the buried soil generally increases in sand content with increasing depth.

**Carway**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Interdune on depression on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.6 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* Frequent

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21-28)

*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 7 inches; loamy fine sand  
 Bt1—7 to 10 inches; sandy clay loam  
 Bt2—10 to 15 inches; sandy clay loam  
 Bt3—15 to 22 inches; fine sandy loam  
 Bt4—22 to 35 inches; fine sandy loam  
 2Btb1—35 to 40 inches; clay loam  
 2Btb2—40 to 54 inches; clay loam  
 2Btb3—54 to 63 inches; clay loam  
 2Btb4—63 to 72 inches; clay loam  
 2Btkb—72 to 80 inches; clay loam

*Component note:* This soil was formerly mapped as Carwile. Included with this soil in mapping are small areas with a fine sandy loam surface texture.

### Minor Components

#### Solvay

*Composition:* About 15 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. The high water tables, high shrink-swell potential, and sandy textures will limit most engineering uses of this mapunit.

## 3926—Water

### 4005—Yaggy-Saxman loamy sand, 0 to 2 percent slopes, occasionally flooded

*Mapunit Information:* Yaggy soils usually occur lower on the floodplain than the Saxman soils.

### Map Unit Composition

Yaggy: 60 percent  
 Saxman: 30 percent  
 Minor components: 10 percent

### Component Descriptions

#### Yaggy

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium over sandy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Low (About 4.5 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Sandy Lowland (pe21-28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap1—0 to 5 inches; fine sandy loam  
 Ap2—5 to 11 inches; fine sandy loam  
 2C1—11 to 14 inches; stratified very fine sandy loam to silt loam  
 3C2—14 to 24 inches; fine sand  
 3C3—24 to 31 inches; fine sand  
 3C4—31 to 42 inches; fine sand  
 3C5—42 to 53 inches; stratified gravelly coarse sand  
 3C6—53 to 69 inches; stratified gravelly coarse sand to sand  
 3C7—69 to 80 inches; stratified gravelly coarse sand to sand

*Component note:* This soil was formerly mapped as Platte. Included with this soil are small areas with a loamy fine sands surface texture.

#### Saxman

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Sandy alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Low (About 4.4 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Rare

*Depth to seasonal water saturation:* About 24 to 36 inches

*Runoff class:* Very low

*Ecological site:* Sandy Lowland (pe21-28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap1—0 to 4 inches; loamy sand  
 Ap2—4 to 8 inches; loamy sand  
 A—8 to 13 inches; loamy sand  
 AC—13 to 22 inches; loamy sand  
 C1—22 to 30 inches; sand  
 C2—30 to 37 inches; sand  
 C3—37 to 48 inches; sand  
 C4—48 to 54 inches; fine sand  
 C5—54 to 80 inches; stratified gravelly coarse sand

*Component note:* This soil was formerly mapped as Canadian and Wann. Included with this soil are small areas with a loamy fine sand surface texture.

### Minor Components

#### Solvay

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21-28)

#### Kanza

*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21-28)

#### Ninnescah

*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21-28)

*General Considerations:* Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit.

## Ab—Albion sandy loam, 1 to 4 percent slopes

### Map Unit Composition

Albion: 100 percent

### Component Descriptions

#### Albion

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 6.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe24-32)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 8 inches; sandy loam  
 H2—8 to 18 inches; sandy loam  
 H3—18 to 29 inches; coarse sandy loam  
 H4—29 to 60 inches; gravelly sand

### Minor Components

#### Unnamed Wet Soils

*Phase:* Sandy, Drainageway

## Ao—Albion sandy loam, 3 to 7 percent slopes, eroded

### Map Unit Composition

Albion: 100 percent

### Component Descriptions

#### Albion

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 6.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sandy (pe24-32)  
*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 8 inches; sandy loam  
 H2—8 to 18 inches; sandy loam  
 H3—18 to 29 inches; coarse sandy loam  
 H4—29 to 60 inches; gravelly sand

## As—Albion and Shellabarger Soils, 7 to 15 percent slopes

### Map Unit Composition

Albion: 50 percent  
Shellabarger: 50 percent

### Component Descriptions

#### Albion

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 6.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Sandy (pe24-32)  
*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 8 inches; sandy loam  
H2—8 to 18 inches; sandy loam  
H3—18 to 29 inches; coarse sandy loam  
H4—29 to 60 inches; gravelly sand

#### Shellabarger

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Sandy (pe24-32)  
*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 11 inches; fine sandy loam

H2—11 to 34 inches; sandy clay loam  
H3—34 to 60 inches; coarse sandy loam

## Bc—Blanket silty clay loam, 1 to 4 percent slopes, eroded

### Map Unit Composition

Blanket: 100 percent

### Component Descriptions

#### Blanket

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Paleoterrace on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 9.2 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 13 inches; silty clay loam  
H2—13 to 46 inches; silty clay  
H3—46 to 60 inches; silty clay loam

## Be—Blanket silt loam, 0 to 1 percent slopes

### Map Unit Composition

Blanket: 100 percent

### Component Descriptions

#### Blanket

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Paleoterrace on river valley

*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 9.2 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (nonirrigated):* 1

*Typical Profile:*  
 H1—0 to 13 inches; silt loam  
 H2—13 to 46 inches; silty clay  
 H3—46 to 60 inches; silty clay loam

## **Bh—Blanket silt loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Blanket: 100 percent

### **Component Descriptions**

#### **Blanket**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Paleoterrace on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 9.2 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*  
 H1—0 to 13 inches; silt loam  
 H2—13 to 46 inches; silty clay  
 H3—46 to 60 inches; silty clay loam

## **Br—Fluvents, frequently flooded**

## **Ca—Carwile fine sandy loam, 0 to 1 percent slopes**

### **Map Unit Composition**

Carwile: 100 percent

### **Component Descriptions**

#### **Carwile**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Depression on paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.4 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 0 inches  
*Runoff class:* Negligible  
*Ecological site:* Sandy (pe21-28)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*  
 H1—0 to 10 inches; fine sandy loam  
 H2—10 to 18 inches; sandy clay loam  
 H3—18 to 46 inches; clay  
 H4—46 to 60 inches; clay

#### **Minor Components**

#### **Unnamed Wet Soils**

*Phase:* Loamy, Depression



**Cc—Case-Clark complex, 3 to 7 percent slopes****Map Unit Composition**

Case: 70 percent

Clark: 30 percent

**Component Descriptions****Case***MLRA:* 80A - Central Rolling Red Prairies*Landform:* Paleoterrace on river valley*Parent material:* Calcareous, old alluvium*Slope:* 3 to 7 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 8.7 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Medium*Ecological site:* Limy Upland (pe24-32)*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 6 inches; clay loam

H2—6 to 50 inches; clay loam

**Clark***MLRA:* 80A - Central Rolling Red Prairies*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 3 to 7 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* High (About 10.3 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Medium*Ecological site:* Limy Upland (pe24-32)*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 8 inches; clay loam

H2—8 to 60 inches; clay loam

**Ck—Case-Clark complex, 7 to 15 percent slopes****Map Unit Composition**

Case: 60 percent

Clark: 40 percent

**Component Descriptions****Case***MLRA:* 80A - Central Rolling Red Prairies*Landform:* Paleoterrace on river valley*Parent material:* Alluvium*Slope:* 7 to 15 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* High (About 10.2 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* High*Ecological site:* Limy Upland (pe24-32)*Land capability (nonirrigated):* 6e*Typical Profile:*

H1—0 to 6 inches; clay loam

H2—6 to 60 inches; clay loam

**Clark***MLRA:* 80A - Central Rolling Red Prairies*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 7 to 12 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* High (About 10.3 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* High*Ecological site:* Limy Upland (pe24-32)

*Land capability (nonirrigated): 6e*

*Typical Profile:*

H1—0 to 8 inches; clay loam  
H2—8 to 60 inches; clay loam

**Cm—Clark clay loam, 1 to 4 percent slopes**

**Map Unit Composition**

Clark: 100 percent

**Component Descriptions**

**Clark**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Limy Upland (pe21-28)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 8 inches; clay loam  
H2—8 to 60 inches; clay loam

**Minor Components**

**Unnamed Wet Soils**

*Phase:* Loamy, Depression

**Unnamed Wet Soils**

*Phase:* Loamy, Drainageway

**Cn—Clark fine sandy loam, 1 to 3 percent slopes**

**Map Unit Composition**

Clark: 100 percent

**Component Descriptions**

**Clark**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.0 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Limy Upland (pe24-32)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 8 inches; fine sandy loam  
H2—8 to 60 inches; clay loam

**Co—Clark-Ost clay loams, 0 to 1 percent slopes**

**Map Unit Composition**

Clark: 70 percent  
Ost: 30 percent

**Component Descriptions**

**Clark**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low

*Ecological site:* Limy Upland (pe24-32)  
*Land capability (nonirrigated):* 2c

*Typical Profile:*

H1—0 to 8 inches; clay loam  
 H2—8 to 60 inches; clay loam

**Ost**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe24-32)  
*Land capability (nonirrigated):* 2c

*Typical Profile:*

H1—0 to 9 inches; clay loam  
 H2—9 to 14 inches; clay loam  
 H3—14 to 23 inches; clay loam  
 H4—23 to 60 inches; clay loam

**Cs—Lincoln loamy sand, occasionally flooded**

**Map Unit Composition**

Lincoln: 100 percent

**Component Descriptions**

**Lincoln**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 3.3 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 60 to 72 inches

*Runoff class:* Negligible

*Ecological site:* Sandy Lowland (pe24-32)  
*Land capability (nonirrigated):* 6w

*Typical Profile:*

H1—0 to 10 inches; loamy fine sand  
 H2—10 to 60 inches; stratified fine sand to clay loam

**Minor Components**

**Unnamed Wet Soils**

*Phase:* Sandy, Drainageway

**Fa—Farnum clay loam, 3 to 6 percent slopes, eroded**

**Map Unit Composition**

Farnum: 100 percent

**Component Descriptions**

**Farnum**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 9.9 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 7 inches; clay loam  
 H2—7 to 37 inches; clay loam  
 H3—37 to 60 inches; fine sandy loam

## Fe—Farnum fine sandy loam, 0 to 1 percent slopes

### Map Unit Composition

Farnum: 100 percent

### Component Descriptions

#### Farnum

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.6 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2e

#### Typical Profile:

H1—0 to 11 inches; fine sandy loam

H2—11 to 41 inches; clay loam

H3—41 to 60 inches; fine sandy loam

#### Minor Components

##### Carwile

#### Unnamed Wet Soils

*Phase:* Loamy, Depression

## Fm—Farnum loam, 0 to 1 percent slopes

### Map Unit Composition

Farnum: 100 percent

### Component Descriptions

#### Farnum

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### Typical Profile:

H1—0 to 14 inches; loam

H2—14 to 26 inches; loam

H3—26 to 42 inches; clay loam

H4—42 to 60 inches; fine sandy loam

#### Minor Components

##### Unnamed Wet Soils

*Phase:* Loamy, Depression

## Fn—Farnum loam, 1 to 3 percent slopes

### Map Unit Composition

Farnum: 100 percent

### Component Descriptions

#### Farnum

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 2e

*Typical Profile:*  
 H1—0 to 12 inches; loam  
 H2—12 to 48 inches; clay loam  
 H3—48 to 60 inches; fine sandy loam

**Minor Components**  
**Unnamed Wet Soils**  
*Phase:* Loamy, Depression

## **Fu—Farnum loam, 3 to 6 percent slopes**

### **Map Unit Composition**

Farnum: 100 percent

### **Component Descriptions**

**Farnum**  
*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*  
 H1—0 to 12 inches; loam  
 H2—12 to 48 inches; clay loam  
 H3—48 to 60 inches; fine sandy loam

## **Fw—Farnum-Carwile complex, 0 to 1 percent slopes**

### **Map Unit Composition**

Farnum: 60 percent  
 Carwile: 40 percent

### **Component Descriptions**

**Farnum**  
*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (irrigated):* 1  
*Land capability (nonirrigated):* 2c

*Typical Profile:*  
 H1—0 to 12 inches; loam  
 H2—12 to 48 inches; clay loam  
 H3—48 to 60 inches; fine sandy loam

**Carwile**  
*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Depression on paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.4 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 0 to 0 inches  
*Runoff class:* Negligible  
*Ecological site:* Sandy (pe21-28)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 12 inches; fine sandy loam  
H2—12 to 20 inches; sandy clay loam  
H3—20 to 33 inches; clay  
H4—33 to 60 inches; sandy clay loam

## GRP—Gravel Pit

## INT—Aquolls

*General Considerations:* This map unit was formerly labeled as an Intermittent Water spot symbol. These depressional areas contain soils that are occasionally ponded for long duration.

## Kp—Kanza-Plevna complex, frequently flooded

### Map Unit Composition

Kanza: 50 percent  
Plevna: 50 percent

### Component Descriptions

#### Kanza

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 3.8 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 36 inches  
*Runoff class:* Negligible  
*Land capability (nonirrigated):* 5w

#### *Typical Profile:*

H1—0 to 11 inches; loamy fine sand  
H2—11 to 40 inches; fine sand

#### Plevna

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 6.9 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 24 inches  
*Runoff class:* Negligible  
*Ecological site:* Subirrigated (pe21-28)  
*Land capability (nonirrigated):* 5w

#### *Typical Profile:*

H1—0 to 10 inches; fine sandy loam  
H2—10 to 40 inches; fine sandy loam  
H3—40 to 60 inches; fine sand

## Ks—Elandco silt loam, occasionally flooded

### Map Unit Composition

Elandco: 100 percent

### Component Descriptions

#### Elandco

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.2 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Loamy Lowland (pe21-28)  
*Land capability (nonirrigated):* 2w

#### *Typical Profile:*

H1—0 to 18 inches; silt loam  
H2—18 to 60 inches; silty clay loam

**Kw—Elandco silt loam, frequently flooded****Map Unit Composition**

Elandco: 100 percent

**Component Descriptions****Elandco**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 11.2 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* Frequent

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Negligible

*Ecological site:* Loamy Lowland (pe21-28)

*Land capability (nonirrigated):* 5w

*Typical Profile:*

H1—0 to 18 inches; silt loam

H2—18 to 60 inches; silty clay loam

*Available water capacity:* High (About 9.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Negligible

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 8 inches; fine sandy loam

H2—8 to 38 inches; fine sandy loam

H3—38 to 60 inches; fine sandy loam

**Nf—Naron fine sandy loam, 1 to 3 percent slopes****Map Unit Composition**

Naron: 100 percent

**Component Descriptions****Naron**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 8 inches; fine sandy loam

H2—8 to 38 inches; fine sandy loam

H3—38 to 60 inches; fine sandy loam

**Nd—Naron fine sandy loam, 0 to 1 percent slopes****Map Unit Composition**

Naron: 100 percent

**Component Descriptions****Naron**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

**Minor Components**

**Carwile**

**Unnamed Wet Soils**

*Phase:* Loamy, Depression

**Ng—Naron fine sandy loam, 3 to 6 percent slopes**

**Map Unit Composition**

Naron: 100 percent

**Component Descriptions**

**Naron**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.1 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21-28)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 8 inches; fine sandy loam

H2—8 to 38 inches; fine sandy loam

H3—38 to 60 inches; fine sandy loam

**Minor Components**

**Carwile**

**Nk—Naron loam, 0 to 1 percent slopes**

**Map Unit Composition**

Naron: 100 percent

**Component Descriptions**

**Naron**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.4 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Negligible

*Ecological site:* Sandy (pe21-28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

*Typical Profile:*

H1—0 to 11 inches; loam

H2—11 to 38 inches; fine sandy loam

H3—38 to 60 inches; fine sandy loam

**Minor Components**

**Carwile**

**Unnamed Wet Soils**

*Phase:* Loamy, Depression

**Nm—Naron loam, 1 to 3 percent slopes**

**Map Unit Composition**

Naron: 100 percent

**Component Descriptions**

**Naron**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.4 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)



*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy (pe21-28)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 11 inches; loam  
 H2—11 to 38 inches; fine sandy loam  
 H3—38 to 60 inches; fine sandy loam

**Minor Components**

**Carwile**

**Unnamed Wet Soils**

*Phase:* Loamy, Depression

**Unnamed Wet Soils**

*Phase:* Loamy, Drainageway

**Nn—Naron-Farnum complex, 0 to 3 percent slopes**

**Map Unit Composition**

Naron: 55 percent  
 Farnum: 45 percent

**Component Descriptions**

**Naron**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 9.1 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy (pe21-28)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 11 inches; fine sandy loam  
 H2—11 to 38 inches; fine sandy loam  
 H3—38 to 60 inches; fine sandy loam

**Farnum**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Loamy Lowland (pe21-28)  
*Land capability (irrigated):* 1  
*Land capability (nonirrigated):* 2c

*Typical Profile:*

H1—0 to 12 inches; loam  
 H2—12 to 48 inches; clay loam  
 H3—48 to 60 inches; fine sandy loam

**Minor Components**

**Carwile**

**Unnamed Wet Soils**

*Phase:* Loamy, Depression

**Unnamed Wet Soils**

*Phase:* Loamy, Drainageway

**Oc—Ost clay loam, 0 to 1 percent slopes**

**Map Unit Composition**

Ost: 100 percent

**Component Descriptions**

**Ost**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe21-28)  
*Land capability (nonirrigated):* 2c

*Typical Profile:*

H1—0 to 9 inches; clay loam  
 H2—9 to 14 inches; clay loam  
 H3—14 to 23 inches; clay loam  
 H4—23 to 60 inches; clay loam

## **Os—Ost clay loam, 1 to 4 percent slopes**

### **Map Unit Composition**

Ost: 100 percent

### **Component Descriptions**

#### **Ost**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe21-28)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 9 inches; clay loam  
 H2—9 to 14 inches; clay loam  
 H3—14 to 23 inches; clay loam  
 H4—23 to 60 inches; clay loam

#### **Minor Components** **Unnamed Wet Soils**

*Phase:* Loamy, Depression

#### **Unnamed Wet Soils**

*Phase:* Loamy, Drainageway

## **Pm—Pratt loamy fine sand, 3 to 8 percent slopes**

### **Map Unit Composition**

Pratt: 100 percent

### **Component Descriptions**

#### **Pratt**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 3 to 8 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.4 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sands (pe21-28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 10 inches; loamy fine sand  
 H2—10 to 40 inches; loamy fine sand  
 H3—40 to 60 inches; loamy fine sand

#### **Minor Components** **Carwile**

#### **Unnamed Wet Soils**

*Phase:* Sandy, Depression

## **Pn—Pratt loamy fine sand, 8 to 12 percent slopes**

### **Map Unit Composition**

Pratt: 100 percent

### **Component Descriptions**

#### **Pratt**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 8 to 12 percent

*Drainage class:* Well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Moderate (About 6.4 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sands (pe21-28)

*Land capability (nonirrigated):* 6e

#### *Typical Profile:*

H1—0 to 10 inches; loamy fine sand

H2—10 to 40 inches; loamy fine sand

H3—40 to 60 inches; loamy fine sand

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sands (pe21-28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

H1—0 to 10 inches; loamy fine sand

H2—10 to 40 inches; loamy fine sand

H3—40 to 60 inches; loamy fine sand

#### **Carwile**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Depression on paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.4 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Sandy (pe21-28)

*Land capability (nonirrigated):* 2w

#### *Typical Profile:*

H1—0 to 12 inches; fine sandy loam

H2—12 to 20 inches; sandy clay loam

H3—20 to 33 inches; clay

H4—33 to 60 inches; sandy clay loam

## **Po—Pratt-Carwile complex, 0 to 8 percent slopes**

### **Map Unit Composition**

Pratt: 60 percent

Carwile: 40 percent

### **Component Descriptions**

#### **Pratt**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 3 to 8 percent

*Drainage class:* Well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Moderate (About 6.4 inches)

#### **Minor Components**

##### **Unnamed Wet Soils**

*Phase:* Sandy, Depression

## **PRR—Pratt loamy fine sand, 1 to 5 percent slopes**

### **Map Unit Composition**

Pratt: 100 percent

### **Component Descriptions**

#### **Pratt**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.4 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sands (pe21-28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 12 inches; loamy fine sand  
H2—12 to 36 inches; loamy fine sand  
H3—36 to 60 inches; loamy fine sand

**Minor Components**  
**Carwile**

**Unnamed Wet Soils**  
*Phase:* Sandy, Depression

**PSS—Pratt loamy fine sand, 5 to 10 percent slopes**

**Map Unit Composition**

Pratt: 100 percent

**Component Descriptions**

**Pratt**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 5 to 10 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.3 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sands (pe21-28)  
*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 8 inches; loamy fine sand  
H2—8 to 28 inches; loamy fine sand  
H3—28 to 60 inches; loamy fine sand

**Minor Components**  
**Carwile**

**Unnamed Wet Soils**  
*Phase:* Sandy, Depression

**Pt—Pratt-Tivoli loamy fine sands, 8 to 15 percent slopes**  
**Map Unit Composition**

Pratt: 60 percent  
Tivoli: 40 percent

**Component Descriptions**

**Pratt**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 8 to 12 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.4 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21-28)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 10 inches; loamy fine sand  
H2—10 to 40 inches; loamy fine sand  
H3—40 to 60 inches; loamy fine sand

**Tivoli**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 8 to 15 percent  
*Drainage class:* Excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 3.2 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Land capability (nonirrigated):* 7e

*Typical Profile:*  
 H1—0 to 6 inches; loamy fine sand  
 H2—6 to 60 inches; fine sand

## **PTT—Pratt-Tivoli loamy fine sands, 5 to 15 percent slopes**

### **Map Unit Composition**

Pratt: 60 percent  
 Tivoli: 40 percent

### **Component Descriptions**

#### **Pratt**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 5 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.3 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21-28)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*  
 H1—0 to 10 inches; loamy fine sand  
 H2—10 to 32 inches; loamy fine sand  
 H3—32 to 60 inches; fine sand

#### **Tivoli**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 5 to 15 percent  
*Drainage class:* Excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 3.2 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21-28)  
*Land capability (nonirrigated):* 7e

*Typical Profile:*  
 H1—0 to 7 inches; loamy fine sand  
 H2—7 to 60 inches; fine sand

## **Sa—Albion-Kaski complex, 0 to 15 percent slopes**

### **Map Unit Composition**

Albion: 70 percent  
 Kaski: 30 percent

### **Component Descriptions**

#### **Albion**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 6.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Sandy (pe21-28)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*  
 H1—0 to 8 inches; fine sandy loam  
 H2—8 to 18 inches; sandy loam  
 H3—18 to 29 inches; coarse sandy loam  
 H4—29 to 60 inches; gravelly sand

#### **Kaski**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.5 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe21-28)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 26 inches; loam  
 H2—26 to 40 inches; loam  
 H3—40 to 60 inches; sandy loam

**Sb—Shellabarger fine sandy loam,  
0 to 1 percent slopes**

**Map Unit Composition**

Shellabarger: 100 percent

**Component Descriptions**

**Shellabarger**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Sandy (pe24-32)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 11 inches; fine sandy loam  
 H2—11 to 34 inches; sandy clay loam  
 H3—34 to 60 inches; coarse sandy loam

**Se—Shellabarger fine sandy loam,  
1 to 4 percent slopes**

**Map Unit Composition**

Shellabarger: 100 percent

**Component Descriptions**

**Shellabarger**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy (pe21-28)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 11 inches; fine sandy loam  
 H2—11 to 34 inches; sandy clay loam  
 H3—34 to 60 inches; coarse sandy loam

**Minor Components**

**Unnamed Wet Soils**

*Phase:* Sandy, Drainageway

**Sf—Shellabarger fine sandy loam,  
3 to 7 percent slopes, eroded**

**Map Unit Composition**

Shellabarger: 100 percent

**Component Descriptions**

**Shellabarger**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 3 to 7 percent

*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sandy (pe24-32)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 11 inches; fine sandy loam  
 H2—11 to 34 inches; sandy clay loam  
 H3—34 to 60 inches; coarse sandy loam

**Minor Components**

**Unnamed Wet Soils**

*Phase:* Sandy, Drainageway

**Ta—Tabler clay loam, 0 to 1 percent slopes**

**Map Unit Composition**

Tabler: 100 percent

**Component Descriptions**

**Tabler**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.6 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Clay Upland (pe21-28)  
*Land capability (nonirrigated):* 2s

*Typical Profile:*

H1—0 to 10 inches; clay loam  
 H2—10 to 40 inches; silty clay

H3—40 to 60 inches; silty clay

**Minor Components**

**Carwile**

**Unnamed Wet Soils**

*Phase:* Clayey, Depression

**Unnamed Wet Soils**

*Phase:* Clayey, Drainageway

**Tf—Tivoli fine sand, 12 to 25 percent slopes**

**Map Unit Composition**

Tivoli: 100 percent

**Component Descriptions**

**Tivoli**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 12 to 25 percent  
*Drainage class:* Excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Very low (About 3.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Choppy Sands (pe21-28)  
*Land capability (nonirrigated):* 7e

*Typical Profile:*

H1—0 to 6 inches; fine sand  
 H2—6 to 60 inches; fine sand

**W—Water**

*General Considerations:* Water includes streams, lakes, ponds, and estuaries. These areas are covered with water in most years, at least during the period that is warm enough for plants to grow. Many areas are covered throughout the year.

## **Wa—Waldeck fine sandy loam, occasionally flooded**

### **Map Unit Composition**

Waldeck: 100 percent

### **Component Descriptions**

#### **Waldeck**

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Flood plain on river valley

*Parent material:* Alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Moderate (About 7.8 inches)

*Shrink-swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Negligible

*Ecological site:* Subirrigated (pe24-32)

*Land capability (nonirrigated):* 3w

#### *Typical Profile:*

H1—0 to 15 inches; fine sandy loam

H2—15 to 46 inches; fine sandy loam

H3—46 to 60 inches; fine sand

#### **Minor Components**

**Plevna**

## **Wd—Kingman clay loam, occasionally flooded**

### **Map Unit Composition**

Kingman: 100 percent

### **Component Descriptions**

#### **Kingman**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Flood plain

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.0 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 0 to 24 inches

*Runoff class:* Negligible

*Ecological site:* Subirrigated (pe21-28)

*Land capability (nonirrigated):* 5w

#### *Typical Profile:*

H1—0 to 10 inches; silty clay loam

H2—10 to 60 inches; sandy loam

## **Ze—Zenda clay loam, occasionally flooded**

### **Map Unit Composition**

Zenda: 100 percent

### **Component Descriptions**

#### **Zenda**

*MLRA:* 79 - Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.5 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21-28)

*Land capability (nonirrigated):* 2w

#### *Typical Profile:*

H1—0 to 14 inches; clay loam

H2—14 to 60 inches; clay loam

#### **Minor Components**

##### **Unnamed Wet Soils**

*Phase:* Clayey, Depression



## **Zs—Zenda-Drummond complex, occasionally flooded**

### **Map Unit Composition**

Drummond: 50 percent  
Zenda: 50 percent

### **Component Descriptions**

#### **Zenda**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.5 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Subirrigated (pe21-28)  
*Land capability (nonirrigated):* 4s

#### *Typical Profile:*

H1—0 to 14 inches; clay loam  
H2—14 to 60 inches; clay loam

#### **Drummond**

*MLRA:* 79 - Great Bend Sand Plains  
*Landform:* Terrace on river valley  
*Parent material:* Clayey and/or loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Very low (About 2.8 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Saline Lowland (pe21-28)  
*Land capability (nonirrigated):* 6s

#### *Typical Profile:*

H1—0 to 8 inches; clay loam  
H2—8 to 30 inches; clay  
H3—30 to 60 inches; variable

#### **Minor Components**

##### **Unnamed Wet Soils**

*Phase:* Clayey, Depression

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in the following table. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in the "Acres and Proportionate Extent of Soils" table. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described in other tables in this document."

Map symbol	Mapunit name	Farmland Classification
007CC	Case-clark clay loams, 2 to 6 percent slopes	All areas are prime farmland
007SB	Shellabarger sandy loam, 3 to 6 percent slopes	All areas are prime farmland
097CE	Case clay loam, 2 to 7 percent slopes	All areas are prime farmland
097CK	Clark loam, 1 to 3 percent slopes	All areas are prime farmland
097CM	Clark loam, 3 to 7 percent slopes	All areas are prime farmland
1005	Albion sandy loam, 1 to 3 percent slopes	All areas are prime farmland
1725	Funmar and farnum loams, 0-1 percent slopes	All areas are prime farmland
1726	Funmar and farnum loams, 1 to 3 percent slopes	All areas are prime farmland
1985	Hayes loamy fine sand, 1 to 5 percent slopes	All areas are prime farmland
2948	Nalim loam, 0 to 1 percent slopes	All areas are prime farmland
3051	Ost loam, 0 to 1 percent slope	All areas are prime farmland
3053	Ost loam, 1 to 3 percent slopes	All areas are prime farmland
3445	Shellabarger fine sandy loam, 3 to 7 percent slopes, eroded	All areas are prime farmland
3510	Saltcreek-funmar-farnum complex, 1 to 3 percent slopes	All areas are prime farmland
3512	Saltcreek and naron fine sandy loams, 1 to 3 percent slopes	All areas are prime farmland
3533	Shellabarger sandy loam, 0 to 1 percent slopes	All areas are prime farmland
3534	Shellabarger sandy loam, 1 to 3 percent slopes	All areas are prime farmland
3639	Taver loam, 0 to 1 percent slopes	All areas are prime farmland
Bc	Blanket silty clay loam, 1 to 4 percent slopes, eroded	All areas are prime farmland
Be	Blanket silt loam, 0 to 1 percent slopes	All areas are prime farmland
Bh	Blanket silt loam, 1 to 3 percent slopes	All areas are prime farmland
Cc	Case-clark complex, 3 to 7 percent slopes	All areas are prime farmland
Cm	Clark clay loam, 1 to 4 percent slopes	All areas are prime farmland
Cn	Clark fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland
Co	Clark-ost clay loams, 0 to 1 percent slopes	All areas are prime farmland
Fa	Farnum clay loam, 3 to 6 percent slopes, eroded	All areas are prime farmland
Fe	Farnum fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland
Fm	Farnum loam, 0 to 1 percent slopes	All areas are prime farmland
Fn	Farnum loam, 1 to 3 percent slopes	All areas are prime farmland
Fu	Farnum loam, 3 to 6 percent slopes	All areas are prime farmland
Ks	Elandco silt loam, occasionally flooded	All areas are prime farmland
Nd	Naron fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland
Nf	Naron fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland
Ng	Naron fine sandy loam, 3 to 6 percent slopes	All areas are prime farmland
Nk	Naron loam, 0 to 1 percent slopes	All areas are prime farmland
Nm	Naron loam, 1 to 3 percent slopes	All areas are prime farmland
Nn	Naron-farnum complex, 0 to 3 percent slopes	All areas are prime farmland
Oc	Ost clay loam, 0 to 1 percent slopes	All areas are prime farmland
Os	Ost clay loam, 1 to 4 percent slopes	All areas are prime farmland
Sb	Shellabarger fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland
Se	Shellabarger fine sandy loam, 1 to 4 percent slopes	All areas are prime farmland
Sf	Shellabarger fine sandy loam, 3 to 7 percent slopes, eroded	All areas are prime farmland
Ta	Tabler clay loam, 0 to 1 percent slopes	All areas are prime farmland
Wa	Waldeck fine sandy loam, occasionally flooded	All areas are prime farmland
Ze	Zenda clay loam, occasionally flooded	All areas are prime farmland
095AB	Albion sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated
Ab	Albion sandy loam, 1 to 4 percent slopes	Prime farmland if irrigated

The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
007AE	Albion And Shellabarger Soils, 4 To 15 Percent Slopes-----	44
007CC	Case-Clark Clay Loams, 2 To 6 Percent Slopes-----	39
007LN	Lincoln Soils, Frequently Flooded-----	17
007SB	Shellabarger Sandy Loam, 3 To 6 Percent Slopes-----	65
047PG	Pratt Loamy Fine Sand, 1 To 4 Percent Slopes-----	37
095AB	Albion Sandy Loam, 1 To 3 Percent Slopes-----	42
095DA	Dillwyn-Plevna Complex, Occasionally Flooded-----	31
097AS	Albion-Shellabarger Sandy Loams, 4 To 15 Percent Slopes-----	44
097CE	Case Clay Loam, 2 To 7 Percent Slopes-----	43
097CK	Clark Loam, 1 To 3 Percent Slopes-----	32
097CM	Clark Loam, 3 To 7 Percent Slopes-----	31
1005	Albion Sandy Loam, 1 To 3 Percent Slopes-----	60
1006	Albion Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	56
1017	Albion And Shellabarger Soils, 7 To 15 Percent Slopes-----	51
1324	Carway And Carbika Soils, 0 To 1 Percent Slopes-----	33
1340	Case-Clark Complex, 3 To 7 Percent Slopes-----	40
1341	Case-Clark Complex, 7 To 15 Percent Slopes-----	35
1725	Funmar And Farnum Loams, 0-1 Percent Slopes-----	76
1726	Funmar And Farnum Loams, 1 To 3 Percent Slopes-----	74
1985	Hayes Loamy Fine Sand, 1 To 5 Percent Slopes-----	57
1986	Hayes-Solvay Loamy Fine Sands, 0 To 5 Percent Slopes-----	52
1987	Hayes-Turon Complex, 0 To 5 Percent Slopes-----	54
1988	Hayes Loamy Fine Sand, 5 To 10 Percent Slopes-----	49
2556	Langdon Fine Sand, 0 To 15 Percent Slopes-----	26
2948	Nalim Loam, 0 To 1 Percent Slopes-----	77
3051	Ost Loam, 0 To 1 Percent Slopes-----	36
3053	Ost Loam, 1 To 3 Percent Slopes-----	40
3180	Pratt Fine Sand, 5 To 10 Percent Slopes-----	37
3181	Pratt-Turon Fine Sands, 1 To 5 Percent Slopes-----	43
3445	Shellabarger Fine Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	66
3510	Saltcreek-Funmar-Farnum Complex, 1 To 3 Percent Slopes-----	66
3512	Saltcreek And Naron Fine Sandy Loams, 1 To 3 Percent Slopes-----	65
3533	Shellabarger Sandy Loam, 0 To 1 Percent Slopes-----	70
3534	Shellabarger Sandy Loam, 1 To 3 Percent Slopes-----	66
3540	Solvay Loamy Fine Sand, 0 To 2 Percent Slopes-----	66
3639	Taver Loam, 0 To 1 Percent Slopes-----	66
3640	Tivin Fine Sand, 10 To 30 Percent Slopes-----	17
3644	Turon-Carway Complex, 0 To 5 Percent Slopes-----	40
3926	Water-----	0
4005	Yaggy-Saxman Loamy Sand, 0 To 2 Percent Slopes, Occasionally Flooded-----	33
Ab	Albion Sandy Loam, 1 To 4 Percent Slopes-----	42
Ao	Albion Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	41
As	Albion And Shellabarger Soils, 7 To 15 Percent Slopes-----	46
Bc	Blanket Silty Clay Loam, 1 To 4 Percent Slopes, Eroded-----	64
Be	Blanket Silt Loam, 0 To 1 Percent Slopes-----	66
Bh	Blanket Silt Loam, 1 To 3 Percent Slopes-----	66
Br	Fluvents, Frequently Flooded-----	0
Ca	Carwile Fine Sandy Loam, 0 To 1 Percent Slopes-----	21
Cc	Case-Clark Complex, 3 To 7 Percent Slopes-----	55
Ck	Case-Clark Complex, 7 To 15 Percent Slopes-----	35
Cm	Clark Clay Loam, 1 To 4 Percent Slopes-----	33
Cn	Clark Fine Sandy Loam, 1 To 3 Percent Slopes-----	34
Co	Clark-Ost Clay Loams, 0 To 1 Percent Slopes-----	35
Cs	Lincoln Loamy Sand, Occasionally Flooded-----	23
Fa	Farnum Clay Loam, 3 To 6 Percent Slopes, Eroded-----	67
Fe	Farnum Fine Sandy Loam, 0 To 1 Percent Slopes-----	68
Fm	Farnum Loam, 0 To 1 Percent Slopes-----	73
Fn	Farnum Loam, 1 To 3 Percent Slopes-----	71
Fu	Farnum Loam, 3 To 6 Percent Slopes-----	68
Fw	Farnum-Carwile Complex, 0 To 1 Percent Slopes-----	51
GRP	Gravel Pit-----	18
INT	Aquolls-----	12
Kp	Kanza-Plevna Complex, Frequently Flooded-----	27
Ks	Elandco Silt Loam, Occasionally Flooded-----	55
Kw	Elandco Silt Loam, Frequently Flooded-----	44
Nd	Naron Fine Sandy Loam, 0 To 1 Percent Slopes-----	67
Nf	Naron Fine Sandy Loam, 1 To 3 Percent Slopes-----	67
Ng	Naron Fine Sandy Loam, 3 To 6 Percent Slopes-----	64
Nk	Naron Loam, 0 To 1 Percent Slopes-----	69
Nm	Naron Loam, 1 To 3 Percent Slopes-----	68
Nn	Naron-Farnum Complex, 0 To 3 Percent Slopes-----	69
Oc	Ost Clay Loam, 0 To 1 Percent Slopes-----	39
Os	Ost Clay Loam, 1 To 4 Percent Slopes-----	38
PRR	Pratt Loamy Fine Sand, 1 To 5 Percent Slopes-----	37
PSS	Pratt Loamy Fine Sand, 5 To 10 Percent Slopes-----	34
PTT	Pratt-Tivoli Loamy Fine Sands, 5 To 15 Percent Slopes-----	27
Pm	Pratt Loamy Fine Sand, 3 To 8 Percent Slopes-----	37
Pn	Pratt Loamy Fine Sand, 8 To 12 Percent Slopes-----	34
Po	Pratt-Carwile Complex, 0 To 8 Percent Slopes-----	30
Pt	Pratt-Tivoli Loamy Fine Sands, 8 To 15 Percent Slopes-----	28
Sa	Albion-Kaski Complex, 0 To 15 Percent Slopes-----	46

The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
Sb	Shellabarger Fine Sandy Loam, 0 To 1 Percent Slopes-----	66
Se	Shellabarger Fine Sandy Loam, 1 To 4 Percent Slopes-----	64
Sf	Shellabarger Fine Sandy Loam, 3 To 7 Percent Slopes, Eroded-----	63
Ta	Tabler Clay Loam, 0 To 1 Percent Slopes-----	64
Tf	Tivoli Fine Sand, 12 To 25 Percent Slopes-----	14
W	Water-----	0
Wa	Waldeck Fine Sandy Loam, Occasionally Flooded-----	45
Wd	Kingman Clay Loam, Occasionally Flooded-----	56
Ze	Zenda Clay Loam, Occasionally Flooded-----	58
Zs	Zenda-Drummond Complex, Occasionally Flooded-----	39

Pratt County, Kansas: Maintenance needed  
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
007AE:ALBION----	65	N/A	6e	Not prime farmland	B	Sandy (pe20-25)	6G	.20	.20	4	3	86
007AE:SHELLABARG ER-----	35	N/A	6e	Not prime farmland	B	Sandy (pe20-25)	5	.20	.20	5	3	86
007CC:CASE-----	50	N/A	4e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.32	.32	5	4L	86
007CC:CLARK-----	50	N/A	4e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
007LN:LINCOLN---	100	N/A	6w	Not prime farmland	A	Sandy Lowland (pe20-25)	1K	.20	.20	5	3	86
007SB:SHELLABARG ER-----	100	N/A	3e	All areas are prime farmland	B	Sandy (pe20-25)	5	.20	.20	5	3	86
047PG:PRATT-----	100	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
095AB:ALBION----	100	N/A	3e	Prime farmland if irrigated	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
	100	N/A	3e	Prime farmland if irrigated	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
095DA:DILLWYN---	60	N/A	4w	Not prime farmland	A	Subirrigated (pe24-32)	1	.17	.17	5	2	134
095DA:PLEVNA----	40	N/A	5w	Not prime farmland	D	Subirrigated (pe24-32)	2	.20	.20	5	3	86
097AS:ALBION----	65	N/A	6e	Not prime farmland	B	Sandy (pe20-25)	6G	.20	.20	4	3	86
097AS:SHELLABARG ER-----	35	N/A	6e	Not prime farmland	B	Sandy (pe20-25)	5	.20	.20	5	3	86
097CE:CASE-----	100	N/A	4e	All areas are prime farmland	B	Limy Upland (pe20-25)	8	.32	.32	5	4L	86
097CK:CLARK-----	100	N/A	3e	All areas are prime farmland	B	Limy Upland (pe20-25)	8	.28	.28	5	4L	86
097CM:CLARK-----	100	N/A	4e	All areas are prime farmland	B	Limy Upland (pe20-25)	8	.28	.28	5	4L	86
1005:ALBION----	100	N/A	3e	Prime farmland if irrigated	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
	75	N/A	3e	All areas are prime farmland	B	Sandy (pe21-28)	6G	.20	.24	4	3	86

Pratt County, Kansas: Maintenance needed  
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
1006:ALBION----	100	N/A	4e	Not prime farmland	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
	100	N/A	3e	Not prime farmland	B	Sandy (pe21-28)	6G	.20	.24	4	3	86
1017:ALBION----	50	N/A	6e	Not prime farmland	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
1017:SHELLABARGE R-----	50	N/A	6e	Not prime farmland	B	Sandy (pe24-32)	5	.20	.20	5	3	86
1017:ALBION----	45	N/A	3e	Not prime farmland	B	Sandy (pe21-28)	6G	.20	.24	4	3	86
1017:SHELLABARGE R-----	40	N/A	2e	Not prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
1324:CARWILE----	100	N/A	2w	Not prime farmland	D	Sandy (pe21-28)	1	.24	.24	5	3	86
1324:CARWAY----	50	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.20	.20	5	3	86
1324:CARBIKA----	30	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.24	.24	5	5	56
1340:CASE-----	70	N/A	4e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.32	.32	5	4L	86
	70	N/A	4e	Not prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
1340:CLARK-----	30	N/A	4e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
	30	N/A	4e	Not prime farmland	B	Limy Upland (pe21-28)	3	.28	.28	5	4L	86
1341:CASE-----	60	N/A	6e	Not prime farmland	B	Limy Upland (pe24-32)	8	.32	.32	5	4L	86
	60	N/A	6e	Not prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
1341:CLARK-----	40	N/A	6e	Not prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
	40	N/A	4e	Not prime farmland	B	Limy Upland (pe21-28)	3	.28	.28	5	4L	86
1725:FARNUM-----	100	1-	2c	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
	60	1-	2c	Not prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
1725:CARWILE----	40	N/A	2w	Not prime farmland	D	Sandy (pe21-28)	1	.24	.24	5	3	86
1725:FUNMAR-----	40	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	3	.28	.28	5	6	56

Pratt County, Kansas: Maintenance needed  
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
1725:FARNUM-----	40	1-	2c	All areas are prime farmland	B	Loamy Upland (pe21-28)	4	.28	.28	5	6	56
1726:FARNUM-----	100	2e-	2e	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
	40	1-	2c	All areas are prime farmland	B	Loamy Upland (pe21-28)	4	.28	.28	5	6	56
1726:FUNMAR-----	40	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	3	.28	.28	5	6	56
1985:NARON-----	100	N/A	4e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
1985:PRATT-----	100	3e-	4e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
1985:HAYES-----	60	3e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
1986:PRATT-----	60	3e-	4e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
1986:HAYES-----	55	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.17	.17	5	2	134
1986:CARWILE----	40	N/A	2w	Not prime farmland	D	Sandy (pe21-28)	1	.24	.24	5	3	86
1986:SOLVAY-----	20	N/A	2e	Not prime farmland	D	Subirrigated (pe21-28)	5	.17	.17	5	2	134
1987:HAYES-----	40	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.17	.17	5	2	134
1987:TURON-----	35	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
1988:PRATT-----	100	N/A	6e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
1988:HAYES-----	70	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
2556:PRATT-----	60	N/A	6e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
2556:LANGDON----	50	N/A	6e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.15	.15	5	1	220
2556:TIVOLI-----	40	N/A	7e	Not prime farmland	A	Unspecified	7	.17	.17	5	2	134

Pratt County, Kansas: Maintenance needed  
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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
2948:NALIM-----	80	2e-	2e	All areas are prime farmland	B	Loamy Upland (pe24-32)	3	.28	.28	5	5	56
3051:OST-----	90	N/A	2c	All areas are prime farmland	B	Loamy Upland (pe24-32)	8	.28	.28	5	6	48
3051:CLARK-----	70	N/A	2c	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
3051:OST-----	30	N/A	2c	All areas are prime farmland	B	Loamy Upland (pe24-32)	3	.32	.32	5	6	48
3053:CLARK-----	100	N/A	3e	All areas are prime farmland	B	Limy Upland (pe21-28)	8	.28	.28	5	4L	86
3053:OST-----	100	N/A	2e	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.32	.32	5	6	48
	85	N/A	2c	All areas are prime farmland	B	Loamy Upland (pe24-32)	8	.28	.28	5	6	48
3180:PRATT-----	85	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3181:PRATT-----	45	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3181:TURON-----	30	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3445:SHELLABARGE R-----	100	N/A	3e	All areas are prime farmland	B	Sandy (pe24-32)	5	.20	.20	5	3	86
	100	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3510:NARON-----	100	1-	2c	All areas are prime farmland	B	Sandy (pe21-28)	5	.28	.28	5	5	56
	55	2e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3510:SALTCREEK--	50	1-	3e	All areas are prime farmland	C	Sandy (pe21-28)	5	.20	.20	5	3	86
3510:FARNUM-----	45	1-	2c	All areas are prime farmland	B	Loamy Lowland (pe21-28)	3	.28	.28	5	6	48
3510:FUNMAR-----	30	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	3	.28	.28	5	6	56



Pratt County, Kansas: Maintenance needed  
Field Office Thunderbook: Soils Properties for Conservation Planning

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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
3510:FARNUM----	20	1-	2c	All areas are prime farmland	B	Loamy Upland (pe21-28)	4	.28	.28	5	6	56
3512:CLARK-----	100	N/A	3e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.20	.20	5	3	86
3512:NARON-----	100	2e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
	100	2e-	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.28	.28	5	5	56
3512:SALTCREEK--	50	1-	3e	All areas are prime farmland	C	Sandy (pe21-28)	5	.20	.20	5	3	86
3512:NARON-----	50	3e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3533:SHELLABARGE R-----	100	N/A	2e	All areas are prime farmland	B	Sandy (pe24-32)	5	.20	.20	5	3	86
	85	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3534:SHELLABARGE R-----	100	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
	85	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3540:CARWILE----	100	N/A	2w	Not prime farmland	D	Sandy (pe21-28)	1	.24	.24	5	3	86
3540:SOLVAY-----	90	N/A	2e	Not prime farmland	D	Subirrigated (pe21-28)	5	.17	.17	5	3	86
3639:TABLER-----	100	N/A	2s	All areas are prime farmland	D	Clay Upland (pe21-28)	4C	.43	.43	5	7	38
3639:TAVER-----	90	N/A	2s	All areas are prime farmland	D	Clay Upland (pe21-28)	3	.28	.28	5	6	48
3640:TIVOLI-----	100	N/A	7e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.17	.20	5	1	250
3640:TIVIN-----	95	N/A	6e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.15	.15	5	1	220
3644:TURON-----	65	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3644:CARWAY-----	20	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.17	.17	5	2	134

Pratt County, Kansas: Maintenance needed  
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
3926:WATER-----	100	N/A	N/A			Unspecified		---	---	-	---	---
4005:ALBION-----	70	N/A	6e	Not prime farmland	B	Sandy (pe21-28)	6G	.20	.20	4	3	86
4005:YAGGY-----	60	2e-	3e	Not prime farmland	C	Sandy Lowland (pe21-28)	1	.20	.20	3	3	86
4005:KASKI-----	30	N/A	2w	Not prime farmland	B	Loamy Lowland (pe21-28)	1K	.28	.28	5	6	48
4005:SAXMAN-----	30	2e-	3e	Not prime farmland	A	Sandy Lowland (pe21-28)	1	.20	.20	5	2	134
Ab:ALBION-----	100	N/A	3e	Prime farmland if irrigated	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
Ao:ALBION-----	100	N/A	4e	Not prime farmland	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
As:ALBION-----	50	N/A	6e	Not prime farmland	B	Sandy (pe24-32)	6G	.20	.20	4	3	86
As:SHELLABARGER-	50	N/A	6e	Not prime farmland	B	Sandy (pe24-32)	5	.20	.20	5	3	86
Bc:BLANKET-----	100	N/A	3e	All areas are prime farmland	C	Loamy Upland (pe21-28)	4C	.37	.37	5	6	48
Be:BLANKET-----	100	N/A	1	All areas are prime farmland	C	Loamy Upland (pe21-28)	4C	.37	.37	5	6	48
Bh:BLANKET-----	100	N/A	2e	All areas are prime farmland	C	Loamy Upland (pe21-28)	4C	.37	.37	5	6	48
Br:FLUVENTS-----	100	N/A	6w	Not prime farmland	B	Unspecified		.37	.37	5	4L	86
Ca:CARWILE-----	100	N/A	2w	Not prime farmland	D	Sandy (pe21-28)	1	.24	.24	5	3	86
Cc:CASE-----	70	N/A	4e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.32	.32	5	4L	86
	70	N/A	4e	Not prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
Cc:CLARK-----	30	N/A	4e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
	30	N/A	4e	Not prime farmland	B	Limy Upland (pe21-28)	3	.28	.28	5	4L	86
Ck:CASE-----	60	N/A	6e	Not prime farmland	B	Limy Upland (pe24-32)	8	.32	.32	5	4L	86

Pratt County, Kansas: Maintenance needed  
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Ck:CLARK-----	40	N/A	6e	Not prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
Cm:CLARK-----	100	N/A	3e	All areas are prime farmland	B	Limy Upland (pe21-28)	8	.28	.28	5	4L	86
Cn:CLARK-----	100	N/A	3e	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.20	.20	5	3	86
Co:CLARK-----	70	N/A	2c	All areas are prime farmland	B	Limy Upland (pe24-32)	8	.28	.28	5	4L	86
Co:OST-----	30	N/A	2c	All areas are prime farmland	B	Loamy Upland (pe24-32)	3	.32	.32	5	6	48
Cs:LINCOLN-----	100	N/A	6w	Not prime farmland	A	Sandy Lowland (pe24-32)	1K	.17	.17	5	2	134
Fa:FARNUM-----	100	N/A	4e	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
Fe:FARNUM-----	100	1-	2e	All areas are prime farmland	B	Sandy (pe21-28)	3	.20	.20	5	3	86
Fm:FARNUM-----	100	1-	2c	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
Fn:FARNUM-----	100	2e-	2e	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
Fu:FARNUM-----	100	N/A	3e	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
Fw:FARNUM-----	60	1-	2c	Not prime farmland	B	Loamy Upland (pe21-28)	3	.28	.28	5	6	48
Fw:CARWILE-----	40	N/A	2w	Not prime farmland	D	Sandy (pe21-28)	1	.24	.24	5	3	86
GRP:PITS-----	100	N/A	8s	Not prime farmland	A	Unspecified		.10	.17	2	8	0
INT:AQUOLLS-----	100	N/A	5w	Not prime farmland	C	Unspecified		---	---	-	---	0
Kp:KANZA-----	50	N/A	5w	Not prime farmland	D	Unspecified	2	.17	.17	5	2	134
Kp:PLEVNA-----	50	N/A	5w	Not prime farmland	D	Subirrigated (pe21-28)	2	.20	.20	5	3	86
Ks:ELANDCO-----	100	N/A	2w	All areas are prime farmland	B	Loamy Lowland (pe21-28)	1	.43	.43	5	6	48

Pratt County, Kansas: Maintenance needed  
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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Kw:ELANDCO-----	100	N/A	5w	Not prime farmland	B	Loamy Lowland (pe21-28)	1	.43	.43	5	6	48
Nd:NARON-----	100	1-	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
Nf:NARON-----	100	2e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
Ng:NARON-----	100	N/A	4e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
Nk:NARON-----	100	1-	2c	All areas are prime farmland	B	Sandy (pe21-28)	5	.28	.28	5	5	56
Nm:NARON-----	100	2e-	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.28	.28	5	5	56
Nn:NARON-----	55	2e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
Nn:FARNUM-----	45	1-	2c	All areas are prime farmland	B	Loamy Lowland (pe21-28)	3	.28	.28	5	6	48
Oc:OST-----	100	N/A	2c	All areas are prime farmland	B	Loamy Lowland (pe21-28)	3	.32	.32	5	6	48
Os:OST-----	100	N/A	2e	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.32	.32	5	6	48
PRR:PRATT-----	100	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
PSS:PRATT-----	100	3e-	4e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
PTT:PRATT-----	60	N/A	6e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
PTT:TIVOLI-----	40	N/A	7e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
Pm:PRATT-----	100	3e-	4e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
Pn:PRATT-----	100	N/A	6e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
Po:PRATT-----	60	3e-	4e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
Po:CARWILE-----	40	N/A	2w	Not prime farmland	D	Sandy (pe21-28)	1	.24	.24	5	3	86

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Pt:PRATT-----	60	N/A	6e	Not prime farmland	A	Sands (pe21-28)	7	.17	.17	5	2	134
Pt:TIVOLI-----	40	N/A	7e	Not prime farmland	A	Unspecified	7	.17	.17	5	2	134
Sa:ALBION-----	70	N/A	6e	Not prime farmland	B	Sandy (pe21-28)	6G	.20	.20	4	3	86
Sa:KASKI-----	30	N/A	2w	Not prime farmland	B	Loamy Lowland (pe21-28)	1K	.28	.28	5	6	48
Sb:SHELLABARGER-	100	N/A	2e	All areas are prime farmland	B	Sandy (pe24-32)	5	.20	.20	5	3	86
Se:SHELLABARGER-	100	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
Sf:SHELLABARGER-	100	N/A	3e	All areas are prime farmland	B	Sandy (pe24-32)	5	.20	.20	5	3	86
Ta:TABLER-----	100	N/A	2s	All areas are prime farmland	D	Clay Upland (pe21-28)	4C	.43	.43	5	7	38
Tf:TIVOLI-----	100	N/A	7e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.17	.20	5	1	250
W:WATER-----	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	0
Wa:WALDECK-----	100	N/A	3w	All areas are prime farmland	C	Subirrigated (pe24-32)	1K	.20	.20	4	3	86
Wd:KINGMAN-----	100	N/A	5w	Not prime farmland	D	Subirrigated (pe21-28)	2	.32	.32	5	4L	86
Ze:ZENDA-----	100	N/A	2w	All areas are prime farmland	C	Subirrigated (pe21-28)	1	.28	.28	5	6	48
Zs:ZENDA-----	50	N/A	4s	Not prime farmland	C	Subirrigated (pe21-28)	1	.28	.28	5	6	48
Zs:DRUMMOND-----	50	N/A	6s	Not prime farmland	D	Saline Lowland (pe21-28)	9W	.49	.49	2	4L	86

RANGELAND PRODUCTIVITY  
Pratt County, Kansas

### Use and Explanation of Rangeland, Grazed Forest Land, Native Pastureland Interpretations

Information in this subsection can be used to plan the use and management of soils for rangeland, grazed forest land, and native pasture. Different kinds of soils vary in their capacity to produce native grasses and other plants suitable for grazing. Information in this subsection provides groupings of similar soils and estimates of potential forage production, which can be used to determine livestock stocking rates.

**Rangeland.** Range is land on which the native vegetation (climax or natural potential plant community) is predominantly grasses, grasslike plants, forbs, and shrubs suitable for grazing and browsing. Range includes natural grasslands, savannas, many wetlands, some deserts, tundra, and certain shrub and forb communities. Rangeland receives no regular or frequent cultural treatment. The composition and production of the plant community are determined by soil, climate, topography, overstory canopy, and grazing management.

**Grazed Forest Land.** Includes land on which the understory includes, as an integral part of the forest plant community, plants that can be grazed without significantly impairing other forest values.

**Native Pasture.** Includes land on which the native vegetation (climax or natural potential plant community) is forest but which is used and managed primarily for production of native plants for forage. Native pasture includes cut-over forest land and forest land cleared and now managed for native or naturalized forage plants.

#### Rangeland

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management based on the relationship between the soils and vegetation and water.

The Rangeland, Grazed Forest land, Native Pastureland Interpretations shows, for each soil that supports rangeland vegetation, the ecological site and the potential annual production of vegetation in favorable, normal, unfavorable years. An explanation of the column headings in this table follows.

An ecological site is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of a site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Total dry-weight production is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, average, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the National Range and Pasture Handbook, which is available in local offices of the Natural Resources Conservation Service. The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

RANGELAND PRODUCTIVITY--Continued  
Pratt County, Kansas

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
007AE:				
Albion-----	Sandy (pe20-25)	4,000	3,000	2,000
Shellabarger-----	Sandy (pe20-25)	4,500	3,200	2,000
007CC:				
Case-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Clark-----	Limy Upland (pe24-32)	5,000	4,000	3,000
007LN:				
Lincoln-----	Sandy Lowland (pe20-25)	3,000	2,300	1,800
007SB:				
Shellabarger-----	Sandy (pe20-25)	4,500	3,200	2,000
047PG:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
095AB:				
Albion-----	Sandy (pe24-32)	4,000	3,000	2,000
095DA:				
Dillwyn-----	Subirrigated (pe24-32)	9,000	8,000	7,000
Plevna-----	Subirrigated (pe24-32)	9,000	8,000	7,000
097AS:				
Albion-----	Sandy (pe20-25)	4,000	3,000	2,000
Shellabarger-----	Sandy (pe20-25)	4,500	3,200	2,000
097CE:				
Case-----	Limy Upland (pe20-25)	5,000	4,000	3,000
097CK:				
Clark-----	Limy Upland (pe20-25)	5,000	4,000	3,000
097CM:				
Clark-----	Limy Upland (pe20-25)	5,000	4,000	3,000
1005:				
Albion-----	Sandy (pe21-28)	4,000	3,000	2,000
1006:				
Albion-----	Sandy (pe21-28)	4,000	3,000	2,000
1017:				
Shellabarger, Eroded-----	Sandy (pe21-28)	4,000	3,000	2,000
Albion-----	Sandy (pe21-28)	4,000	3,000	2,000
1324:				
Carway-----	Subirrigated (pe21-28)	9,500	8,500	7,500
Carbika-----	Subirrigated (pe21-28)	9,500	8,500	7,500
1340:				
Case-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Clark-----	Limy Upland (pe21-28)	4,500	3,500	3,000
1341:				
Case-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Clark-----	Limy Upland (pe21-28)	4,500	3,500	3,000
1725:				
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Funmar-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
1726:				
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Funmar-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
1985:				
Hayes-----	Sandy (pe21-28)	4,000	3,000	2,000
1986:				
Hayes-----	Sandy (pe21-28)	4,000	3,000	2,000
Solvay-----	Subirrigated (pe21-28)	9,500	8,500	7,500
1987:				
Hayes-----	Sandy (pe21-28)	4,000	3,000	2,000
Turon-----	Sands (pe21-28)	4,500	3,500	2,500
1988:				
Hayes-----	Sandy (pe21-28)	4,000	3,000	2,000
2556:				
Langdon-----	Choppy Sands (pe21-28)	3,000	2,150	1,550
2948:				
Nalim-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
3051:				
Ost-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
3053:				
Ost-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
3180:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
3181:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Turon-----	Sands (pe21-28)	4,500	3,500	2,500
3445:				
Shellabarger, Moderately Eroded---	Sandy (pe21-28)	4,000	3,000	2,000
3510:				
Saltcreek-----	Sandy (pe21-28)	4,000	3,000	2,000
Funmar-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
3512:				
Saltcreek-----	Sandy (pe21-28)	4,000	3,000	2,000
Naron-----	Sandy (pe21-28)	4,000	3,000	2,000
3533:				
Shellabarger-----	Sandy (pe21-28)	4,000	3,000	2,000
3534:				
Shellabarger-----	Sandy (pe21-28)	4,000	3,000	2,000
3540:				

RANGELAND PRODUCTIVITY--Continued  
Pratt County, Kansas

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Solvay-----	Subirrigated (pe21-28)	9,500	8,500	7,500
3639:				
Taver-----	Clay Upland (pe21-28)	5,000	3,500	2,500
3640:				
Tivin-----	Choppy Sands (pe21-28)	3,000	2,150	1,550
3644:				
Turon-----	Sands (pe21-28)	4,500	3,500	2,500
Carway-----	Subirrigated (pe21-28)	9,500	8,500	7,500
3926:				
Water-----	---	---	---	---
4005:				
Yaggy-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
Saxman-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
Ab:				
Albion-----	Sandy (pe24-32)	4,000	3,000	2,000
Ao:				
Albion-----	Sandy (pe24-32)	4,000	3,000	2,000
As:				
Albion-----	Sandy (pe24-32)	4,000	3,000	2,000
Shellabarger-----	Sandy (pe24-32)	4,500	3,200	2,000
Bc:				
Blanket-----	Loamy Upland (pe21-28)	6,500	5,000	3,000
Be:				
Blanket-----	Loamy Upland (pe21-28)	6,500	5,000	3,000
Bh:				
Blanket-----	Loamy Upland (pe21-28)	6,500	5,000	3,000
Br:				
Fluvents-----	---	---	---	---
Ca:				
Carwile-----	Sandy (pe21-28)	5,000	3,800	3,000
Cc:				
Case-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Clark-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Ck:				
Case-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Clark-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Cm:				
Clark-----	Limy Upland (pe21-28)	5,000	4,000	3,000
Cn:				
Clark-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Co:				
Clark-----	Limy Upland (pe24-32)	5,000	4,000	3,000
Ost-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
Cs:				
Lincoln-----	Sandy Lowland (pe24-32)	3,000	2,300	1,800
Fa:				
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Fe:				
Farnum-----	Sandy (pe21-28)	5,000	3,500	2,500
Fm:				
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Fn:				
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Fu:				
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Fw:				
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Carwile-----	Sandy (pe21-28)	5,000	3,800	3,000
GRP:				
Pits-----	---	---	---	---
INT:				
Aquolls-----	---	---	---	---
Kp:				
Kanza-----	---	---	---	---
Plevna-----	Subirrigated (pe21-28)	9,000	8,000	7,000
Ks:				
Elandco-----	Loamy Lowland (pe21-28)	6,500	5,000	3,500
Kw:				
Elandco-----	Loamy Lowland (pe21-28)	6,500	5,000	3,500
Nd:				
Naron-----	Sandy (pe21-28)	4,500	3,000	2,000
Nf:				
Naron-----	Sandy (pe21-28)	4,500	3,000	2,000
Ng:				
Naron-----	Sandy (pe21-28)	4,500	3,000	2,000
Nk:				
Naron-----	Sandy (pe21-28)	5,000	3,500	2,000
Nm:				
Naron-----	Sandy (pe21-28)	5,000	3,500	2,000
Nn:				
Naron-----	Sandy (pe21-28)	4,500	3,000	2,000
Farnum-----	Loamy Lowland (pe21-28)	5,500	4,000	2,500
Oc:				
Ost-----	Loamy Lowland (pe21-28)	5,500	4,000	2,500
Os:				



RANGELAND PRODUCTIVITY--Continued  
Pratt County, Kansas

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Ost-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Pm:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Pn:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Po:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Carwile-----	Sandy (pe21-28)	5,000	3,800	3,000
PRR:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
PSS:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Pt:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Tivoli-----	---	---	---	---
PTT:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Tivoli-----	Sands (pe21-28)	2,000	1,400	1,000
Sa:				
Albion-----	Sandy (pe21-28)	4,000	3,000	2,000
Kaski-----	Loamy Lowland (pe21-28)	7,000	6,000	4,500
Sb:				
Shellabarger-----	Sandy (pe24-32)	4,500	3,200	2,000
Se:				
Shellabarger-----	Sandy (pe21-28)	4,500	3,200	2,000
Sf:				
Shellabarger-----	Sandy (pe24-32)	4,500	3,200	2,000
Ta:				
Tabler-----	Clay Upland (pe21-28)	3,800	2,600	1,800
Tf:				
Tivoli-----	Choppy Sands (pe21-28)	2,000	1,400	1,000
W:				
Water-----	---	---	---	---
Wa:				
Waldeck-----	Subirrigated (pe24-32)	9,000	8,000	7,000
Wd:				
Kingman-----	Subirrigated (pe21-28)	9,000	8,000	7,000
Ze:				
Zenda-----	Subirrigated (pe21-28)	9,000	8,000	7,000
Zs:				
Drummond-----	Saline Lowland (pe21-28)	7,000	5,800	5,000
Zenda-----	Subirrigated (pe21-28)	9,000	8,000	7,000

BUILDING SITE DEVELOPMENT  
Pratt County, Kansas

### Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. These tables show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
007CC: Case-----	50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50 0.00
Clark-----	50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.00
007LN: Lincoln-----	100	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.03	Very limited Flooding	1.00
007SB: Shellabarger-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
047PG: Pratt-----	100	Not limited		Not limited		Not limited	
095AB: Albion-----	100	Not limited		Not limited		Not limited	
095DA: Dillwyn-----	60	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Plevna-----	40	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
097AS: Albion-----	65	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
097CE: Case-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
097CK: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
097CM: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
1005: Albion-----	75	Not limited		Not limited		Not limited	
1006: Albion-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
1017: Shellabarger, Eroded	40	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Albion-----	45	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
1324: Carway-----	50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00 1.00
Carbika-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
1340: Case-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.48
Clark-----	30	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.48

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1341: Case-----	60	Somewhat limited Shrink-swell Slope	0.50 0.37	Somewhat limited Shrink-swell Slope	0.50 0.37	Very limited Slope Shrink-swell	1.00 0.50
Clark-----	40	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 0.50
1725: Farnum-----	40	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Funmar-----	40	Not limited		Somewhat limited Shrink-swell	0.50	Not limited	
1726: Farnum-----	40	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Funmar-----	40	Not limited		Somewhat limited Shrink-swell	0.50	Not limited	
1985: Hayes-----	60	Not limited		Very limited Shrink-swell	1.00	Not limited	
1986: Hayes-----	55	Not limited		Very limited Shrink-swell	1.00	Not limited	
Solvay-----	20	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
1987: Hayes-----	40	Not limited		Very limited Shrink-swell	1.00	Not limited	
Turon-----	35	Not limited		Not limited		Not limited	
1988: Hayes-----	70	Not limited		Very limited Shrink-swell	1.00	Somewhat limited Slope	0.48
2556: Langdon-----	50	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
2948: Nalim-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
3051: Ost-----	90	Not limited		Not limited		Not limited	
3053: Ost-----	85	Not limited		Not limited		Not limited	
3180: Pratt-----	85	Not limited		Not limited		Somewhat limited Slope	0.86
3181: Pratt-----	45	Not limited		Not limited		Not limited	
Turon-----	30	Not limited		Not limited		Not limited	
3445: Shellabarger, Moderately Eroded--	100	Not limited		Not limited		Somewhat limited Slope	0.00
3510: Saltcreek-----	50	Not limited		Very limited Shrink-swell	1.00	Not limited	
Funmar-----	30	Not limited		Somewhat limited Shrink-swell	0.50	Not limited	
Farnum-----	20	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
3512: Saltcreek-----	50	Not limited		Very limited Shrink-swell	1.00	Not limited	
Naron-----	50	Not limited		Not limited		Not limited	
3533: Shellabarger-----	85	Not limited		Not limited		Not limited	
3534: Shellabarger-----	85	Not limited		Not limited		Not limited	
3540: Solvay-----	90	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
3639: Taver-----	90	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
3640: Tivin-----	95	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3644: Turon-----	65	Not limited		Not limited		Somewhat limited Slope	0.00
Carway-----	20	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
3926: Water-----	100	Not rated		Not rated		Not rated	
4005: Yaggy-----	60	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.95	Very limited Flooding	1.00
Saxman-----	30	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding	1.00
Ab: Albion-----	100	Not limited		Not limited		Not limited	
AO: Albion-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
As: Albion-----	50	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
Shellabarger-----	50	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
Bc: Blanket-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Be: Blanket-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Bh: Blanket-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Br: Fluvents-----	100	Very limited Flooding Slope Shrink-swell	1.00 1.00 0.50	Very limited Flooding Slope Shrink-swell	1.00 1.00 0.50	Very limited Flooding Slope Shrink-swell	1.00 1.00 0.50
Ca: Carwile-----	100	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Cc: Case-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
Clark-----	30	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
Ck: Case-----	60	Somewhat limited Shrink-swell Slope	0.50 0.37	Somewhat limited Shrink-swell Slope	0.50 0.37	Very limited Slope Shrink-swell	1.00 0.50
Clark-----	40	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 0.50
Cm: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Cn: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Co: Clark-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Ost-----	30	Not limited		Not limited		Not limited	

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Cs: Lincoln-----	100	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.03	Very limited Flooding	1.00
Fa: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
Fe: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Fm: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
Fn: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Fu: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
Fw: Farnum-----	60	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Carwile-----	40	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00
GRP: Pits-----	100	Not rated		Not rated		Not rated	
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Kp: Kanza-----	50	Very limited Flooding Depth to saturated zone	1.00 0.98	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.98
Plevna-----	50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Ks: Elandco-----	100	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50
Kw: Elandco-----	100	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50
Ng: Naron-----	100	Not limited		Not limited		Not limited	
Nf: Naron-----	100	Not limited		Not limited		Not limited	
Ng: Naron-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
Nk: Naron-----	100	Not limited		Not limited		Not limited	
Nm: Naron-----	100	Not limited		Not limited		Not limited	
Nn: Naron-----	55	Not limited		Not limited		Not limited	
Farnum-----	45	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Oc: Ost-----	100	Not limited		Not limited		Not limited	
Os: Ost-----	100	Not limited		Not limited		Not limited	
Pm: Pratt-----	100	Not limited		Not limited		Somewhat limited Slope	0.48

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Pn: Pratt-----	100	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Po: Pratt-----	60	Not limited		Not limited		Somewhat limited Slope	0.48
Carwile-----	40	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00
PRR: Pratt-----	100	Not limited		Not limited		Not limited	
PSS: Pratt-----	100	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
Pt: Pratt-----	60	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Tivoli-----	40	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
PTT: Pratt-----	60	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Tivoli-----	40	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Sa: Albion-----	70	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
Kaski-----	30	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding	1.00	Very limited Flooding Shrink-swell	1.00 0.50
Sb: Shellabarger-----	100	Not limited		Not limited		Not limited	
Se: Shellabarger-----	100	Not limited		Not limited		Not limited	
Sf: Shellabarger-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
Ta: Tabler-----	100	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
Tf: Tivoli-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.95	Very limited Flooding	1.00
Wd: Kingman-----	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Ze: Zenda-----	100	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.95 0.50	Very limited Flooding Shrink-swell	1.00 0.50
Zs: Drummond-----	50	Very limited Shrink-swell	1.00	Somewhat limited Depth to saturated zone	0.95	Very limited Shrink-swell	1.00
Zenda-----	50	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.95 0.50	Very limited Flooding Shrink-swell	1.00 0.50

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope Cutbanks cave	0.16 0.10	Somewhat limited Slope	0.16
007CC: Case-----	50	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Clark-----	50	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
007LN: Lincoln-----	100	Very limited Flooding	1.00	Very limited Cutbanks cave Flooding Depth to saturated zone	1.00 0.80 0.03	Very limited Flooding Droughty	1.00 0.89
007SB: Shellabarger-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
047PG: Pratt-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
095AB: Albion-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
095DA: Dillwyn-----	60	Somewhat limited Depth to saturated zone	0.19	Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.22
				Depth to saturated zone	1.00	Depth to saturated zone	0.19
Plevna-----	40	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
				Flooding	0.80		
097AS: Albion-----	65	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope Cutbanks cave	0.16 0.10	Somewhat limited Slope	0.16
097CE: Case-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
097CK: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
097CM: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
1005: Albion-----	75	Not limited		Very limited Cutbanks cave	1.00	Not limited	
1006: Albion-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
1017: Shellabarger, Eroded	40	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
Albion-----	45	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16



BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1324: Carway-----	50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Carbika-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave Too clayey	1.00 1.00 0.10 0.00	Very limited Ponding Depth to saturated zone	1.00 1.00
1340: Case-----	70	Somewhat limited Low strength Shrink-swell	0.78 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Clark-----	30	Somewhat limited Low strength Shrink-swell	0.78 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
1341: Case-----	60	Somewhat limited Low strength Shrink-swell Slope	0.78 0.50 0.37	Somewhat limited Slope Cutbanks cave	0.37 0.10	Somewhat limited Slope	0.37
Clark-----	40	Somewhat limited Low strength Shrink-swell Slope	0.78 0.50 0.16	Somewhat limited Slope Cutbanks cave	0.16 0.10	Somewhat limited Slope	0.16
1725: Farnum-----	40	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Funmar-----	40	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
1726: Farnum-----	40	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Funmar-----	40	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
1985: Hayes-----	60	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.02	Not limited	
1986: Hayes-----	55	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.02	Not limited	
Solvay-----	20	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.95	Not limited	
1987: Hayes-----	40	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.02	Not limited	
Turon-----	35	Not limited		Very limited Cutbanks cave Too clayey	1.00 0.01	Not limited	
1988: Hayes-----	70	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.02	Not limited	
2556: Langdon-----	50	Somewhat limited Slope	0.00	Very limited Cutbanks cave Slope	1.00 0.00	Somewhat limited Droughty Slope	0.97 0.00
2948: Nalim-----	80	Very limited Low strength Shrink-swell	1.00 0.50	Very limited Cutbanks cave	1.00	Not limited	
3051: Ost-----	90	Somewhat limited Low strength	0.78	Somewhat limited Cutbanks cave	0.10	Not limited	
3053: Ost-----	85	Somewhat limited Low strength	0.78	Somewhat limited Cutbanks cave	0.10	Not limited	

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3180: Pratt-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3181: Pratt-----	45	Not limited		Very limited Cutbanks cave	1.00	Not limited	
Turon-----	30	Not limited		Very limited Cutbanks cave Too clayey	1.00 0.01	Not limited	
3445: Shellabarger, Moderately Eroded--	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3510: Saltcreek-----	50	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.00	Not limited	
Funmar-----	30	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
Farnum-----	20	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
3512: Saltcreek-----	50	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.00	Not limited	
Naron-----	50	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3533: Shellabarger-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3534: Shellabarger-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3540: Solvay-----	90	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.95	Not limited	
3639: Taver-----	90	Very limited Low strength Shrink-swell	1.00 1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
3640: Tivin-----	95	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.98
3644: Turon-----	65	Not limited		Very limited Cutbanks cave Too clayey	1.00 0.01	Not limited	
Carway-----	20	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
3926: Water-----	100	Not rated		Not rated		Not rated	
4005: Yaggy-----	60	Very limited Flooding	1.00	Very limited Cutbanks cave Depth to saturated zone Flooding Depth to dense layer	1.00 0.95 0.60 0.50	Somewhat limited Flooding Droughty	0.60 0.04
Saxman-----	30	Somewhat limited Flooding	0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Somewhat limited Droughty	0.15
Ab: Albion-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
Ao: Albion-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
As: Albion-----	50	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Slope	0.37
Shellabarger-----	50	Somewhat limited Slope	0.37	Somewhat limited Slope Cutbanks cave	0.37 0.10	Somewhat limited Slope	0.37
Bc: Blanket-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave Too clayey	0.10 0.03	Not limited	
Be: Blanket-----	100	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave Too clayey	0.10 0.03	Not limited	
Bh: Blanket-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave Too clayey	0.10 0.03	Not limited	
Br: Fluents-----	100	Very limited Flooding Slope Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Slope Flooding Cutbanks cave	1.00 0.80 0.10	Very limited Flooding Slope	1.00 1.00
Ca: Carwile-----	100	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	1.00 1.00 0.28 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Cc: Case-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Clark-----	30	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Ck: Case-----	60	Somewhat limited Shrink-swell Slope	0.50 0.37	Somewhat limited Slope Cutbanks cave	0.37 0.10	Somewhat limited Slope	0.37
Clark-----	40	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Slope Cutbanks cave	0.16 0.10	Somewhat limited Slope	0.16
Cm: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Cn: Clark-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Co: Clark-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Ost-----	30	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Cs: Lincoln-----	100	Very limited Flooding	1.00	Very limited Cutbanks cave Flooding Depth to saturated zone	1.00 0.60 0.03	Somewhat limited Droughty Flooding	0.92 0.60
Fa: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Fe: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Fm: Farnum-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Fn: Farnum-----	100	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Fu: Farnum-----	100	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Fw: Farnum-----	60	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Carwile-----	40	Very limited Depth to saturated zone Shrink-swell Low strength	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 0.28 0.10	Very limited Depth to saturated zone	1.00
GRP: Pits-----	100	Not rated		Not rated		Not rated	
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
Kp: Kanza-----	50	Very limited Flooding Depth to saturated zone	1.00 0.75	Very limited Cutbanks cave Depth to saturated zone Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Droughty	1.00 0.75 0.02
Plevna-----	50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	1.00 1.00
Ks: Elandco-----	100	Very limited Flooding Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Flooding Cutbanks cave	0.60 0.10	Somewhat limited Flooding	0.60
Kw: Elandco-----	100	Very limited Flooding Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Flooding Cutbanks cave	0.80 0.10	Very limited Flooding	1.00
Nd: Naron-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Nf: Naron-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Ng: Naron-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Nk: Naron-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Nm: Naron-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Nn: Naron-----	55	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Farnum-----	45	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Oc: Ost-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Os: Ost-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Pm: Pratt-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
Pn: Pratt-----	100	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Po: Pratt-----	60	Not limited		Very limited Cutbanks cave	1.00	Not limited	
Carwile-----	40	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 0.28 0.10	Very limited Depth to saturated zone	1.00
PRR: Pratt-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
PSS: Pratt-----	100	Somewhat limited Slope	0.00	Very limited Cutbanks cave Slope	1.00 0.00	Somewhat limited Slope	0.00
Pt: Pratt-----	60	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
Tivoli-----	40	Somewhat limited Slope	0.63	Very limited Cutbanks cave Slope	1.00 0.63	Somewhat limited Droughty Slope	0.97 0.63
PTT: Pratt-----	60	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
Tivoli-----	40	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Droughty Slope	0.96 0.16
Sa: Albion-----	70	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Slope	0.37
Kaski-----	30	Very limited Flooding Shrink-swell	1.00 0.50	Somewhat limited Flooding Cutbanks cave	0.60 0.10	Somewhat limited Flooding	0.60
Sb: Shellabarger-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Se: Shellabarger-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Sf: Shellabarger-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Ta: Tabler-----	100	Very limited Shrink-swell	1.00	Somewhat limited Too clayey Cutbanks cave	0.28 0.10	Not limited	
Tf: Tivoli-----	100	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 1.00
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Very limited Flooding	1.00	Very limited Cutbanks cave Depth to saturated zone Flooding	1.00 0.95 0.60	Somewhat limited Flooding	0.60
Wd: Kingman-----	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.60 0.10	Very limited Depth to saturated zone Flooding	1.00 0.60
Ze: Zenda-----	100	Very limited Flooding Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Depth to saturated zone Flooding Cutbanks cave	0.95 0.60 0.10	Somewhat limited Flooding	0.60

BUILDING SITE DEVELOPMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Zs: Drummond-----	50	Very limited Shrink-swell	1.00	Somewhat limited Depth to saturated zone Too clayey Cutbanks cave	0.95 0.28 0.10	Very limited Salinity Droughty	1.00 0.68
Zenda-----	50	Very limited Flooding Shrink-swell	1.00 0.50	Somewhat limited Depth to saturated zone Flooding Cutbanks cave	0.95 0.60 0.10	Somewhat limited Flooding	0.60

CONSTRUCTION MATERIALS  
Pratt County, Kansas

### Construction Materials

These tables give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a probable or improbable source of sand and gravel. A rating of probable means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the first table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
007AE: Albion-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.91
Shellabarger-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.05 0.10
007CC: Case-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Clark-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
007LN: Lincoln-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.22
007SB: Shellabarger-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.09
047PG: Pratt-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
095AB: Albion-----	100	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.49
095DA: Dillwyn-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.18 0.18
Plevna-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
097AS: Albion-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.91
Shellabarger-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.05 0.10
097CE: Case-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
097CK: Clark-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
097CM: Clark-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1005: Albion-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.90



CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1006: Albion-----	100	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.90
1017: Shellabarger, Eroded	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
Albion-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.90
1324: Carway-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Carbika-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1340: Case-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Clark-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1341: Case-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Clark-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1725: Farnum-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Funmar-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1726: Farnum-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Funmar-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1985: Hayes-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1986: Hayes-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Solvay-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.44
1987: Hayes-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Turon-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
1988: Hayes-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
2556: Langdon-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.50 0.50
2948: Nalim-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.98
3051: Ost-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3053: Ost-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3180: Pratt-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.84 0.86
3181: Pratt-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.84 0.86
Turon-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
3445: Shellabarger, Moderately Eroded--	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
3510: Saltcreek-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Funmar-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Farnum-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3512: Saltcreek-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Naron-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.55
3533: Shellabarger-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
3534: Shellabarger-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
3540: Solvay-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.44
3639: Taver-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.00
3640: Tivin-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Good	
3644: Turon-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
Carway-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3926: Water-----	100	Not rated		Not rated	
4005: Yaggy-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.16
Saxman-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.50
Ab: Albion-----	100	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.91
Ao: Albion-----	100	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.91
As: Albion-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Fair Bottom layer Thickest layer	0.01 0.09
Shellabarger-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.09
Bc: Blanket-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Be: Blanket-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Bh: Blanket-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Br: Fluvents-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ca: Carwile-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Cc: Case-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Clark-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ck: Case-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Clark-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Cm: Clark-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Cn: Clark-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.08
Co: Clark-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ost-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Cs: Lincoln-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.22 0.39
Fa: Farnum-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06
Fe: Farnum-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06
Fm: Farnum-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06
Fn: Farnum-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06
Fu: Farnum-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Fw: Farnum-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06
Carwile-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02
GRP: Pits-----	100	Not rated		Not rated	
INT: Aquolls-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Kp: Kanza-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.57 0.98
Plevna-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
Ks: Elandco-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Kw: Elandco-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Nd: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
Nf: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
Ng: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
Nk: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
Nm: Naron-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
Nn: Naron-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.08
Farnum-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06
Oc: Ost-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Os: Ost-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Pm: Pratt-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Pn: Pratt-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Po: Pratt-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Carwile-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02
PRR: Pratt-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.44
PSS: Pratt-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Pt: Pratt-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.19 0.57
Tivoli-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.57 0.99
PTT: Pratt-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.57
Tivoli-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.57 0.99
Sa: Albion-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.91
Kaski-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.09
Sb: Shellabarger-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.09
Se: Shellabarger-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.09
Sf: Shellabarger-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.09

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Ta: Tabler-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Tf: Tivoli-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.99 0.99
W: Water-----	100	Not rated		Not rated	
Wa: Waldeck-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.09
Wd: Kingman-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.08
Ze: Zenda-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Zs: Drummond-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Zenda-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Poor Too sandy Low content of organic matter Too acid	0.00 0.00 0.95	Good		Poor Too sandy Rock fragments  Hard to reclaim Slope	0.00 0.00  0.68 0.84
Shellabarger-----	35	Poor Low content of organic matter Too acid	0.00 0.84	Good		Fair Slope	0.84
007CC: Case-----	50	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.87	Good	
Clark-----	50	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content	0.68
007LN: Lincoln-----	100	Poor Low content of organic matter Droughty Too sandy	0.00 0.06 0.22	Good		Fair Too sandy	0.22
007SB: Shellabarger-----	100	Poor Low content of organic matter Too acid	0.00 0.84	Good		Good	
047PG: Pratt-----	100	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
095AB: Albion-----	100	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Rock fragments  Too sandy Hard to reclaim	0.00 0.00 0.68
095DA: Dillwyn-----	60	Poor Wind erosion  Low content of organic matter Too sandy Droughty	0.00 0.00 0.36 0.79	Fair Depth to saturated zone	0.53	Fair Too sandy  Depth to saturated zone	0.36 0.53
Plevna-----	40	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
097AS: Albion-----	65	Poor Too sandy Low content of organic matter Too acid	0.00 0.00 0.95	Good		Poor Too sandy Rock fragments  Hard to reclaim Slope	0.00 0.00 0.68 0.84
Shellabarger-----	35	Poor Low content of organic matter Too acid	0.00 0.84	Good		Fair Slope	0.84
097CE: Case-----	100	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.87	Good	



CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
097CK: Clark-----	100	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content	0.68
097CM: Clark-----	100	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content	0.68
1005: Albion-----	75	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Too sandy Hard to reclaim Rock fragments	0.00 0.32 0.72
1006: Albion-----	100	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Too sandy Hard to reclaim Rock fragments	0.00 0.32 0.72
1017: Shellabarger, Eroded	40	Fair Low content of organic matter Too acid	0.12 0.84	Good		Fair Slope	0.84
Albion-----	45	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Too sandy Hard to reclaim Rock fragments Slope	0.00 0.32 0.72 0.84
1324: Carway-----	50	Fair Low content of organic matter Too acid No water erosion limitation	0.12 0.95 0.99	Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.89	Poor Depth to saturated zone	0.00
Carbika-----	30	Fair Too clayey Low content of organic matter Too acid No water erosion limitation	0.74 0.88 0.95 0.99	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too Clayey	0.00 0.53
1340: Case-----	70	Fair Low content of organic matter Carbonate content	0.02 0.80	Fair Low strength Shrink-swell	0.22 0.87	Good	
Clark-----	30	Poor Carbonate content Low content of organic matter	0.00 0.02	Fair Low strength Shrink-swell	0.22 0.87	Good	
1341: Case-----	60	Fair Low content of organic matter Carbonate content	0.02 0.80	Fair Low strength Shrink-swell	0.22 0.87	Fair Slope	0.63
Clark-----	40	Poor Carbonate content Low content of organic matter	0.00 0.02	Fair Low strength Shrink-swell	0.22 0.87	Fair Slope	0.84

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1725: Farnum-----	40	Fair Low content of organic matter Too acid	0.12 0.99	Poor Low strength Shrink-swell	0.00 0.96	Good	
Funmar-----	40	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Poor Low strength	0.00	Good	
1726: Farnum-----	40	Fair Low content of organic matter Too acid	0.12 0.99	Poor Low strength Shrink-swell	0.00 0.96	Good	
Funmar-----	40	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Poor Low strength	0.00	Good	
1985: Hayes-----	60	Fair Low content of organic matter Too acid	0.12 0.97	Poor Low strength	0.00	Good	
1986: Hayes-----	55	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.97	Poor Low strength	0.00	Good	
Solvay-----	20	Poor Wind erosion Low content of organic matter Too acid	0.00 0.04 0.97	Good		Good	
1987: Hayes-----	40	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.97	Poor Low strength	0.00	Good	
Turon-----	35	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
1988: Hayes-----	70	Fair Low content of organic matter Too acid	0.12 0.97	Poor Low strength	0.00	Good	
2556: Langdon-----	50	Poor Wind erosion Low content of organic matter Too sandy Droughty Too acid	0.00 0.00 0.00 0.38 0.61	Good		Poor Too sandy Too acid	0.00 0.99
2948: Nalim-----	80	Fair Low content of organic matter Too acid	0.88 0.95	Fair Shrink-swell	0.94	Fair Hard to reclaim Hard to reclaim	0.01 0.32

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3051: Ost-----	90	Fair Low content of organic matter Carbonate content	0.08 0.68	Good		Fair Carbonate content	0.80
3053: Ost-----	85	Fair Low content of organic matter Carbonate content	0.08 0.68	Good		Fair Carbonate content	0.80
3180: Pratt-----	85	Poor Wind erosion Too sandy Low content of organic matter Too acid	0.00 0.00 0.00 0.74	Good		Poor Too sandy	0.00
3181: Pratt-----	45	Poor Wind erosion Too sandy Low content of organic matter Too acid	0.00 0.00 0.00 0.74	Good		Poor Too sandy	0.00
Turon-----	30	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
3445: Shellabarger, Moderately Eroded--	100	Fair Low content of organic matter Too acid	0.12 0.84	Good		Good	
3510: Saltcreek-----	50	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Funmar-----	30	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Poor Low strength	0.00	Good	
Farnum-----	20	Fair Low content of organic matter Too acid	0.12 0.99	Poor Low strength Shrink-swell	0.00 0.96	Good	
3512: Saltcreek-----	50	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Naron-----	50	Fair Low content of organic matter	0.12	Good		Good	
3533: Shellabarger-----	85	Fair Low content of organic matter Too acid	0.12 0.84	Good		Good	

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3534: Shellabarger-----	85	Fair Low content of organic matter Too acid	0.12 0.84	Good		Good	
3540: Solvay-----	90	Fair Low content of organic matter Too acid	0.04 0.97	Good		Good	
3639: Taver-----	90	Poor Too clayey No water erosion limitation	0.00 0.99	Poor Low strength Shrink-swell	0.00 0.27	Poor Too Clayey	0.00
3640: Tivin-----	95	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.00 0.36 0.99	Good		Poor Too sandy Slope	0.00 0.00
3644: Turon-----	65	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
Carway-----	20	Poor Wind erosion  Low content of organic matter Too acid No water erosion limitation	0.00  0.12 0.95 0.99	Poor Depth to saturated zone Low strength  Shrink-swell	0.00  0.00 0.89	Poor Depth to saturated zone	0.00
3926: Water-----	100	Not rated		Not rated		Not rated	
4005: Yaggy-----	60	Poor Too sandy Low content of organic matter Droughty	0.00 0.00 0.93	Good		Poor Too sandy	0.00
Saxman-----	30	Poor Wind erosion  Low content of organic matter Too sandy Too acid Droughty	0.00  0.00 0.15 0.16 0.89	Fair Depth to saturated zone	0.89	Fair Too sandy  Depth to saturated zone	0.15 0.89
Ab: Albion-----	100	Poor Low content of organic matter Too acid	0.00 0.95	Good		Fair Hard to reclaim  Rock fragments	0.68 0.72
Ao: Albion-----	100	Poor Low content of organic matter Too acid	0.00 0.95	Good		Fair Hard to reclaim  Rock fragments	0.68 0.72

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
As: Albion-----	50	Poor Low content of organic matter Too acid	0.00 0.95	Good		Fair Slope  Hard to reclaim Rock fragments	0.63  0.68 0.72
Shellabarger-----	50	Poor Low content of organic matter Too acid	0.00 0.84	Good		Fair Slope	0.63
Bc: Blanket-----	100	Poor Low content of organic matter Too clayey Water erosion	0.00 0.00 0.90	Fair Shrink-swell	0.87	Poor Too Clayey	0.00
Be: Blanket-----	100	Poor Low content of organic matter Too clayey Water erosion	0.00 0.00 0.90	Poor Low strength  Shrink-swell	0.00 0.90	Poor Too Clayey	0.00
Bh: Blanket-----	100	Poor Low content of organic matter Too clayey Water erosion	0.00 0.00 0.90	Fair Shrink-swell	0.90	Poor Too Clayey	0.00
Br: Fluvents-----	100	Poor Low content of organic matter Water erosion	0.00 0.90	Fair Low strength  Shrink-swell	0.22 0.87	Poor Slope	0.00
Ca: Carwile-----	100	Poor Low content of organic matter Too clayey Too acid No water erosion limitation	0.00 0.00 0.97 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.22	Poor Depth to saturated zone Too Clayey	0.00 0.00
Cc: Case-----	70	Fair Low content of organic matter	0.98	Fair Shrink-swell	0.87	Good	
Clark-----	30	Fair Low content of organic matter	0.98	Fair Shrink-swell	0.87	Good	
Ck: Case-----	60	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.87	Fair Slope	0.63
Clark-----	40	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content Slope	0.68 0.84
Cm: Clark-----	100	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content	0.68
Cn: Clark-----	100	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content	0.68

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Co: Clark-----	70	Poor Low content of organic matter Carbonate content	0.00 0.68	Fair Shrink-swell	0.87	Fair Carbonate content	0.68
Ost-----	30	Poor Low content of organic matter Carbonate content	0.00 0.68	Good		Fair Carbonate content	0.68
Cs: Lincoln-----	100	Poor Wind erosion Droughty Low content of organic matter Too sandy	0.00 0.04 0.08 0.22	Good		Fair Too sandy	0.22
Fa: Farnum-----	100	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.99	Good	
Fe: Farnum-----	100	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.99	Good	
Fm: Farnum-----	100	Poor Low content of organic matter	0.00	Good		Good	
Fn: Farnum-----	100	Poor Low content of organic matter	0.00	Poor Low strength Shrink-swell	0.00 0.97	Good	
Fu: Farnum-----	100	Poor Low content of organic matter	0.00	Poor Low strength Shrink-swell	0.00 0.97	Good	
Fw: Farnum-----	60	Poor Low content of organic matter	0.00	Poor Low strength Shrink-swell	0.00 0.97	Good	
Carwile-----	40	Poor Low content of organic matter Too clayey Too acid No water erosion limitation	0.00 0.00 0.97 0.99	Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.28	Poor Depth to saturated zone Too Clayey	0.00 0.00
GRP: Pits-----	100	Not rated		Not rated		Not rated	
INT: Aquolls-----	100	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Kp: Kanza-----	50	Poor Wind erosion Low content of organic matter Too sandy Droughty Too acid	0.00 0.00 0.00 0.18 0.95	Fair Depth to saturated zone	0.14	Poor Too sandy Depth to saturated zone	0.00 0.14

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Plevna-----	50	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Ks: Elandco-----	100	Poor Low content of organic matter Water erosion	0.00 0.90	Poor Low strength Shrink-swell	0.00 0.87	Good	
Kw: Elandco-----	100	Poor Low content of organic matter Water erosion	0.00 0.90	Poor Low strength Shrink-swell	0.00 0.87	Good	
Nd: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	
Nf: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	
Ng: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	
Nk: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	
Nm: Naron-----	100	Poor Low content of organic matter	0.00	Good		Good	
Nn: Naron-----	55	Poor Low content of organic matter	0.00	Good		Good	
Farnum-----	45	Poor Low content of organic matter	0.00	Poor Low strength Shrink-swell	0.00 0.97	Good	
Oc: Ost-----	100	Poor Low content of organic matter Carbonate content	0.00 0.68	Good		Fair Carbonate content	0.68
Os: Ost-----	100	Poor Low content of organic matter Carbonate content	0.00 0.68	Good		Fair Carbonate content	0.68
Pm: Pratt-----	100	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
Pn: Pratt-----	100	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy Slope	0.00 0.84

CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Po: Pratt-----	60	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
Carwile-----	40	Poor Low content of organic matter Too clayey Too acid No water erosion limitation	0.00 0.00 0.97 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.28	Poor Depth to saturated zone Too Clayey	0.00 0.00
PRR: Pratt-----	100	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
PSS: Pratt-----	100	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy	0.00
Pt: Pratt-----	60	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy Slope	0.00 0.84
Tivoli-----	40	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.02	Good		Poor Too sandy Slope	0.00 0.37
PTT: Pratt-----	60	Poor Wind erosion Low content of organic matter Too sandy	0.00 0.00 0.00	Good		Poor Too sandy Slope	0.00 0.84
Tivoli-----	40	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.02	Good		Poor Too sandy Slope	0.00 0.84
Sa: Albion-----	70	Poor Low content of organic matter Too acid	0.00 0.95	Good		Fair Slope  Hard to reclaim Rock fragments	0.63  0.68 0.72
Kaski-----	30	Good		Fair Shrink-swell	0.99	Good	
Sb: Shellabarger-----	100	Poor Low content of organic matter Too acid	0.00 0.84	Good		Good	
Se: Shellabarger-----	100	Poor Low content of organic matter Too acid	0.00 0.84	Good		Good	



CONSTRUCTION MATERIALS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Sf: Shellabarger-----	100	Poor Low content of organic matter Too acid	0.00 0.84	Good		Good	
Ta: Tabler-----	100	Poor Too clayey Low content of organic matter Water erosion	0.00 0.00 0.90	Fair Shrink-swell	0.12	Poor Too Clayey	0.00
Tf: Tivoli-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.00 0.00	Fair Slope	0.68	Poor Too sandy Slope	0.00 0.00
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Poor Low content of organic matter	0.00	Good		Good	
Wd: Kingman-----	100	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Ze: Zenda-----	100	Poor Low content of organic matter	0.00	Poor Low strength Shrink-swell	0.00 0.87	Good	
Zs: Drummond-----	50	Poor Low content of organic matter Droughty Too clayey Water erosion Salinity	0.00 0.00 0.00 0.68 0.88	Fair		Poor Too Clayey Salinity	0.00 0.00
Zenda-----	50	Poor Low content of organic matter	0.00	Fair Shrink-swell	0.87	Good	

# RECREATIONAL INTERPRETATIONS Pratt County, Kansas

## Recreation

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Gravel content Very limited Slope	0.06 1.00
007CC: Case-----	50	Not limited		Not limited		Somewhat limited Slope	0.50
Clark-----	50	Not limited		Not limited		Somewhat limited Slope	0.50
007LN: Lincoln-----	100	Very limited Flooding	1.00	Somewhat limited Flooding	0.40	Very limited Flooding	1.00
007SB: Shellabarger-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
047PG: Pratt-----	100	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy Slope	0.37 0.13
095AB: Albion-----	100	Not limited		Not limited		Somewhat limited Gravel content Slope	0.06 0.00
095DA: Dillwyn-----	60	Somewhat limited Depth to saturated zone Too sandy	0.39 0.37	Somewhat limited Too sandy Depth to saturated zone	0.37 0.19	Somewhat limited Depth to saturated zone Too sandy	0.39 0.37
Plevna-----	40	Very limited Flooding	1.00	Very limited Depth to saturated zone Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00		0.40	Depth to saturated zone	1.00
097AS: Albion-----	65	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Gravel content Very limited Slope	0.06 1.00
097CE: Case-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
097CK: Clark-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
097CM: Clark-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
1005: Albion-----	75	Somewhat limited Too sandy	0.02	Somewhat limited Too sandy	0.02	Somewhat limited Slope Gravel content Too sandy	0.13 0.06 0.02
1006: Albion-----	100	Somewhat limited Too sandy	0.02	Somewhat limited Too sandy	0.02	Somewhat limited Slope Gravel content Too sandy	0.87 0.06 0.02
1017: Shellabarger, Eroded	40	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Albion-----	45	Somewhat limited Slope Too sandy	0.16 0.02	Somewhat limited Slope Too sandy	0.16 0.02	Very limited Slope Gravel content Too sandy	1.00 0.06 0.02
1324: Carway-----	50	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
Carbika-----	30	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
1340: Case-----	70	Not limited		Not limited		Very limited Slope	1.00
Clark-----	30	Not limited		Not limited		Very limited Slope	1.00
1341: Case-----	60	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
Clark-----	40	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
1725: Farnum-----	40	Not limited		Not limited		Not limited	
Funmar-----	40	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
1726: Farnum-----	40	Not limited		Not limited		Somewhat limited Slope	0.00
Funmar-----	40	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability Slope	0.39 0.00
1985: Hayes-----	60	Not limited		Not limited		Somewhat limited Slope	0.13
1986: Hayes-----	55	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy Slope	0.87 0.13
Solvay-----	20	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37
1987: Hayes-----	40	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy Slope	0.94 0.13
Turon-----	35	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Slope	0.98 0.13
1988: Hayes-----	70	Not limited		Not limited		Very limited Slope	1.00
2556: Langdon-----	50	Very limited Too sandy Slope	1.00 0.00	Very limited Too sandy Slope	1.00 0.00	Very limited Too sandy Slope	1.00 1.00
2948: Nalim-----	80	Not limited		Not limited		Not limited	
3051: Ost-----	90	Not limited		Not limited		Not limited	
3053: Ost-----	85	Not limited		Not limited		Somewhat limited Slope	0.00
3180: Pratt-----	85	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
3181: Pratt-----	45	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.13
Turon-----	30	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Slope	0.98 0.13
3445: Shellabarger, Moderately Eroded--	100	Not limited		Not limited		Somewhat limited Slope	0.50
3510: Saltcreek-----	50	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability Slope	0.39 0.00
Funmar-----	30	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
Farnum-----	20	Not limited		Not limited		Not limited	
3512: Saltcreek-----	50	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Naron-----	50	Not limited		Not limited		Slope Somewhat limited Slope	0.00 0.00
3533: Shellabarger-----	85	Not limited		Not limited		Not limited	
3534: Shellabarger-----	85	Not limited		Not limited		Somewhat limited Slope	0.00
3540: Solvay-----	90	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37
3639: Taver-----	90	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45
3640: Tivin-----	95	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
3644: Turon-----	65	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Slope	0.98 0.50
Carway-----	20	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
		Restricted permeability Too sandy	1.00 0.82	Restricted permeability Too sandy	1.00 0.82	Restricted permeability Too sandy	1.00 0.82
3926: Water-----	100	Not rated		Not rated		Not rated	
4005: Yaggy-----	60	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
Saxman-----	30	Very limited Flooding Too sandy	1.00 0.39	Somewhat limited Too sandy	0.39	Somewhat limited Too sandy	0.39
Ab: Albion-----	100	Not limited		Not limited		Somewhat limited Slope Gravel content	0.13 0.06
Ao: Albion-----	100	Not limited		Not limited		Somewhat limited Slope Gravel content	0.87 0.06
As: Albion-----	50	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope Gravel content	1.00 0.06
Shellabarger-----	50	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
Bc: Blanket-----	100	Not limited		Not limited		Somewhat limited Slope	0.13
Be: Blanket-----	100	Not limited		Not limited		Not limited	
Bh: Blanket-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
Br: Fluents-----	100	Very limited Flooding Slope	1.00 1.00	Very limited Slope Flooding	1.00 0.40	Very limited Flooding Slope	1.00 1.00
Ca: Carwile-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
		Restricted permeability	0.94	Restricted permeability	0.94	Restricted permeability	0.94
Cc: Case-----	70	Not limited		Not limited		Somewhat limited Slope	0.87
Clark-----	30	Not limited		Not limited		Somewhat limited Slope	0.87
Ck: Case-----	60	Somewhat limited		Somewhat limited		Very limited	

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Clark-----	40	Slope Somewhat limited Slope	0.37 0.16	Slope Somewhat limited Slope	0.37 0.16	Slope Very limited Slope	1.00 1.00
Cm: Clark-----	100	Not limited		Not limited		Somewhat limited Slope	0.13
Cn: Clark-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
Co: Clark-----	70	Not limited		Not limited		Not limited	
Ost-----	30	Not limited		Not limited		Not limited	
Cs: Lincoln-----	100	Very limited Flooding Too sandy	1.00 0.79	Somewhat limited Too sandy	0.79	Somewhat limited Too sandy Flooding	0.79 0.60
Fa: Farnum-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
Fe: Farnum-----	100	Not limited		Not limited		Not limited	
Fm: Farnum-----	100	Not limited		Not limited		Not limited	
Fn: Farnum-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
Fu: Farnum-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
Fw: Farnum-----	60	Not limited		Not limited		Not limited	
Carwile-----	40	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
GRP: Pits-----	100	Not rated		Not rated		Not rated	
INT: Aguolls-----	100	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00
Kp: Kanza-----	50	Very limited Flooding Depth to saturated zone Too sandy	1.00 0.98 0.92	Somewhat limited Too sandy Depth to saturated zone Flooding	0.92 0.75 0.40	Very limited Flooding Depth to saturated zone Too sandy	1.00 0.98 0.92
Plevna-----	50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
Ks: Elandco-----	100	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
Kw: Elandco-----	100	Very limited Flooding	1.00	Somewhat limited Flooding	0.40	Very limited Flooding	1.00
Nd: Naron-----	100	Not limited		Not limited		Not limited	
NF: Naron-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
Ng: Naron-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
Nk: Naron-----	100	Not limited		Not limited		Not limited	
Nm: Naron-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
Nn: Naron-----	55	Not limited		Not limited		Somewhat limited Slope	0.00
Farnum-----	45	Not limited		Not limited		Not limited	

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Oc: Ost-----	100	Not limited		Not limited		Not limited	
Os: Ost-----	100	Not limited		Not limited		Somewhat limited Slope	0.13
Pm: Pratt-----	100	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Very limited Slope Too sandy	1.00 0.37
Pn: Pratt-----	100	Somewhat limited Too sandy Slope	0.37 0.16	Somewhat limited Too sandy Slope	0.37 0.16	Very limited Slope Too sandy	1.00 0.37
Po: Pratt-----	60	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Very limited Slope Too sandy	1.00 0.37
Carwile-----	40	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
PRR: Pratt-----	100	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy Slope	0.37 0.13
PSS: Pratt-----	100	Somewhat limited Too sandy Slope	0.37 0.00	Somewhat limited Too sandy Slope	0.37 0.00	Very limited Slope Too sandy	1.00 0.37
Pt: Pratt-----	60	Somewhat limited Too sandy Slope	0.37 0.16	Somewhat limited Too sandy Slope	0.37 0.16	Very limited Slope Too sandy	1.00 0.37
Tivoli-----	40	Somewhat limited Too sandy Slope	0.92 0.63	Somewhat limited Too sandy Slope	0.92 0.63	Very limited Slope Too sandy	1.00 0.92
PTT: Pratt-----	60	Somewhat limited Too sandy Slope	0.37 0.16	Somewhat limited Too sandy Slope	0.37 0.16	Very limited Slope Too sandy	1.00 0.37
Tivoli-----	40	Somewhat limited Too sandy Slope	0.92 0.16	Somewhat limited Too sandy Slope	0.92 0.16	Very limited Slope Too sandy	1.00 0.92
Sa: Albion-----	70	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope Gravel content Somewhat limited Flooding	1.00 0.06 0.60
Kaski-----	30	Very limited Flooding	1.00	Not limited			
Sb: Shellabarger-----	100	Not limited		Not limited		Not limited	
Se: Shellabarger-----	100	Not limited		Not limited		Somewhat limited Slope	0.13
Sf: Shellabarger-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
Ta: Tabler-----	100	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45
Tf: Tivoli-----	100	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
Wd: Kingman-----	100	Very limited Flooding	1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Flooding Restricted permeability	1.00 0.60 0.15

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ze: Zenda-----	100	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
Zs: Drummond-----	50	Very limited Salinity Restricted permeability	1.00 0.45	Very limited Salinity Restricted permeability	1.00 0.45	Very limited Salinity Restricted permeability	1.00 0.45
Zenda-----	50	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60



RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Not limited		Somewhat limited Slope	0.16
Shellabarger-----	35	Not limited		Somewhat limited Slope	0.16
007CC: Case-----	50	Not limited		Not limited	
Clark-----	50	Not limited		Not limited	
007LN: Lincoln-----	100	Somewhat limited Flooding	0.40	Very limited Flooding Droughty	1.00 0.89
007SB: Shellabarger-----	100	Not limited		Not limited	
047PG: Pratt-----	100	Somewhat limited Too sandy	0.37	Not limited	
095AB: Albion-----	100	Not limited		Not limited	
095DA: Dillwyn-----	60	Somewhat limited Too sandy	0.37	Somewhat limited Droughty Depth to saturated zone	0.22 0.19
Plevna-----	40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
097AS: Albion-----	65	Not limited		Somewhat limited Slope	0.16
Shellabarger-----	35	Not limited		Somewhat limited Slope	0.16
097CE: Case-----	100	Not limited		Not limited	
097CK: Clark-----	100	Not limited		Not limited	
097CM: Clark-----	100	Not limited		Not limited	
1005: Albion-----	75	Somewhat limited Too sandy	0.02	Not limited	
1006: Albion-----	100	Somewhat limited Too sandy	0.02	Not limited	
1017: Shellabarger, Eroded	40	Not limited		Somewhat limited Slope	0.16
Albion-----	45	Somewhat limited Too sandy	0.02	Somewhat limited Slope	0.16
1324: Carway-----	50	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Carbika-----	30	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
1340: Case-----	70	Not limited		Not limited	
Clark-----	30	Not limited		Not limited	
1341: Case-----	60	Not limited		Somewhat limited Slope	0.37
Clark-----	40	Not limited		Somewhat limited Slope	0.16
1725: Farnum-----	40	Not limited		Not limited	
Funmar-----	40	Not limited		Not limited	
1726: Farnum-----	40	Not limited		Not limited	
Funmar-----	40	Not limited		Not limited	
1985: Hayes-----	60	Not limited		Not limited	
1986: Hayes-----	55	Somewhat limited Too sandy	0.87	Not limited	

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Solvay-----	20	Somewhat limited Too sandy	0.37	Not limited	
1987:					
Hayes-----	40	Somewhat limited Too sandy	0.94	Not limited	
Turon-----	35	Somewhat limited Too sandy	0.98	Not limited	
1988:					
Hayes-----	70	Not limited		Not limited	
2556:					
Langdon-----	50	Very limited Too sandy	1.00	Somewhat limited Droughty Slope	0.97 0.00
2948:					
Nalim-----	80	Not limited		Not limited	
3051:					
Ost-----	90	Not limited		Not limited	
3053:					
Ost-----	85	Not limited		Not limited	
3180:					
Pratt-----	85	Very limited Too sandy	1.00	Not limited	
3181:					
Pratt-----	45	Very limited Too sandy	1.00	Not limited	
Turon-----	30	Somewhat limited Too sandy	0.98	Not limited	
3445:					
Shellabarger, Moderately Eroded--	100	Not limited		Not limited	
3510:					
Saltcreek-----	50	Not limited		Not limited	
Funmar-----	30	Not limited		Not limited	
Farnum-----	20	Not limited		Not limited	
3512:					
Saltcreek-----	50	Not limited		Not limited	
Naron-----	50	Not limited		Not limited	
3533:					
Shellabarger-----	85	Not limited		Not limited	
3534:					
Shellabarger-----	85	Not limited		Not limited	
3540:					
Solvay-----	90	Somewhat limited Too sandy	0.37	Not limited	
3639:					
Taver-----	90	Not limited		Not limited	
3640:					
Tivin-----	95	Very limited Too sandy Slope	1.00 0.00	Very limited Slope Droughty	1.00 0.98
3644:					
Turon-----	65	Somewhat limited Too sandy	0.98	Not limited	
Carway-----	20	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
		Too sandy	0.82		
3926:					
Water-----	100	Not rated		Not rated	
4005:					
Yaggy-----	60	Not limited		Somewhat limited Flooding Droughty	0.60 0.04
Saxman-----	30	Somewhat limited Too sandy	0.39	Somewhat limited Droughty	0.15
Ab:					
Albion-----	100	Not limited		Not limited	
Ao:					
Albion-----	100	Not limited		Not limited	
As:					
Albion-----	50	Not limited		Somewhat limited Slope	0.37
Shellabarger-----	50	Not limited		Somewhat limited Slope	0.37
Bc:					
Blanket-----	100	Not limited		Not limited	

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Be: Blanket-----	100	Not limited		Not limited	
Bh: Blanket-----	100	Not limited		Not limited	
Br: Fluents-----	100	Somewhat limited Flooding Slope	0.40 0.00	Very limited Flooding Slope	1.00 1.00
Ca: Carwile-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Cc: Case-----	70	Not limited		Not limited	
Clark-----	30	Not limited		Not limited	
Ck: Case-----	60	Not limited		Somewhat limited Slope	0.37
Clark-----	40	Not limited		Somewhat limited Slope	0.16
Cm: Clark-----	100	Not limited		Not limited	
Cn: Clark-----	100	Not limited		Not limited	
Co: Clark-----	70	Not limited		Not limited	
Ost-----	30	Not limited		Not limited	
Cs: Lincoln-----	100	Somewhat limited Too sandy	0.79	Somewhat limited Droughty Flooding	0.92 0.60
Fa: Farnum-----	100	Not limited		Not limited	
Fe: Farnum-----	100	Not limited		Not limited	
Fm: Farnum-----	100	Not limited		Not limited	
Fn: Farnum-----	100	Not limited		Not limited	
Fu: Farnum-----	100	Not limited		Not limited	
Fw: Farnum-----	60	Not limited		Not limited	
Carwile-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
GRP: Pits-----	100	Not rated		Not rated	
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Kp: Kanza-----	50	Somewhat limited Too sandy Depth to saturated zone Flooding	0.92 0.44 0.40	Very limited Flooding Depth to saturated zone Droughty	1.00 0.75 0.02
Plevna-----	50	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
Ks: Elandco-----	100	Not limited		Somewhat limited Flooding	0.60
Kw: Elandco-----	100	Somewhat limited Flooding	0.40	Very limited Flooding	1.00
Ng: Naron-----	100	Not limited		Not limited	
Nf: Naron-----	100	Not limited		Not limited	

RECREATIONAL INTERPRETATIONS--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ng:					
Naron-----	100	Not limited		Not limited	
Nk:					
Naron-----	100	Not limited		Not limited	
Nm:					
Naron-----	100	Not limited		Not limited	
Nn:					
Naron-----	55	Not limited		Not limited	
Farnum-----	45	Not limited		Not limited	
Oc:					
Ost-----	100	Not limited		Not limited	
Os:					
Ost-----	100	Not limited		Not limited	
Pm:					
Pratt-----	100	Somewhat limited Too sandy	0.37	Not limited	
Pn:					
Pratt-----	100	Somewhat limited Too sandy	0.37	Somewhat limited Slope	0.16
Po:					
Pratt-----	60	Somewhat limited Too sandy	0.37	Not limited	
Carwile-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
PRR:					
Pratt-----	100	Somewhat limited Too sandy	0.37	Not limited	
PSS:					
Pratt-----	100	Somewhat limited Too sandy	0.37	Somewhat limited Slope	0.00
Pt:					
Pratt-----	60	Somewhat limited Too sandy	0.37	Somewhat limited Slope	0.16
Tivoli-----	40	Somewhat limited Too sandy	0.92	Somewhat limited Droughty Slope	0.97 0.63
PTT:					
Pratt-----	60	Somewhat limited Too sandy	0.37	Somewhat limited Slope	0.16
Tivoli-----	40	Somewhat limited Too sandy	0.92	Somewhat limited Droughty Slope	0.96 0.16
Sa:					
Albion-----	70	Not limited		Somewhat limited Slope	0.37
Kaski-----	30	Not limited		Somewhat limited Flooding	0.60
Sb:					
Shellabarger-----	100	Not limited		Not limited	
Se:					
Shellabarger-----	100	Not limited		Not limited	
Sf:					
Shellabarger-----	100	Not limited		Not limited	
Ta:					
Tabler-----	100	Not limited		Not limited	
Tf:					
Tivoli-----	100	Very limited Too sandy Slope	1.00 0.32	Very limited Slope Droughty	1.00 1.00
W:					
Water-----	100	Not rated		Not rated	
Wa:					
Waldeck-----	100	Not limited		Somewhat limited Flooding	0.60
Wd:					
Kingman-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Ze:					
Zenda-----	100	Not limited		Somewhat limited Flooding	0.60
Zs:					
Drummond-----	50	Not limited		Very limited Salinity Droughty	1.00 0.68
Zenda-----	50	Not limited		Somewhat limited Flooding	0.60

WILDLIFE INTERPRETATIONS  
Pratt County, Kansas

#### Use and Explanation of Wildlife Interpretations

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, water, and living space. If any one of these elements is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area. If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In the Wildlife Interpretations table, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

#### Suitability Ratings

The potential of the soil is rated good, fair, poor, or very poor.

Good - means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose.

Fair - means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderately intensive management is required for satisfactory results.

Poor - means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort.

Very Poor - means that limitations are very severe for the designated element or kind of wildlife habitat. Habitat is difficult to create, improve, or maintain in most places, and management is difficult and requires intensive effort.

#### Description of Wildlife Habitat Elements

Openland habitat consists of croplands, pastures, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kind of wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, red fox, and coyote.

Woodland habitat consists of hardwood or conifers, or a mixture of these and associated grasses, legumes and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, thrushes, woodpeckers, owl, tree squirrels, raccoon, and deer.

Wetland habitat consists of water-tolerant plants in open, marshy or swampy, shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, bitterns, rails, kingfishers, shorebirds, muskrat, mink, and beaver.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated good are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are fragrant sumac, chokecherry, American plum, sand plum, and gorden currant.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, saltgrass, cordgrass, rushes, sedges, and cattails.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, red fox and coyote.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include antelope, deer, cottontail rabbit, prairie chicken, meadowlark, quail, and pheasant.

WILDLIFE INTERPRETATIONS  
Pratt County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
007AE: ALBION-----	Poor	Fair	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
SHELLABARGER----	Poor	Fair	Good	---	---	Good	Very poor	Very poor	Fair	---	Very poor	Good
007CC: CASE-----	Fair	Good	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
CLARK-----	Fair	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	---	Very poor	Fair
007LN: LINCOLN-----	Poor	Fair	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
007SB: SHELLABARGER----	Fair	Good	Good	---	---	Good	Poor	Very poor	Good	---	Very poor	Good
047PG: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
095AB: ALBION-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
095DA: DILLWYN-----	Poor	Fair	Good	---	---	Fair	Fair	Fair	Fair	---	Fair	Fair
PLEVNA-----	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
097AS: ALBION-----	Poor	Fair	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
SHELLABARGER----	Poor	Fair	Good	---	---	Good	Very poor	Very poor	Fair	---	Very poor	Good
097CE: CASE-----	Fair	Good	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
097CK: CLARK-----	Fair	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	---	Very poor	Fair
097CM: CLARK-----	Fair	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	---	Very poor	Fair
1005: ALBION-----	Fair	Good	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
1006: ALBION-----	Fair	Good	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
1017: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
ALBION-----	Fair	Good	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
1324: CARWAY-----	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
CARBIKA-----	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
1340: CASE-----	Poor	Fair	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
CLARK-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1341: CASE-----	Poor	Fair	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair

WILDLIFE INTERPRETATIONS--Continued  
Pratt County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
CLARK-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1725: FARNUM-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
FUNMAR-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
1726: FARNUM-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
FUNMAR-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
1985: HAYES-----	Fair	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
1986: HAYES-----	Fair	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
SOLVAY-----	Fair	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
1987: HAYES-----	Fair	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
TURON-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
1988: HAYES-----	Fair	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
2556: LANGDON-----	Poor	Poor	Fair	Good	Fair	Poor	Very poor	Very poor	Poor	Poor	Very poor	Poor
2948: NALIM-----	Good	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor	Fair
3051: OST-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Poor	Good	Fair	Poor	Fair
3053: OST-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Poor	Good	Fair	Poor	Fair
3180: PRATT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
3181: PRATT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
TURON-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
3445: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
3510: SALTCREEK-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Fair
FUNMAR-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
FARNUM-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
3512: SALTCREEK-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Fair
NARON-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Good
3533: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
3534: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good



WILDLIFE INTERPRETATIONS--Continued  
Pratt County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
3540: SOLVAY-----	Fair	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
3639: TAVER-----	Good	Good	Good	Good	Fair	Fair	Poor	Poor	Good	Fair	Poor	Good
3640: TIVIN-----	Poor	Poor	Fair	Fair	Fair	Poor	Very poor	Very poor	Poor	Poor	Very poor	Poor
3644: TURON-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
CARWAY-----	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
3926: WATER-----	---	---	---	---	---	---	---	---	---	---	---	---
4005: YAGGY-----	Poor	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair
SAXMAN-----	Fair	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Fair
Ab: ALBION-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
Ao: ALBION-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
As: ALBION-----	Poor	Fair	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
SHELLABARGER----	Poor	Fair	Good	---	---	Good	Very poor	Very poor	Fair	---	Very poor	Good
Bc: BLANKET-----	Good	Good	Fair	---	Good	Good	Poor	Very poor	Good	---	Very poor	Fair
Be: BLANKET-----	Good	Good	Fair	---	Good	Good	Poor	Very poor	Good	---	Very poor	Fair
Bh: BLANKET-----	Good	Good	Fair	---	Good	Good	Poor	Very poor	Good	---	Very poor	Fair
Br: FLUVENTS-----	Poor	Poor	Fair	Poor	Good	---	Poor	Very poor	Poor	Fair	Very poor	Fair
Ca: CARWILE-----	Fair	Good	Good	---	---	Good	Good	Fair	Good	---	Fair	Good
Cc: CASE-----	Fair	Good	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
CLARK-----	Fair	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	---	Very poor	Fair
Ck: CASE-----	Poor	Fair	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
CLARK-----	Poor	Fair	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	---	Very poor	Fair
Cm: CLARK-----	Fair	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	---	Very poor	Fair
Cn: CLARK-----	Fair	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	---	Very poor	Fair
Co: CLARK-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Good	---	Very poor	Fair

WILDLIFE INTERPRETATIONS--Continued  
Pratt County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
OST-----	Good	Good	Fair	---	---	Fair	Poor	Poor	Good	---	Poor	Fair
Cs: LINCOLN-----	Fair	Fair	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
Fa: FARNUM-----	Fair	Good	Good	---	---	Good	Poor	Very poor	Good	---	Very poor	Good
Fe: FARNUM-----	Good	Good	Good	---	---	Good	Poor	Poor	Good	---	Poor	Good
Fm: FARNUM-----	Good	Good	Good	---	---	Good	Poor	Poor	Good	---	Poor	Good
Fn: FARNUM-----	Good	Good	Good	---	---	Good	Poor	Poor	Good	---	Poor	Good
Fu: FARNUM-----	Fair	Good	Good	---	---	Good	Poor	Very poor	Good	---	Very poor	Good
Fw: FARNUM-----	Good	Good	Good	---	---	Good	Poor	Poor	Good	---	Poor	Good
CARWILE-----	Fair	Good	Good	---	---	Good	Good	Fair	Good	---	Fair	Good
GRP: PITS-----	Very poor	Very poor	Poor	Poor	Poor	Poor	Very poor	Fair	Very poor	Very poor	Poor	Poor
INT: AQUOLLS-----	---	---	---	---	---	---	---	---	---	---	---	---
Kp: KANZA-----	Very poor	Poor	Fair	---	---	Fair	Fair	Fair	Poor	---	Fair	Fair
PLEVNA-----	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
Ks: ELANDCO-----	Good	Good	Fair	---	---	Good	Poor	Very poor	Good	---	Very poor	Fair
Kw: ELANDCO-----	Very poor	Poor	Fair	---	---	Good	Poor	Very poor	Poor	---	Very poor	Fair
Nd: NARON-----	Good	Good	Good	---	---	Fair	Poor	Very poor	Good	---	Very poor	Fair
Nf: NARON-----	Good	Good	Good	---	---	Fair	Poor	Very poor	Good	---	Very poor	Fair
Ng: NARON-----	Good	Good	Good	---	---	Fair	Poor	Very poor	Good	---	Very poor	Fair
Nk: NARON-----	Good	Good	Good	---	---	Fair	Poor	Very poor	Good	---	Very poor	Fair
Nm: NARON-----	Good	Good	Good	---	---	Fair	Poor	Very poor	Good	---	Very poor	Fair
Nn: NARON-----	Good	Good	Good	---	---	Fair	Poor	Very poor	Good	---	Very poor	Fair
FARNUM-----	Good	Good	Good	---	---	Good	Poor	Poor	Good	---	Poor	Good
Oc: OST-----	Good	Good	Fair	---	---	Fair	Poor	Poor	Good	---	Poor	Fair
Os: OST-----	Good	Good	Fair	---	---	Fair	Poor	Poor	Good	---	Poor	Fair
Pm: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair

WILDLIFE INTERPRETATIONS--Continued  
Pratt County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
Pn: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
Po: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
CARWILE-----	Fair	Good	Good	---	---	Good	Good	Fair	Good	---	Fair	Good
PRR: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
PSS: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
Pt: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
TIVOLI-----	Poor	Poor	Fair	---	---	Poor	Very poor	Very poor	Poor	---	Very poor	Poor
PTT: PRATT-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
TIVOLI-----	Poor	Poor	Fair	---	---	Poor	Very poor	Very poor	Poor	---	Very poor	Poor
Sa: ALBION-----	Poor	Fair	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
KASKI-----	Good	Good	Good	---	---	Good	Poor	Very poor	Good	---	Very poor	Good
Sb: SHELLABARGER----	Good	Good	Good	---	---	Good	Poor	Very poor	Good	---	Very poor	Good
Se: SHELLABARGER----	Good	Good	Good	---	---	Good	Poor	Very poor	Good	---	Very poor	Good
Sf: SHELLABARGER----	Fair	Good	Good	---	---	Good	Poor	Very poor	Good	---	Very poor	Good
Ta: TABLER-----	Good	Good	Fair	---	---	Fair	Poor	Poor	Good	---	Poor	Fair
Tf: TIVOLI-----	Poor	Poor	Fair	---	---	Poor	Very poor	Very poor	Poor	---	Very poor	Poor
W: WATER-----	---	---	---	---	---	---	---	---	---	---	---	---
Wa: WALDECK-----	Fair	Good	Good	---	---	Good	Fair	Fair	Good	---	Fair	Good
Wd: KINGMAN-----	Poor	Fair	Good	---	---	Fair	Fair	Fair	Fair	---	Fair	Fair
Ze: ZENDA-----	Fair	Good	Good	---	---	Good	Fair	Fair	Good	---	Fair	Good
Zs: DRUMMOND-----	Poor	Fair	Fair	---	Poor	Poor	Fair	Fair	Fair	---	Fair	Poor
ZENDA-----	Fair	Good	Good	---	---	Good	Fair	Fair	Good	---	Fair	Good

YIELDS PER ACRE OF PASTURE AND HAYLAND  
Pratt County, Kansas

## Use and Explanation of Pastureland and Hayland Interpretations

This subsection provides information concerning the suitability of soils for the production of pasture and hayland. This subsection may contain pasture and hayland suitability groupings, land capability and yield estimates, yield estimates for individual grasses or legumes, or other information pertaining to the production of forage.

## Pasture and Hayland Suitability Groupings

Soils are placed in pasture and hayland groups according to their suitability for the production of forage. The soils in each group are enough alike to be suited to the same grasses or legumes, to have similar limitations and hazards, to require similar management, and to have similar productivity and other responses to management. Thus, the pasture and hayland suitability group is a convenient way of grouping the soils for their management. If used, these groupings are identified and described in other reports in the subsection.

## Yield Estimates

The average yields per acre that can be expected of the principal pasture or hayland crops, under a high level of management, are presented in this subsection. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall or other climatic factors. The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation are also important management practices.

The Pasture and Hayland table show yield estimates in tons per acre and animal unit months for pasture and hayland groups. An animal unit month is the amount of forage required by one animal unit (AU) for 30 days. On animal unit (AU) is one (1000 pound) mature cow and a calf up to weaning age (usually six months of age) or their equivalent. The Natural Resources Conservation Service uses 900 pounds of air dry forage as the amount needed to meet this requirement. To maintain a healthy and vigorous plant community, the degree of use should never be greater than 50 percent. Therefore only 25 percent of the total biomass grown is considered consumed by the grazing animal. Animal Unit Months can be converted to air dry pounds per acre production by multiplying the AUM by 30 days, then by 30 pounds per day, and then by four. This figure is the amount of total forage production.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil in the Nontechnical Description section. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
007AE: Albion-----	6e	---	---	---
Shellabarger-----	6e	---	---	---
007CC: Case-----	4e	---	---	---
Clark-----	4e	---	---	---
007LN: Lincoln-----	6w	---	---	---
007SB: Shellabarger-----	3e	---	2.00	6.00
047PG: Pratt-----	3e	3e	---	5.50
095AB: Albion-----	3e	---	2.00	---
095DA: Dillwyn-----	4w	---	---	---
Plevna-----	5w	---	---	---
097AS: Albion-----	6e	---	---	---
Shellabarger-----	6e	---	---	---
097CE: Case-----	4e	---	---	---
097CK: Clark-----	3e	---	---	---
097CM: Clark-----	4e	---	---	---
1005: Albion-----	3e	---	2.00	---
1006: Albion-----	3e	---	2.00	---
1017: Shellabarger, Eroded-----	2e	---	2.20	6.50
Albion-----	3e	---	2.00	---
1324: Carway-----	2w	---	5.00	---
Carbika-----	2w	---	5.00	---
1340: Case-----	4e	---	---	---
Clark-----	4e	---	---	---
1341: Case-----	6e	---	---	---
Clark-----	4e	---	---	---
1725: Farnum-----	2c	1	3.00	7.00
Funmar-----	2c	1	3.00	7.00
1726: Farnum-----	2c	1	3.00	7.00
Funmar-----	2c	1	3.00	7.00
1985: Hayes-----	3e	3e	3.00	6.00

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
1986: Hayes-----	3e	3e	3.00	6.00
Solvay-----	2e	---	5.00	6.00
1987: Hayes-----	3e	3e	3.00	6.00
Turon-----	3e	3e	---	5.50
1988: Hayes-----	3e	3e	3.00	6.00
2556: Langdon-----	6e	---	---	---
2948: Nalim-----	2e	2e	3.50	6.50
3051: Ost-----	2c	---	---	---
3053: Ost-----	2c	---	---	---
3180: Pratt-----	3e	3e	---	5.50
3181: Pratt-----	3e	3e	---	5.50
Turon-----	3e	3e	---	5.50
3445: Shellabarger, Moderately Eroded-----	2e	---	2.20	6.50
3510: Saltcreek-----	3e	1	3.00	7.00
Funmar-----	2c	1	3.00	7.00
Farnum-----	2c	1	3.00	7.00
3512: Saltcreek-----	3e	1	3.00	7.00
Naron-----	3e	3e	3.00	6.50
3533: Shellabarger-----	2e	---	2.20	6.50
3534: Shellabarger-----	2e	---	2.20	6.50
3540: Solvay-----	2e	---	5.00	6.00
3639: Taver-----	2s	---	4.00	8.00
3640: Tivin-----	6e	---	---	---
3644: Turon-----	3e	3e	---	5.50
Carway-----	2w	---	5.00	---
3926: Water-----	---	---	---	---
4005: Yaggy-----	3e	2e	4.50	7.50
Saxman-----	3e	2e	3.50	7.00
Ab: Albion-----	3e	---	2.00	---

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
Ao: Albion-----	4e	---	1.50	---
As: Albion-----	6e	---	---	---
Shellabarger-----	6e	---	---	---
Bc: Blanket-----	3e	---	---	---
Be: Blanket-----	1	---	---	---
Bh: Blanket-----	2e	---	---	---
Br: Fluents-----	6w	---	---	---
Ca: Carwile-----	2w	---	---	---
Cc: Case-----	4e	---	---	---
Clark-----	4e	---	---	---
Ck: Case-----	6e	---	---	---
Clark-----	6e	---	---	---
Cm: Clark-----	3e	---	---	---
Cn: Clark-----	3e	---	---	---
Co: Clark-----	2c	---	---	---
Ost-----	2c	---	---	---
Cs: Lincoln-----	6w	---	---	---
Fa: Farnum-----	4e	---	---	---
Fe: Farnum-----	2e	1	3.00	7.00
Fm: Farnum-----	2c	1	3.00	7.00
Fn: Farnum-----	2e	2e	3.00	6.50
Fu: Farnum-----	3e	---	3.00	---
Fw: Farnum-----	2c	1	3.00	7.00
Carwile-----	2w	---	---	---
GRP: Pits-----	8s	---	---	---
INT: Aquolls-----	5w	---	---	---
Kp: Kanza-----	5w	---	---	---
Plevna-----	5w	---	---	---
Ks: Elandco-----	2w	---	---	---

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued  
Pratt County, Kansas

PAGE 5 OF 6

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
Kw: Elandco-----	5w	---	---	---
Nd: Naron-----	2e	1	3.00	7.00
Nf: Naron-----	3e	2e	3.00	6.50
Ng: Naron-----	4e	---	3.00	---
Nk: Naron-----	2c	1	3.00	7.00
Nm: Naron-----	2e	2e	3.00	6.50
Nn: Naron-----	3e	2e	3.00	6.50
Farnum-----	2c	1	3.00	7.00
Oc: Ost-----	2c	---	---	---
Os: Ost-----	2e	---	---	---
Pm: Pratt-----	4e	3e	---	5.50
Pn: Pratt-----	6e	---	---	---
Po: Pratt-----	4e	3e	---	5.50
Carwile-----	2w	---	---	---
PRR: Pratt-----	3e	3e	---	5.50
PSS: Pratt-----	4e	3e	---	5.50
Pt: Pratt-----	6e	---	---	---
Tivoli-----	7e	---	---	---
PTT: Pratt-----	6e	---	---	5.50
Tivoli-----	7e	---	---	---
Sa: Albion-----	6e	---	---	---
Kaski-----	2w	---	3.00	6.50
Sb: Shellabarger-----	2e	---	2.50	7.00
Se: Shellabarger-----	2e	---	2.20	6.50
Sf: Shellabarger-----	3e	---	2.00	6.00
Ta: Tabler-----	2s	---	---	---
Tf: Tivoli-----	7e	---	---	---
W: Water-----	---	---	---	---



(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
Wa: Waldeck-----	3w	---	3.50	5.00
Wd: Kingman-----	5w	---	---	---
Ze: Zenda-----	2w	---	4.00	5.50
Zs: Drummond-----	6s	---	---	---
Zenda-----	4s	---	4.00	5.50

CONSERVATION TREE AND SHRUB MANAGEMENT  
Pratt County, Kansas

A Conservation Tree/Shrub Suitability Group (CTSG), formerly Windbreak Suitability Group, is a physiographic unit or area having similar climatic and edaphic characteristics that control the selection and height growth of trees and shrubs.

In this table, the Conservation Tree and Shrub Grouping is expressed as a group index number. The group index for Conservation Tree and Shrub groups (CTSG) are a guide for species best suited for different kinds of soil and for prediction height, growth, and effectiveness. The groupings can be used when selection woody plants for windbreaks, wildlife plantings riparian buffers, reforestation, other environmental plantings, recreation, landscaping, wetland restoration or enhancement and critical area plantings. CTSG's are developed to assure satisfactory species selection and adaptation to specific conditions of soil, climate and physiography. CTSG's are a guide for selection species best suited for different kinds of soil and prediction height growth and effectiveness.

All soil series mapped in the state have been placed in 10 groups of similar soil characteristics. Groups 1, 2, 3, 4, 6, and 9 are further divided into subgroups. In addition, all groups provide information by Major Land Resource Areas.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters a tree or shrub may be well or poorly suited because of soil characteristics. Each tree or shrub also has definable potentials of height growth depending on the factors just mentioned. Accurate definitions of potential heights are necessary for proper windbreak planning and design.

Windbreaks protect livestock, buildings, roads and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low-growing and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not grow trees originally. Knowledge of how trees perform on such land can be gained only by observing and recording their performance where trees have been planted and survived. The problem is compounded by the fact that many favorite windbreak species are not indigenous to the areas in which they are planted.

The Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups shows the adapted species listing for each group index number. Showing the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates are based on measurements and observation of established plantings that have been given adequate care. This information should be used to determine the placement of a windbreak, the area protected and the arrangement of species.

A number of attributes are included in the CTSG species tables for each group number found in this section of the Field Office Technical Guide. These attributes were rated subjectively and assigned a relative value to further assist those unfamiliar with individual species characteristics or desirability for the intended use. Definitions and explanations can be found. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery. See part 537 of the National Forestry Manual for additional information.

In the Tree and Shrub Management table interpretive ratings are given for various aspects of forest and conservation tree and shrub management. Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. Well suited indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. Moderately well suited indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable and fair performance can be expected. Some maintenance is needed. Poorly suited indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. Unsuit indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

The paragraphs that follow indicate the soil properties considered in rating the soils for forest and conservation tree and shrub management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet. Also, in the Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups.

Ratings in the columns suitability for hand planting and suitability for mechanical planting are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately well suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column suitability for mechanical site preparation (surface) are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1-foot is considered in the ratings.

Ratings in the column suitability for mechanical site preparation (deep) are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column potential for seedling mortality are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality. See the National Forestry Manual, Subpart B for criteria used in rating management concerns. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

CONSERVATION TREE AND SHRUB MANAGEMENT  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
007AE: Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Shellabarger-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Low
007CC: Case-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
Clark-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Lime Soil reaction
007LN: Lincoln-----	1K	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
007SB: Shellabarger-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Low
047PG: Pratt-----	7	Well suited	Well suited	Well suited	Well suited	Low
095AB: Albion-----	6G	Well suited	Well suited	Well suited	Well suited	Low
095DA: Dillwyn-----	1	Well suited	Well suited	Well suited	Well suited	Low
Plevna-----	2	Well suited	Well suited	Well suited	Unsuited Wetness	High Wetness
097AS: Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Shellabarger-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Low
097CE: Case-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
097CK: Clark-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Lime Soil reaction
097CM: Clark-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Lime Soil reaction
1005: Albion-----	6G	Well suited	Well suited	Well suited	Well suited	Moderate Available water
1006: Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Available water
1017: Shellabarger, Eroded	5	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Available water
Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Available water
1324: Carway-----	2	Well suited	Well suited	Well suited	Well suited	High Wetness
Carbika-----	2	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	High Wetness
1340: Case-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
Clark-----	3	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
1341: Case-----	8	Well suited	Moderately suited	Well suited	Well suited	Moderate

CONSERVATION TREE AND SHRUB MANAGEMENT  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Clark-----	3	Well suited	Slope Moderately suited Slope	Well suited	Well suited	Soil reaction Moderate
1725: Farnum-----	4	Well suited	Well suited	Well suited	Well suited	Soil reaction Low
Funmar-----	3	Well suited	Well suited	Well suited	Well suited	Low
1726: Farnum-----	4	Well suited	Well suited	Well suited	Well suited	Low
Funmar-----	3	Well suited	Well suited	Well suited	Well suited	Low
1985: Hayes-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
1986: Hayes-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
Solvay-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
1987: Hayes-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Turon-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
1988: Hayes-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Available water
2556: Langdon-----	7	Moderately suited Sandiness	Moderately suited Sandiness Slope	Well suited	Well suited	Low
2948: Nalim-----	3	Well suited	Well suited	Well suited	Well suited	Low
3051: Ost-----	8	Well suited	Well suited	Well suited	Well suited	Low
3053: Ost-----	8	Well suited	Well suited	Well suited	Well suited	Low
3180: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
3181: Pratt-----	7	Well suited	Well suited	Well suited	Well suited	Low
Turon-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
3445: Shellabarger, Moderately Eroded--	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3510: Saltcreek-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Funmar-----	3	Well suited	Well suited	Well suited	Well suited	Low
Farnum-----	4	Well suited	Well suited	Well suited	Well suited	Low
3512: Saltcreek-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Moderate Available water
Naron-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3533: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3534: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3540: Solvay-----	5	Well suited	Well suited	Well suited	Well suited	Moderate

CONSERVATION TREE AND SHRUB MANAGEMENT  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3639: Taver-----	3	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Available water  Moderate Available water
3640: Tivin-----	7	Moderately suited Sandiness	Moderately suited Slope Sandiness	Poorly suited  Slope	Poorly suited  Slope	Low
3644: Turon-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
Carway-----	2	Well suited	Well suited	Well suited	Well suited	High Wetness
3926: Water-----		Not rated	Not rated	Not rated	Not rated	Not rated
4005: Yaggy-----	1	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Saxman-----	1	Well suited	Well suited	Well suited	Well suited	Low
Ab: Albion-----	6G	Well suited	Well suited	Well suited	Well suited	Low
Ao: Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Low
As: Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Shellabarger-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Bc: Blanket-----	4C	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Be: Blanket-----	4C	Well suited	Well suited	Well suited	Well suited	Low
Bh: Blanket-----	4C	Well suited	Well suited	Well suited	Well suited	Low
Br: Fluvents-----		Well suited	Moderately suited Slope	Poorly suited  Slope	Poorly suited  Slope	Low
Ca: Carwile-----	1	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	High  Wetness
Cc: Case-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate  Soil reaction
Clark-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate  Soil reaction
Ck: Case-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate  Soil reaction
Clark-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate  Soil reaction
Cm: Clark-----	8	Well suited	Well suited	Well suited	Well suited	Lime Soil reaction Moderate Lime Soil reaction
Cn: Clark-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Lime Soil reaction
Co: Clark-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Lime Soil reaction

CONSERVATION TREE AND SHRUB MANAGEMENT  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Ost-----	3	Well suited	Well suited	Well suited	Well suited	Low
Cs: Lincoln-----	1K	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
Fa: Farnum-----	3	Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
Fe: Farnum-----	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Fm: Farnum-----	3	Well suited	Well suited	Well suited	Well suited	Low
Fn: Farnum-----	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Fu: Farnum-----	3	Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
Fw: Farnum-----	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Carwile-----	1	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	High Wetness
GRP: Pits-----		Not rated	Not rated	Not rated	Not rated	Not rated
INT: Aquolls-----		Well suited	Well suited	Well suited	Well suited	High Wetness Soil reaction
Kp: Kanza-----	2	Well suited	Well suited	Well suited	Well suited	Low
Plevna-----	2	Well suited	Well suited	Well suited	Unsuited Wetness	High Wetness
Ks: Elandco-----	1	Well suited	Well suited	Well suited	Well suited	Low
Kw: Elandco-----	1	Well suited	Well suited	Well suited	Well suited	Low
Nd: Naron-----	5	Well suited	Well suited	Well suited	Well suited	Low
Nf: Naron-----	5	Well suited	Well suited	Well suited	Well suited	Low
Ng: Naron-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Nk: Naron-----	5	Well suited	Well suited	Well suited	Well suited	Low
Nm: Naron-----	5	Well suited	Well suited	Well suited	Well suited	Low
Nn: Naron-----	5	Well suited	Well suited	Well suited	Well suited	Low
Farnum-----	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Oc: Ost-----	3	Well suited	Well suited	Well suited	Well suited	Low
Os: Ost-----	3	Well suited	Well suited	Well suited	Well suited	Low
Pm: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Pn: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Po: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low

CONSERVATION TREE AND SHRUB MANAGEMENT  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Carwile-----	1	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	High Wetness
PRR: Pratt-----	7	Well suited	Well suited	Well suited	Well suited	Low
PSS: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Pt: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Tivoli-----	7	Moderately suited Sandiness	Moderately suited Slope Sandiness	Well suited	Well suited	Low
PTT: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Tivoli-----	7	Moderately suited Sandiness	Moderately suited Slope Sandiness	Well suited	Well suited	Low
Sa: Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Kaski-----	1K	Well suited	Well suited	Well suited	Well suited	Low
Sb: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Low
Se: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Low
Sf: Shellabarger-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Ta: Tabler-----	4C	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Tf: Tivoli-----	7	Moderately suited Sandiness	Poorly suited Slope Sandiness	Poorly suited Slope	Poorly suited Slope	Low
W: Water-----		Not rated	Not rated	Not rated	Not rated	Not rated
Wa: Waldeck-----	1K	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
Wd: Kingman-----	2	Well suited	Well suited	Well suited	Well suited	High Wetness Soil reaction
Ze: Zenda-----	1	Well suited	Well suited	Well suited	Well suited	Low
Zs: Drummond-----	9W	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	High Salinity Soil reaction
Zenda-----	1	Well suited	Well suited	Well suited	Well suited	Low

ENGINEERING INDEX PROPERTIES  
Pratt County, Kansas

Engineering Index Properties table gives the engineering classifications and the range of index properties for the layers of each soil in the survey area. Depth to the upper and lower boundaries of each layer is indicated. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998). The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in Engineering Index Properties table.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.



ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
007AE: Albion-----	0-11 11-24 24-60	Sandy loam Sandy loam Sand	ML, SM ML, SM GM, GP-GM, SM, SP-SM	A-4, A-2 A-4, A-2 A-2, A-1, A-3	0 0 0	0 0 0-5	100 85-100 40-100	75-100 75-100 40-90	60-90 45-90 30-70	25-55 30-55 5-30	15-30 20-35 15-30	NP-5 NP-10 NP-5
Shellabarger---	0-12 12-60	Sandy loam Sandy clay loam	ML, SM SC	A-4, A-2 A-6, A-4	0 0	0 0	95-100 95-100	95-100 85-100	75-100 70-90	30-55 35-50	15-30 25-40	NP-5 8-20
007CC: Case-----	0-6 6-60	Clay loam Clay loam	CL CL	A-6 A-6, A-7-6	0 0	0 0	90-100 90-100	90-100 90-100	85-100 85-100	55-85 55-85	30-40 25-45	10-20 10-25
Clark-----	0-10 10-60	Clay loam Clay loam	CL CL	A-6 A-6	0 0	0 0	100 100	95-100 95-100	90-100 90-100	50-90 55-90	30-40 25-40	10-20 10-25
007LN: Lincoln-----	0-6 6-60	Fine sandy loam Stratified fine sand to clay loam	SM, SC-SM, ML, CL-ML SP-SM, SM	A-4 A-2, A-3	0 0	0 0	100 100	98-100 98-100	94-100 82-100	36-60 5-35	15-24 ---	NP-7 NP
007SB: Shellabarger---	0-14 14-48 48-60	Sandy loam Sandy clay loam Coarse sandy loam	ML, SM SC SC, SM, SP- SM, SC-SM	A-2, A-4 A-4, A-6 A-2, A-4	0 0 0	0 0 0	95-100 95-100 80-100	95-100 85-100 70-100	75-100 70-90 50-80	30-55 35-50 10-40	15-30 25-40 15-30	NP-5 8-20 NP-10
047PG: Pratt-----	0-13 13-30 30-60	Loamy fine sand Loamy fine sand Loamy fine sand	SM SC-SM, SM SM, SP-SM	A-2 A-4, A-2 A-2, A-3	0 0 0	0 0 0	100 100 100	95-100 95-100 95-100	70-100 90-100 80-100	15-35 15-40 5-35	--- 15-20 ---	NP NP-6 NP
095AB: Albion-----	0-8 8-16 16-26 26-60	Sandy loam Sandy loam Coarse sandy loam Sand	ML, SM ML, SM SM GM, GP-GM, SM, SP-SM	A-2, A-4 A-4, A-2 A-1, A-2 A-1, A-2, A-3	0 0 0 0	0 0 0 0-5	100 85-100 85-100 40-100	75-100 75-100 75-90 40-90	60-90 45-90 40-70 30-70	25-55 30-55 15-30 5-30	15-30 20-35 15-30 15-30	NP-5 NP-10 NP-5 NP-5
095DA: Dillwyn-----	0-8 8-60	Loamy fine sand Loamy fine sand	SM, SP-SM SM, SP-SM	A-2, A-3 A-2, A-3	0 0	0 0	100 100	95-100 90-100	70-90 70-90	5-35 5-35	--- ---	NP NP
Plevna-----	0-11 11-36 36-60	Fine sandy loam Fine sandy loam Sand	SC-SM, SM SC-SM, SM SP, SM	A-2, A-4 A-2, A-4 A-2, A-3	0 0 0	0 0 0	100 100 100	95-100 95-100 90-100	70-100 70-100 50-90	20-50 30-50 4-35	15-26 15-26 ---	NP-6 NP-6 NP
097AS: Albion-----	0-11 11-24 24-60	Sandy loam Sandy loam Sand	ML, SM ML, SM GM, GP-GM, SM, SP-SM	A-4, A-2 A-4, A-2 A-2, A-1, A-3	0 0 0	0 0 0-5	100 85-100 40-100	75-100 75-100 40-90	60-90 45-90 30-70	25-55 30-55 5-30	15-30 20-35 15-30	NP-5 NP-10 NP-5
Shellabarger---	0-12 12-60	Sandy loam Sandy clay loam	ML, SM SC	A-4, A-2 A-6, A-4	0 0	0 0	95-100 95-100	95-100 85-100	75-100 70-90	30-55 35-50	15-30 25-40	NP-5 8-20
097CE: Case-----	0-6 6-60	Clay loam Clay loam	CL CL	A-6 A-7-6, A-6	0 0	0 0	90-100 90-100	90-100 90-100	85-100 85-100	55-85 55-85	30-40 25-45	10-20 10-25
097CK: Clark-----	0-5 5-60	Loam Clay loam	CL, CL-ML CL	A-4, A-6 A-6	0 0	0 0	100 100	95-100 95-100	90-100 90-100	50-90 55-90	20-40 25-40	5-20 10-25
097CM: Clark-----	0-10 10-60	Loam Clay loam	CL, CL-ML CL	A-4, A-6 A-6	0 0	0 0	100 100	95-100 95-100	90-100 90-100	50-90 55-90	20-40 25-40	5-20 10-25
1005: Albion-----	0-9 9-16 16-27 27-48 48-80	Sandy loam Sandy loam Sandy loam Loamy coarse sand Sand	SC, SC-SM, SM SC, SC-SM, SM SC, SC-SM, SM SM, SC, SC-SM SP-SM, GM, SM, GP-GM	A-2, A-4 A-2, A-4 A-2, A-4 A-1-b, A-2 A-3, A-1, A-2	0 0 0 0 0	0 0 0 0 0-5	100 85-100 85-100 85-100 40-100	75-100 75-100 75-100 75-90 35-85	60-90 50-95 50-95 40-70 30-70	25-45 25-40 25-40 15-30 5-30	0-25 20-30 20-30 0-25 0-20	NP-10 NP-10 NP-10 NP-10 NP-5
1006: Albion-----	0-9 9-16 16-27 27-48 48-80	Sandy loam Sandy loam Sandy loam Loamy coarse sand Sand	SC, SC-SM, SM SC, SC-SM, SM SC, SC-SM, SM SC, SC-SM, SM SP-SM, SM, GP-GM, GM	A-2, A-4 A-2, A-4 A-2, A-4 A-1-b, A-2 A-3, A-1, A-2	0 0 0 0 0	0 0 0 0 0-5	100 85-100 85-100 85-100 40-100	75-100 75-100 75-100 75-90 35-85	60-90 50-95 50-95 40-70 30-70	25-45 25-40 25-40 15-30 5-30	0-25 20-30 20-30 0-25 0-20	NP-10 NP-10 NP-10 NP-10 NP-5

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
1017: Shellabarger, Eroded-----	In											
	0-5	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
	5-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
Albion-----	0-9	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	75-100	60-90	25-45	0-25	NP-10
	9-16	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	16-27	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	27-48	Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	48-80	Sand	GM, GP-GM, SM, SP-SM	A-3, A-1, A-2	0	0-5	40-100	35-85	30-70	5-30	0-20	NP-5
1324: Carway-----	0-7	Fine sandy loam	SC, CL	A-2-6, A-6	0	0	100	100	80-95	30-55	20-30	10-15
	7-10	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	10-15	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	15-22	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	22-35	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	35-40	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	40-54	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	54-63	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	63-72	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	72-80	Clay loam	SC, CL	A-6	0	0	100	100	75-90	45-60	25-35	10-15
Carbika-----	0-11	Silt loam	SM, SC-SM	A-2-4, A-4	0	0	100	100	90-100	30-45	20-30	1-7
	11-15	Clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	30-35
	15-22	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	30-35
	22-34	Clay loam	CL, SC	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
	34-41	Clay loam	SC, CL	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
	41-60	Clay loam	CL, SC	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
	60-80	Clay loam	CL, SC	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
1340: Case-----	0-6	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	80-95	60-75	25-35	5-15
	6-20	Loam	CL	A-6	0	0	100	95-100	80-100	50-80	30-40	10-20
	20-35	Loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	35-80	Very fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
Clark-----	0-11	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	80-95	60-75	25-35	5-15
	11-16	Loam	CL	A-6	0	0	100	95-100	80-100	50-80	30-40	10-20
	16-28	Loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	28-45	Fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	45-65	Fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	65-80	Very fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
1341: Case-----	0-6	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	80-95	60-75	25-35	5-15
	6-20	Loam	CL	A-6	0	0	100	95-100	80-100	50-80	30-40	10-20
	20-35	Loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	35-80	Very fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
Clark-----	0-11	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	80-95	60-75	25-35	5-15
	11-16	Loam	CL	A-6	0	0	100	95-100	80-100	50-80	30-40	10-20
	16-28	Loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	28-45	Fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	45-65	Fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	65-80	Very fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
1725: Farnum-----	0-5	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	5-15	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	15-21	Loam	CL	A-6	0	0	100	100	85-100	60-80	30-40	10-15
	21-34	Sandy clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	34-48	Loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-61	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	61-73	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	73-80	Loam	SC, CL, SC- SM, CL-ML	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Funmar-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	6-12	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	12-17	Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20
	17-26	Clay loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20
	26-32	Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20
	32-38	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	75-100	40-50	20-30
	38-54	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	54-66	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	66-80	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1726: Farnum-----	0-5	Loam	CL-ML, CL	A-6, A-4	0	0	100	100	90-100	60-85	20-35	5-15
	5-15	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	15-21	Loam	CL	A-6	0	0	100	100	85-100	60-80	30-40	10-15
	21-34	Sandy clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	34-48	Loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-61	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	61-73	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	73-80	Loam	SC, CL, SC- SM, CL-ML	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Funmar-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	6-12	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	12-17	Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20
	17-26	Clay loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20
	26-32	Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20
	32-38	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	75-100	40-50	20-30
	38-54	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	54-66	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	66-80	Silty clay loam	CL, SC	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
1985: Hayes-----	0-8	Fine sandy loam	SC-SM	A-2-4, A-4	0	0	100	100	80-95	30-49	20-25	4-7
	8-14	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	14-23	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-4, A-2-4	0	0	100	100	80-95	30-55	21-28	3-10
	23-34	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	34-42	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	42-47	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	47-56	Sandy clay loam	CL	A-6	0	0	100	100	80-100	60-85	30-35	11-15
	56-69	Silty clay	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	69-80	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
1986: Hayes-----	0-8	Loamy fine sand	SM	A-2	0	0	100	100	75-95	15-30	0-0	NP
	8-14	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	14-23	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	23-34	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	34-42	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	42-47	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	47-56	Sandy clay loam	CL	A-6	0	0	100	100	80-100	60-85	30-35	11-15
	56-69	Silty clay	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	69-80	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Solvay-----	0-5	Loamy fine sand	SM, SC-SM	A-2-4	0	0	100	100	85-100	15-30	10-20	NP-5
	5-14	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	14-23	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	23-37	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	37-58	Fine sandy loam	SC-SM, SC, CL-ML, CL	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	58-76	Loamy fine sand	SC-SM, SC, CL-ML, CL	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	76-80	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
1987: Hayes-----	0-8	Loamy fine sand	SM	A-2	0	0	100	100	75-95	15-30	0-0	NP
	8-14	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	14-23	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	23-34	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	34-42	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	42-47	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	47-56	Sandy clay loam	CL	A-6	0	0	100	100	80-100	60-85	30-35	11-15
	56-69	Silty clay	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	69-80	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Turon-----	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP
	8-28	Loamy fine sand	SM, SP-SM	A-2-4	0	0	100	100	80-100	10-25	0-20	NP-3
	28-40	Stratified loamy fine sand to fine sandy loam	SC-SM, SM, SP-SM, SP-SC	A-2-4	0	0	100	100	80-100	10-30	0-23	NP-6
	40-58	Silty clay	CL, CH	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	58-75	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	75-80	Silty clay	CL, CH	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1988: Hayes-----	0-8	Fine sandy loam	SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	20-25	4-7
	8-14	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	14-23	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	23-34	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	34-42	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	42-47	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	47-56	Sandy clay loam	CL	A-6	0	0	100	100	80-100	60-85	30-35	11-15
	56-69	Silty clay	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
2556: Langdon-----	69-80	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	0-8	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP
	8-47	Stratified sand to loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP
	47-64	Fine sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	80-100	5-20	0-0	NP
2948: Nalim-----	64-80	Stratified sand to loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP
	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15
	6-9	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15
	9-13	Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	13-21	Clay loam	SC, CL, SM, ML	A-7-6, A-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	21-31	Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	31-39	Sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20
	39-44	Gravelly sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20
	44-52	Sandy clay loam	SC, CL	A-2, A-4, A-6	0	0	95-100	95-100	60-90	15-70	25-40	10-20
	52-62	Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	62-72	Gravelly loamy coarse sand	SP-SC, GM, GP-GM, SM, SP-SM, GC- GM, GP-GC, SC-SM	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5
	72-80	Stratified sand to gravelly loamy coarse sand	SP-SM, SP-SC, GP-GC, SC- SM, GM, GP- GM, SM, GC- GM	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5
3051: Ost-----	0-8	Loam	CL, CL-ML	A-6, A-4	0	0	95-100	95-100	85-95	60-75	20-35	5-15
	8-12	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20
	12-18	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20
	18-23	Clay loam	CL, SC	A-6, A-7	0	0	95-100	90-100	80-100	35-80	30-45	10-20
	23-38	Clay loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
	38-54	Loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
	54-80	Loam	CL, SC, SC- SM, CL-ML	A-6, A-2, A-4	0	0	85-100	85-100	60-100	30-80	20-40	5-20
3053: Ost-----	0-8	Loam	CL, CL-ML	A-6, A-4	0	0	95-100	95-100	85-95	60-75	20-35	5-15
	8-12	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20
	12-18	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20
	18-23	Clay loam	CL, SC	A-6, A-7	0	0	95-100	90-100	80-100	35-80	30-45	10-20
	23-38	Clay loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
	38-54	Loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
	54-80	Loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
3180: Pratt-----	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	65-100	5-35	0-14	NP
	8-24	Loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6
	24-64	Stratified fine sand to loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6
	64-80	Fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	80-100	5-35	0-14	NP

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
3181: Pratt-----	In											
	0-8	Fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	65-100	5-35	0-14	NP
	8-24	Loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6
	24-64	Stratified fine sand to loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6
Turon-----	64-80	Fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	80-100	5-35	0-14	NP
	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP
	8-28	Loamy fine sand	SP-SM, SM	A-2-4	0	0	100	100	80-100	10-25	0-20	NP-3
	28-40	Stratified loamy fine sand to fine sandy loam	SC-SM, SM, SP-SM	A-2-4	0	0	100	100	80-100	10-30	0-23	NP-6
	40-58	Silty clay	CL, CH	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	58-75	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	75-80	Silty clay	CL, CH	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
3445: Shellabarger, Moderately Eroded-----	0-6	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
	6-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	33-47	Coarse sandy loam	SC, SM, SP-SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	47-59	Loamy sand	SC, SM, SP-SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	59-73	Sand	SC, SM, SP-SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	73-80	Sand	SC, SM, SP-SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
3510: Saltcreek-----	0-5	Fine sandy loam	SC-SM, ML, CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	5-10	Sandy clay loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	10-26	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	26-39	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	39-56	Silty clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	56-66	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	66-80	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Funmar-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	6-12	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	12-17	Loam	CL	A-6, A-4, A-7-6	0	0	100	100	85-100	60-80	30-45	7-20
	17-26	Clay loam	CL	A-6, A-4, A-7-6	0	0	100	100	85-100	60-80	30-45	7-20
	26-32	Loam	CL	A-6, A-4, A-7-6	0	0	100	100	85-100	60-80	30-45	7-20
	32-38	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	75-100	40-50	20-30
	38-54	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	54-66	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	66-80	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	0-5	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
Farnum-----	5-15	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	15-21	Loam	CL	A-6	0	0	100	100	85-100	60-80	30-40	10-15
	21-34	Sandy clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	34-48	Loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-61	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	61-73	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	73-80	Loam	SC, CL, SC-SM, CL-ML	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
3512: Saltcreek-----	0-5	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	5-10	Sandy clay loam	ML, CL-ML, SM, SC-SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	10-26	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	26-39	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	39-56	Silty clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	56-66	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	66-80	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Naron-----	0-8	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	100	100	60-85	30-55	0-25	NP-7
	8-14	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	60-85	30-55	0-25	NP-7
	14-28	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	28-39	Sandy clay loam	SC, CL	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	39-55	Sandy clay loam	SC, CL	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	55-66	Fine sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10
	66-80	Loamy fine sand	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
3533: Shellabarger---	0-7	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
	7-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
3534: Shellabarger---	0-7	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
	7-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
3540: Solvay-----	0-5	Loamy fine sand	SM, SC-SM	A-2-4	0	0	100	100	85-100	15-30	10-20	NP-5
	5-14	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	14-23	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	23-37	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	37-58	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	58-76	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	76-80	Loamy fine sand	CL, SC, SC- SM, CL-ML	A-4	0	0	100	100	55-100	20-52	20-30	5-10
3639: Taver-----	0-7	Loam	CL	A-4, A-6	0	0	100	100	96-100	65-85	28-34	9-14
	7-17	Silty clay loam	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	17-33	Silty clay	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	33-53	Silty clay loam	CL, CH	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	53-64	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20
	64-80	Sandy clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20
3640: Tivin-----	0-7	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-25	0-0	NP
	7-18	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP
	18-80	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP
3644: Turon-----	0-8	Fine sand	SP-SM, SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP
	8-28	Loamy fine sand	SM, SP-SM	A-2-4	0	0	100	100	80-100	10-25	0-20	NP-3
	28-40	Stratified loamy fine sand to fine sandy loam	SC-SM, SM, SP-SM, SP-SC	A-2-4	0	0	100	100	80-100	10-30	0-23	NP-6
Carway-----	40-58	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	58-75	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	75-80	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	0-7	Loamy fine sand	SM, SC-SM	A-2-4	0	0	100	100	85-100	15-30	10-20	NP-5
	7-10	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	10-15	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	15-22	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	22-35	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	35-40	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	40-54	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	54-63	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	63-72	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
72-80	Clay loam	SC, CL	A-6	0	0	100	100	75-90	45-60	25-35	10-15	
3926: Water-----	---	---	---	---	---	---	---	---	---	---	---	

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
4005: Yaggy-----	In											
	0-5	Fine sandy loam	CL-ML, SC-SM, SC	A-4	0	0	100	99-100	85-100	40-65	10-25	5-10
	5-11	Fine sandy loam	SC-SM, CL, CL-ML	A-4	0	0	100	99-100	85-100	40-60	10-25	5-10
	11-14	Stratified very fine sandy loam to silt loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	75-95	60-80	10-35	5-15
	14-24	Fine sand	SP-SM, SP	A-2-4, A-3	0	0	100	80-100	70-95	1-12	0-0	NP
	24-31	Fine sand	SP, SP-SM	A-2-4, A-3	0	0	100	80-100	70-98	1-12	0-0	NP
	31-42	Fine sand	SP-SM, SP	A-2-4, A-3	0	0	100	80-100	70-97	1-12	0-0	NP
	42-53	Stratified gravelly coarse sand	SP-SM, SP	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	53-69	Stratified gravelly coarse sand to sand	SP-SM, SP	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	69-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
Saxman-----	0-4	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	4-8	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	8-13	Loamy sand	SM	A-2-4	0	0	99-100	95-100	75-100	15-30	0-0	NP
	13-22	Loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	95-100	75-95	8-30	0-0	NP
	22-30	Sand	SP-SM, SM	A-2-4, A-3	0	0	99-100	95-100	75-95	8-30	0-0	NP
	30-37	Sand	SP-SM, SP, SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
	37-48	Sand	SP, SP-SM, SM	A-2-4, A-3	0	0	85-100	80-97	65-85	1-15	0-0	NP
	48-54	Fine sand	SP, SP-SM, SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
	54-80	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-2-4, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
Ab: Albion-----	0-8	Sandy loam	ML, SM, CL-ML	A-4, A-2	0	0	100	75-100	60-90	25-55	15-30	NP-5
	8-18	Sandy loam	ML, SM	A-4, A-2	0	0	85-100	75-100	45-90	30-55	20-35	NP-10
	18-29	Coarse sandy loam	SM	A-2, A-1	0	0	85-100	75-90	40-70	15-30	15-30	NP-5
	29-60	Gravelly sand	GM, GP-GM, SM, SP-SM	A-1, A-2, A-3	0	0-5	40-100	40-90	30-70	5-30	15-30	NP-5
Ao: Albion-----	0-8	Sandy loam	ML, SM, CL-ML	A-2, A-4	0	0	100	75-100	60-90	25-55	15-30	NP-5
	8-18	Sandy loam	ML, SM	A-2, A-4	0	0	85-100	75-100	45-90	30-55	20-35	NP-10
	18-29	Coarse sandy loam	SM	A-1, A-2	0	0	85-100	75-90	40-70	15-30	15-30	NP-5
	29-60	Gravelly sand	SM, SP-SM, GM, GP-GM	A-1, A-2, A-3	0	0-5	40-100	40-90	30-70	5-30	15-30	NP-5
As: Albion-----	0-8	Sandy loam	ML, SM	A-2, A-4	0	0	100	75-100	60-90	25-55	15-30	NP-5
	8-18	Sandy loam	ML, SM	A-2, A-4	0	0	85-100	75-100	45-90	30-55	20-35	NP-10
	18-29	Coarse sandy loam	SM	A-1, A-2	0	0	85-100	75-90	40-70	15-30	15-30	NP-5
	29-60	Gravelly sand	GM, GP-GM, SM, SP-SM	A-1, A-2, A-3	0	0-5	40-100	40-90	30-70	5-30	15-30	NP-5
Shellabarger---	0-11	Fine sandy loam	ML, SM	A-2, A-4	0	0	95-100	95-100	75-100	30-55	15-30	NP-5
	11-34	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	34-60	Coarse sandy loam	SC, SC-SM, SM, SP-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	15-30	NP-10
Bc: Blanket-----	0-13	Silty clay loam	CH, CL	A-6, A-7	0	0	98-100	96-100	90-100	70-98	36-62	16-38
	13-46	Silty clay	CH, CL	A-7	0	0	98-100	96-100	85-100	70-90	41-64	20-38
	46-60	Silty clay loam	CH, CL	A-6, A-7	0	0	85-100	80-100	80-100	51-85	30-60	15-38
Be: Blanket-----	0-13	Silt loam	CL	A-6	0	0	98-100	96-100	85-100	65-95	28-40	11-20
	13-46	Silty clay	CH, CL	A-7	0	0	98-100	96-100	85-100	70-90	41-64	20-38
	46-60	Silty clay loam	CH, CL	A-6, A-7	0	0	85-100	80-100	80-100	51-85	30-60	15-38
Bh: Blanket-----	0-13	Silt loam	CL	A-6	0	0	98-100	96-100	85-100	65-95	28-40	11-20
	13-46	Silty clay	CH, CL	A-7	0	0	98-100	96-100	85-100	70-90	41-64	20-38
	46-60	Silty clay loam	CH, CL	A-6, A-7	0	0	85-100	80-100	80-100	51-85	30-60	15-38
Br: Fluvents-----	0-6	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	60-90	20-35	5-15
	6-60	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	60-95	20-40	5-20
Ca: Carwile-----	0-10	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4, A-2	0	0	100	98-100	90-100	36-60	15-26	NP-7
	10-18	Sandy clay loam	CL, SC	A-6, A-7	0	0	100	100	90-100	36-90	35-50	14-26
	18-46	Clay	CH, CL, SC	A-7, A-6	0	0	100	100	90-100	40-95	35-70	14-38
	46-60	Clay	CH, CL, SC	A-7, A-6, A-4	0	0	100	100	90-100	36-95	25-70	7-38
Cc: Case-----	0-6	Clay loam	CL	A-6	0	0	90-100	90-100	85-100	55-85	30-40	10-20
	6-50	Clay loam	CL	A-6, A-7-6	0	0	90-100	90-100	85-100	55-85	25-45	10-25
Clark-----	0-8	Clay loam	CL	A-6	0	0	100	95-100	90-100	50-90	30-40	10-20
	8-60	Clay loam	CL	A-6	0	0	100	95-100	90-100	55-90	25-40	10-25

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Ck:												
Case-----	0-6	Clay loam	CL	A-6	0	0	90-100	90-100	85-100	55-85	30-40	10-20
	6-60	Clay loam	CL	A-6, A-7-6	0	0	90-100	90-100	85-100	55-85	25-45	10-25
Clark-----	0-8	Clay loam	CL	A-6	0	0	100	95-100	90-100	50-90	30-40	10-20
	8-60	Clay loam	CL	A-6	0	0	100	95-100	90-100	55-90	25-40	10-25
Cm:												
Clark-----	0-8	Clay loam	CL	A-6	0	0	100	95-100	90-100	50-90	30-40	10-20
	8-60	Clay loam	CL	A-6	0	0	100	95-100	90-100	55-90	25-40	10-25
Cn:												
Clark-----	0-8	Fine sandy loam	SC, SC-SM	A-4	0	0	100	95-100	90-100	35-50	15-25	5-10
	8-60	Clay loam	CL	A-6	0	0	100	95-100	90-100	55-90	25-40	10-25
Co:												
Clark-----	0-8	Clay loam	CL	A-6	0	0	100	95-100	90-100	50-90	30-40	10-20
	8-60	Clay loam	CL	A-6	0	0	100	95-100	90-100	55-90	25-40	10-25
Ost-----	0-9	Clay loam	CL	A-6	0	0	95-100	95-100	85-100	75-90	30-40	10-20
	9-14	Clay loam	CL	A-4, A-6	0	0	95-100	90-100	85-100	55-90	30-40	9-18
	14-23	Clay loam	CL, SC	A-2, A-4, A-6	0	0	95-100	90-100	80-100	30-90	25-40	8-18
	23-60	Clay loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0	85-100	85-100	80-100	30-90	15-40	NP-18
Cs:												
Lincoln-----	0-10	Loamy fine sand	SM	A-2	0	0	100	98-100	90-100	15-35	---	NP
	10-60	Stratified fine sand to clay loam	SM, SP-SM	A-2, A-3	0	0	100	98-100	82-100	5-35	---	NP
Fa:												
Farnum-----	0-7	Clay loam	CL	A-6	0	0	100	100	90-100	60-85	30-40	10-20
	7-37	Clay loam	CL, SC	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	37-60	Fine sandy loam	SC-SM, CL, CL-ML, SC	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Fe:												
Farnum-----	0-11	Fine sandy loam	ML, SM	A-2, A-4	0	0	100	100	70-100	30-55	15-30	NP-5
	11-41	Clay loam	CL, SC	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	41-60	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Fm:												
Farnum-----	0-14	Loam	CL, CL-ML	A-6, A-4	0	0	100	100	90-100	60-85	20-35	5-15
	14-26	Loam	CL	A-6	0	0	100	100	85-100	60-80	30-40	10-15
	26-42	Clay loam	CL, SC	A-7-6, A-6	0	0	100	100	70-100	45-80	35-50	15-30
	42-60	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2	0	0	100	95-100	65-100	30-80	20-35	5-15
Fn:												
Farnum-----	0-12	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	12-48	Clay loam	CL, SC	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-60	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Fu:												
Farnum-----	0-12	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	12-48	Clay loam	CL, SC	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-60	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Fw:												
Farnum-----	0-12	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	12-48	Clay loam	CL, SC	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-60	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Carwile-----	0-12	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	98-100	90-100	36-60	15-26	NP-7
	12-20	Sandy clay loam	CL, SC	A-6, A-7	0	0	100	100	90-100	36-90	35-50	14-26
	20-33	Clay	CH, CL, SC	A-6, A-7	0	0	100	100	90-100	40-95	35-70	14-38
	33-60	Sandy clay loam	CH, CL, SC	A-4, A-6, A-7	0	0	100	100	90-100	36-95	25-70	7-38
GRP:												
Pits-----	0-60	Gravelly sand	GP-GM, SM, SP, SP-SM	A-1, A-2, A-3	---	0-5	45-100	40-100	0-80	0-40	0-14	NP
INT:												
Aquolls-----	0-72	Variable			---	---	---	---	---	---	---	---
Kp:												
Kanza-----	0-11	Loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	90-100	5-35	---	NP
	11-40	Fine sand	SM, SP-SM	A-2, A-3	0	0	90-100	90-100	80-100	5-35	---	NP
Plevna-----	0-10	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	70-100	20-50	15-26	NP-6
	10-40	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	70-100	30-50	15-26	NP-6
	40-60	Fine sand	SM, SP	A-2, A-3	0	0	100	90-100	50-90	4-35	---	NP
Ks:												
Elandco-----	0-18	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	85-95	20-40	4-20
	18-60	Silty clay loam	CL, CL-ML, ML	A-4, A-6, A-7-6	0	0	100	100	95-100	65-95	20-45	4-25
Kw:												
Elandco-----	0-18	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	85-95	20-40	4-20
	18-60	Silty clay loam	CL, CL-ML, ML	A-4, A-6, A-7-6	0	0	100	100	95-100	65-95	20-45	4-25
Nd:												
Naron-----	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	25-60	15-26	1-7
	8-38	Fine sandy loam	CL, SC	A-4, A-6	0	0	100	95-100	80-100	36-60	26-40	8-18
	38-60	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	20-50	15-26	NP-7



ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Nf: Naron-----	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	25-60	15-26	1-7
	8-38	Fine sandy loam	CL, SC	A-4, A-6	0	0	100	95-100	80-100	36-60	26-40	8-18
	38-60	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	20-50	15-26	NP-7
Ng: Naron-----	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	25-60	15-26	1-7
	8-38	Fine sandy loam	CL, SC	A-4, A-6	0	0	100	95-100	80-100	36-60	26-40	8-18
	38-60	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	20-50	15-26	NP-7
Nk: Naron-----	0-11	Loam	CL-ML, ML	A-4	0	0	100	95-100	75-100	50-60	15-26	1-7
	11-38	Fine sandy loam	CL, SC	A-4, A-6	0	0	100	95-100	80-100	36-60	26-40	8-18
	38-60	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	20-50	15-26	NP-7
Nm: Naron-----	0-11	Loam	CL-ML, ML	A-4	0	0	100	95-100	75-100	50-60	15-26	1-7
	11-38	Fine sandy loam	CL, SC	A-4, A-6	0	0	100	95-100	80-100	36-60	26-40	8-18
	38-60	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	20-50	15-26	NP-7
Nn: Naron-----	0-11	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	25-60	15-26	1-7
	11-38	Fine sandy loam	CL, SC	A-4, A-6	0	0	100	95-100	80-100	36-60	26-40	8-18
	38-60	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	20-50	15-26	NP-7
	0-11	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	25-60	15-26	1-7
	11-38	Fine sandy loam	CL, SC	A-4, A-6	0	0	100	95-100	80-100	36-60	26-40	8-18
	38-60	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	20-50	15-26	NP-7
Farnum-----	0-12	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	12-48	Clay loam	CL, SC	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-60	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
Oc: Ost-----	0-9	Clay loam	CL	A-6	0	0	95-100	95-100	85-100	75-90	30-40	10-20
	9-14	Clay loam	CL	A-4, A-6	0	0	95-100	90-100	85-100	55-90	30-40	9-18
	14-23	Clay loam	SC, CL	A-2, A-4, A-6	0	0	95-100	90-100	80-100	30-90	25-40	8-18
	23-60	Clay loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0	85-100	85-100	80-100	30-90	15-40	NP-18
Os: Ost-----	0-9	Clay loam	CL	A-6	0	0	95-100	95-100	85-100	75-90	30-40	10-20
	9-14	Clay loam	CL	A-4, A-6	0	0	95-100	90-100	85-100	55-90	30-40	9-18
	14-23	Clay loam	CL, SC	A-2, A-4, A-6	0	0	95-100	90-100	80-100	30-90	25-40	8-18
	23-60	Clay loam	SM, CL, ML, SC	A-2, A-4, A-6	0	0	85-100	85-100	80-100	30-90	15-40	NP-18
Pm: Pratt-----	0-10	Loamy fine sand	SM	A-2	0	0	100	95-100	70-100	15-35	---	NP
	10-40	Loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	15-20	NP-6
	40-60	Loamy fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	80-100	5-35	---	NP
Pn: Pratt-----	0-10	Loamy fine sand	SM	A-2	0	0	100	95-100	70-100	15-35	---	NP
	10-40	Loamy fine sand	SC-SM, SM	A-2, A-4	0	0	100	95-100	90-100	15-40	15-20	NP-6
	40-60	Loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-35	---	NP
Po: Pratt-----	0-10	Loamy fine sand	SM	A-2	0	0	100	95-100	70-100	15-35	---	NP
	10-40	Loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	15-20	NP-6
	40-60	Loamy fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	80-100	5-35	---	NP
Carwile-----	0-12	Fine sandy loam	SC-SM, CL-ML, ML, SM	A-2, A-4	0	0	100	98-100	90-100	36-60	15-26	NP-7
	12-20	Sandy clay loam	SC, CL	A-6, A-7	0	0	100	100	90-100	36-90	35-50	14-26
	20-33	Clay	SC, CL, CH	A-6, A-7	0	0	100	100	90-100	40-95	35-70	14-38
	33-60	Sandy clay loam	CL, CH, SC	A-4, A-6, A-7	0	0	100	100	90-100	36-95	25-70	7-38
PRR: Pratt-----	0-12	Loamy fine sand	SM	A-2	0	0	100	95-100	70-100	15-35	---	NP
	12-36	Loamy fine sand	SC-SM, SM	A-4, A-2	0	0	100	95-100	90-100	15-40	15-20	NP-6
	36-60	Loamy fine sand	SP-SM, SM	A-3, A-2	0	0	100	95-100	80-100	5-35	---	NP
PSS: Pratt-----	0-8	Loamy fine sand	SM	A-2	0	0	100	95-100	70-100	15-35	---	NP
	8-28	Loamy fine sand	SC-SM, SM	A-2, A-4	0	0	100	95-100	90-100	15-40	15-20	NP-6
	28-60	Loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-35	---	NP
Pt: Pratt-----	0-10	Loamy fine sand	SM	A-2	0	0	100	95-100	70-100	15-35	---	NP
	10-40	Loamy fine sand	SC-SM, SM	A-2, A-4	0	0	100	95-100	90-100	15-40	15-20	NP-6
	40-60	Loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-35	---	NP
Tivoli-----	0-6	Loamy fine sand	SM	A-2	0	0	100	95-100	90-100	15-35	---	NP
	6-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-25	---	NP
PTT: Pratt-----	0-10	Loamy fine sand	SM	A-2	0	0	100	95-100	70-100	15-35	---	NP
	10-32	Loamy fine sand	SC-SM, SM	A-4, A-2	0	0	100	95-100	90-100	15-40	15-20	NP-6
	32-60	Fine sand	SM, SP-SM	A-3, A-2	0	0	100	95-100	80-100	5-35	---	NP
Tivoli-----	0-7	Loamy fine sand	SM	A-2	0	0	100	95-100	90-100	15-35	---	NP
	7-60	Fine sand	SM, SP-SM	A-3, A-2	0	0	100	95-100	80-100	5-25	---	NP
Sa: Albion-----	0-8	Fine sandy loam	ML, SM, CL-ML	A-2, A-4	0	0	100	75-100	60-90	25-55	15-30	NP-5
	8-18	Sandy loam	ML, SM, CL-ML	A-2, A-4	0	0	85-100	75-100	45-90	30-55	20-35	NP-10
	18-29	Coarse sandy loam	SM	A-1, A-2	0	0	85-100	75-90	40-70	15-30	15-30	NP-5
	29-60	Gravelly sand	GM, GP-GM, SM, SP-SM	A-1, A-2, A-3	0	0-5	40-100	40-90	30-70	5-30	15-30	NP-5
Kaski-----	0-26	Loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	85-100	50-85	20-45	5-25
	26-40	Loam	CL, SC	A-4, A-6, A-7	0	0	100	95-100	85-100	45-85	25-45	7-25
	40-60	Sandy loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0	100	95-100	60-100	30-80	15-35	NP-20

ENGINEERING INDEX PROPERTIES--Continued  
Pratt County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Sb: Shellabarger---	0-11	Fine sandy loam	ML, SM	A-2, A-4	0	0	95-100	95-100	75-100	30-55	15-30	NP-5
	11-34	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	34-60	Coarse sandy loam	SC, SC-SM, SM, SP-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	15-30	NP-10
Se: Shellabarger---	0-11	Fine sandy loam	ML, SM, CL-ML	A-2, A-4	0	0	95-100	95-100	75-100	30-55	15-30	NP-5
	11-34	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	34-60	Coarse sandy loam	SC, SC-SM, SM, SP-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	15-30	NP-10
Sf: Shellabarger---	0-11	Fine sandy loam	ML, SM	A-2, A-4	0	0	95-100	95-100	75-100	30-55	15-30	NP-5
	11-34	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	34-60	Coarse sandy loam	SC, SC-SM, SM, SP-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	15-30	NP-10
Ta: Tabler-----	0-10	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-98	32-43	11-20
	10-40	Silty clay	CH, CL	A-7	0	0	100	100	96-100	90-99	41-65	18-35
	40-60	Silty clay	CH, CL	A-6, A-7	0	0	96-100	96-100	92-100	80-99	38-60	15-35
Tf: Tivoli-----	0-6	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-25	---	NP
	6-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-25	---	NP
W: Water-----	---	---	---	---	---	---	---	---	---	---	---	---
Wa: Waldeck-----	0-15	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	75-100	25-55	15-25	NP-5
	15-46	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	70-100	30-50	15-25	NP-5
	46-60	Fine sand	SP-SM, SP, SM	A-1, A-2, A-3	0	0	90-100	80-100	40-60	1-35	---	NP
Wd: Kingman-----	0-10	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	90-100	35-50	13-26
	10-60	Sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	90-100	40-90	15-40	5-20
Ze: Zenda-----	0-14	Clay loam	CL	A-6	0	0	100	95-100	85-100	55-80	30-40	10-20
	14-60	Clay loam	CL	A-6	0	0	100	95-100	85-100	55-80	25-40	10-25
Zs: Zenda-----	0-14	Clay loam	CL	A-6	0	0	100	95-100	85-100	55-80	30-40	10-20
	14-60	Clay loam	CL	A-6	0	0	100	95-100	85-100	55-80	25-40	10-25
Drummond-----	0-8	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-98	37-50	15-26
	8-30	Clay	CH, CL	A-6, A-7	0	0	100	100	96-100	80-98	35-60	15-35
	30-60	Variable			---	---	---	---	---	---	---	---

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

## Physical Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K-sat). The estimates in the table indicate the rate of water movement, in micrometers per second (um/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in this table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					

2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.

3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.

5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.

6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.

7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.

8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
007AE:														
Albion-----	0-11	66	23	7-15	1.35-1.50	2.00-6.00	0.13-0.17	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	11-24	67	19	10-18	1.45-1.60	2.00-6.00	0.12-0.18	0.0-2.9	---	.20	.24			
	24-60	92	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	---	.15	.32			
Shellabarger-	0-12	68	20	8-16	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	12-60	60	18	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	---	.28	.32			
007CC:														
Case-----	0-6	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	0.0-2.9	0.5-2.0	.32	.32	5	4L	86
	6-60	35	38	18-35	1.35-1.70	0.60-2.00	0.15-0.19	3.0-5.9	---	.32	.32			
Clark-----	0-10	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	10-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	---	.28	.28			
007LN:														
Lincoln-----	0-6	66	20	10-18	1.30-1.60	5.95-19.98	0.10-0.15	0.0-2.9	0.0-1.0	.20	.20	5	3	86
	6-60			5-15	1.30-1.60	5.95-19.98	0.02-0.08	0.0-2.9	---	.17	.17			
007SB:														
Shellabarger-	0-14	68	20	8-16	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	14-48	60	18	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	---	.28	.32			
	48-60	66	24	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	---	.28	.32			
047PG:														
Pratt-----	0-13	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	13-30	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	30-60	79	16	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
095AB:														
Albion-----	0-8	66	23	7-15	1.35-1.50	2.00-6.00	0.13-0.17	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	8-16	67	19	10-18	1.45-1.60	2.00-6.00	0.12-0.18	0.0-2.9	---	.20	.24			
	16-26	66	24	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	---	.15	.20			
	26-60	85	9	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	---	.15	.32			
095DA:														
Dillwyn-----	0-8	79	16	2-8	1.50-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-2.0	.17	.17	5	2	134
	8-60	79	16	2-8	1.50-1.60	5.95-19.98	0.06-0.10	0.0-2.9	---	.17	.17			
Plevna-----	0-11	67	20	8-18	1.40-1.50	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20	5	3	86
	11-36	67	20	8-18	1.40-1.50	2.00-6.00	0.12-0.16	0.0-2.9	---	.20	.20			
	36-60	95	1	1-7	1.50-1.60	2.00-6.00	0.05-0.07	0.0-2.9	---	.20	.20			
097AS:														
Albion-----	0-11	66	23	7-15	1.35-1.50	2.00-6.00	0.13-0.17	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	11-24	67	19	10-18	1.45-1.60	2.00-6.00	0.12-0.18	0.0-2.9	---	.20	.24			
	24-60	92	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	---	.15	.32			
Shellabarger-	0-12	68	20	8-16	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	12-60	60	18	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	---	.28	.32			
097CE:														
Case-----	0-6	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	0.0-2.9	0.5-2.0	.32	.32	5	4L	86
	6-60	35	38	18-35	1.35-1.70	0.60-2.00	0.15-0.19	3.0-5.9	---	.32	.32			
097CK:														
Clark-----	0-5	42	37	15-27	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	5-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	---	.28	.28			
097CM:														
Clark-----	0-10	42	37	15-27	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	10-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	---	.28	.28			
1005:														
Albion-----	0-9	72	18	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.24	4	3	86
	9-16	80	7	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	16-27	84	5	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	27-48	87	6	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20			
	48-80	90	7	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.32			
1006:														
Albion-----	0-9	72	18	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.24	4	3	86
	9-16	80	7	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	16-27	84	5	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	27-48	87	6	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20			
	48-80	90	7	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.32			
1017:														
Shellabarger, Eroded-----	0-5	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	5-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.9	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
Albion-----	0-9	72	18	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.24	4	3	86
	9-16	80	7	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	16-27	84	5	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	27-48	87	6	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20			
	48-80	90	7	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.32			

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth  In	Sand  Pct	Silt  Pct	Clay  Pct	Moist bulk density  g/cc	Permea- bility (Ksat)  in/hr	Available water capacity  In/in	Linear extensi- bility  Pct	Organic matter  Pct	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
1324: Carway-----	0-7	67	20	10-16	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	7-10	61	18	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	10-15	61	18	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	15-22	62	19	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	22-35	62	19	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	35-40	34	37	28-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	40-54	33	32	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	54-63	29	31	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	63-72	30	32	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	72-80	35	33	15-34	1.45-1.65	0.60-2.00	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28			
Carbika-----	0-11	27	55	10-22	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	1.0-2.0	.24	.24	5	5	56
	11-15	30	30	35-42	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	15-22	30	32	35-42	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	22-34	34	32	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	34-41	34	32	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	41-60	35	33	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	60-80	34	32	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
1340: Case-----	0-6	32	41	18-35	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	6-20	33	38	18-35	1.35-1.70	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.32	.32			
	20-35	29	41	18-35	1.35-1.70	0.20-0.60	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	35-80	26	47	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
Clark-----	0-11	37	41	15-27	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	11-16	33	40	18-35	1.35-1.70	0.60-2.00	0.17-0.19	3.0-5.9	0.5-2.0	.32	.32			
	16-28	29	50	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	28-45	45	38	10-25	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	45-65	47	44	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
	65-80	26	65	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
1341: Case-----	0-6	32	41	18-35	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	6-20	33	38	18-35	1.35-1.70	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.32	.32			
	20-35	29	41	18-35	1.35-1.70	0.20-0.60	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	35-80	26	47	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
Clark-----	0-11	37	41	15-27	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	11-16	33	40	18-35	1.35-1.70	0.60-2.00	0.17-0.19	3.0-5.9	0.5-2.0	.32	.32			
	16-28	29	50	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	28-45	45	38	10-25	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	45-65	47	44	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
	65-80	26	65	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
1725: Farnum-----	0-5	43	40	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	5-15	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	15-21	40	37	20-27	1.40-1.50	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.5	.28	.28			
	21-34	57	18	20-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	34-48	38	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	48-61	34	37	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	61-73	35	38	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	73-80	39	37	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.28			
Funmar-----	0-6	42	38	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	6-12	41	37	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	12-17	38	36	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	17-26	34	37	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	26-32	38	36	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
	32-38	20	48	26-34	1.35-1.45	0.20-0.60	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	38-54	8	54	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	54-66	8	56	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	66-80	8	54	26-45	1.50-1.60	0.06-0.20	0.10-0.17	0.0-2.9	0.0-0.5	.37	.37			
1726: Farnum-----	0-5	43	40	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	5-15	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	15-21	40	37	20-27	1.40-1.50	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.5	.28	.28			
	21-34	57	18	20-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	34-48	38	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	48-61	34	37	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	61-73	35	38	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	73-80	39	37	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.28			
Funmar-----	0-6	42	38	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	6-12	41	37	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	12-17	38	36	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	17-26	34	37	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	26-32	38	36	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
	32-38	20	48	26-34	1.35-1.45	0.20-0.60	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	38-54	8	54	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	54-66	8	56	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	66-80	8	54	26-45	1.50-1.60	0.06-0.20	0.10-0.17	0.0-2.9	0.0-0.5	.37	.37			

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
1985: Hayes-----	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
	0-8	63	26	9-13	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	8-14	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	14-23	65	19	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	23-34	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	34-42	67	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	42-47	66	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	47-56	61	18	19-28	1.40-1.60	0.20-0.60	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	56-69	8	50	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	69-80	34	37	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
1986: Hayes-----	0-8	85	7	1-9	1.50-1.60	6.00-19.99	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	8-14	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	14-23	65	19	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	23-34	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	34-42	67	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	42-47	66	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	47-56	61	18	19-28	1.40-1.60	0.20-0.60	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	56-69	8	50	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	69-80	34	37	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Solvay-----	0-5	79	16	3-8	1.50-1.60	2.00-6.00	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	5-14	62	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.8	.28	.28			
	14-23	63	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	23-37	66	20	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	37-58	63	26	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	58-76	83	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	76-80	84	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
1987: Hayes-----	0-8	86	5	1-9	1.50-1.60	6.00-19.99	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	8-14	79	6	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	14-23	76	8	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	23-34	78	6	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	34-42	81	5	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	42-47	74	12	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	47-56	67	13	19-28	1.40-1.60	0.20-0.60	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	56-69	11	48	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	69-80	30	40	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Turon-----	0-8	88	8	1-5	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-28	88	4	3-10	1.40-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.5-1.0	.17	.17			
	28-40	88	3	2-18	1.40-1.55	1.98-19.98	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24			
	40-58	11	49	27-41	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	58-75	6	53	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	75-80	4	54	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
1988: Hayes-----	0-8	63	26	9-13	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	8-14	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	14-23	65	19	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	23-34	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	34-42	67	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	42-47	66	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	47-56	61	18	19-28	1.40-1.60	0.20-0.60	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	56-69	8	50	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	69-80	34	37	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
2556: Langdon-----	0-8	96	1	0-6	1.35-1.50	6.00-19.99	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-47			0-12	1.50-1.70	6.00-19.99	0.02-0.08	0.0-2.9	0.0-0.0	.15	.15			
	47-64	96	1	0-5	1.50-1.70	6.00-19.99	0.02-0.08	0.0-2.9	0.0-0.0	.17	.15			
	64-80			0-12	1.50-1.70	6.00-19.99	0.02-0.08	0.0-2.9	0.0-0.0	.15	.15			
2948: Nalim-----	0-6	49	36	14-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-9	38	37	14-27	1.35-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	9-13	33	32	25-35	1.40-1.65	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.5	.28	.28			
	13-21	38	30	25-35	1.40-1.80	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.2	.28	.28			
	21-31	45	30	25-35	1.40-1.85	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.0	.28	.28			
	31-39	54	23	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.8	.32	.28			
	39-44	70	12	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.5	.32	.28			
	44-52	74	10	5-35	1.45-1.70	0.20-0.60	0.06-0.20	3.0-5.9	0.1-0.5	.32	.32			
	52-62	82	8	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.1-0.5	.17	.20			
	62-72	78	9	2-15	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
	72-80	93	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
3051: Ost-----	0-8	35	44	10-27	1.40-1.54	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-12	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	12-18	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	18-23	23	48	18-35	1.40-1.52	0.20-0.60	0.15-0.19	3.0-5.9	0.5-1.0	.32	.32			
	23-38	26	47	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.6	.32	.37			
	38-54	33	44	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
	54-80	44	35	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth In	Sand Pct	Silt Pct	Clay Pct	Moist bulk density g/cc	Permea- bility (Ksat) in/hr	Available water capacity In/in	Linear extensi- bility Pct	Organic matter Pct	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
3053: Ost-----	0-8	35	44	10-27	1.40-1.54	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-12	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	12-18	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	18-23	23	48	18-35	1.40-1.52	0.20-0.60	0.15-0.19	3.0-5.9	0.5-1.0	.32	.32			
	23-38	26	47	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.6	.32	.37			
	38-54	33	44	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
	54-80	44	35	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
3180: Pratt-----	0-8	90	4	1-7	1.40-1.55	6.00-19.99	0.07-0.09	0.0-2.9	0.5-1.0	.15	.15	5	1	220
	8-24	87	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	24-64	89	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	64-80	89	4	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.5	.17	.17			
3181: Pratt-----	0-8	90	4	1-7	1.40-1.55	6.00-19.99	0.07-0.09	0.0-2.9	0.5-1.0	.15	.15	5	1	220
	8-24	87	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	24-64	89	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	64-80	89	4	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.5	.17	.17			
Turon-----	0-8	88	8	1-5	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-28	88	4	3-10	1.40-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.5-1.0	.17	.17			
	28-40	88	3	2-18	1.40-1.55	1.98-19.98	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24			
	40-58	11	49	27-41	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	58-75	6	53	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	75-80	4	54	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
3445: Shellabarger, Moderately Eroded-----	0-6	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	0.2-1.0	.20	.20	5	3	86
	6-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
3510: Saltcreek----	0-5	67	20	10-19	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	5-10	58	20	10-27	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20			
	10-26	58	21	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	26-39	63	18	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	39-56	17	42	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	56-66	8	56	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	66-80	10	59	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Funmar-----	0-6	44	36	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	6-12	44	34	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	12-17	46	29	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	17-26	40	31	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	26-32	25	49	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
	32-38	16	52	26-34	1.35-1.45	0.20-0.60	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	38-54	14	48	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	54-66	18	46	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	66-80	14	48	26-45	1.50-1.60	0.06-0.20	0.10-0.17	0.0-2.9	0.0-0.5	.37	.37			
Farnum-----	0-5	42	41	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	5-15	41	39	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	15-21	46	31	20-27	1.40-1.50	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.5	.28	.28			
	21-34	48	27	20-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	34-48	44	30	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	48-61	33	39	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	61-73	33	40	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	73-80	38	38	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.28			
3512: Saltcreek----	0-5	67	20	10-19	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	5-10	60	18	10-27	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20			
	10-26	60	18	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	26-39	62	19	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	39-56	8	51	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	56-66	8	55	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	66-80	20	48	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Naron-----	0-8	64	27	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	8-14	65	20	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20			
	14-28	62	19	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	28-39	61	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	39-55	62	19	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	55-66	63	19	2-18	1.55-1.60	2.00-6.00	0.10-0.15	0.0-2.9	0.0-0.5	.17	.17			
	66-80	86		2-18	1.55-1.60	5.95-19.98	0.10-0.15	0.0-2.9	0.0-0.5	.10	.10			
3533: Shellabarger-	0-7	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	7-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			



PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth In	Sand Pct	Silt Pct	Clay Pct	Moist bulk density g/cc	Permea- bility (Ksat) in/hr	Available water capacity In/in	Linear extensi- bility Pct	Organic matter Pct	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
3534: Shellabarger-	0-7	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	7-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
3540: Solvay-----	0-5	79	16	3-8	1.50-1.60	2.00-6.00	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	3	86
	5-14	62	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.8	.28	.28			
	14-23	63	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	23-37	66	20	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	37-58	63	26	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	58-76	83	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	76-80	84	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
3639: Taver-----	0-7	36	44	17-25	1.30-1.55	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	7-17	15	49	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	17-33	5	55	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	33-53	5	56	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	53-64	30	35	20-35	1.45-1.65	0.20-0.60	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
	64-80	50	22	20-30	1.45-1.65	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
3640: Tivin-----	0-7	98	1	0-2	1.35-1.50	6.00-19.98	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	7-18	97	1	0-2	1.35-1.50	5.95-19.98	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
	18-80	97	1	0-3	1.50-1.70	5.95-19.98	0.02-0.08	0.0-2.9	0.0-0.0	.10	.10			
3644: Turon-----	0-8	88	8	1-5	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-28	88	4	3-10	1.40-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.5-1.0	.17	.17			
	28-40	88	3	2-18	1.40-1.55	1.98-19.98	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24			
	40-58	11	49	27-41	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	58-75	6	53	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	75-80	4	54	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
Carway-----	0-7	84	10	2-10	1.50-1.60	6.00-19.99	0.05-0.09	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	7-10	61	19	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	10-15	61	18	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	15-22	64	17	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	22-35	63	18	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	35-40	34	36	28-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	40-54	32	33	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	54-63	30	30	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	63-72	30	32	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	72-80	28	40	15-34	1.45-1.65	0.60-2.00	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28			
3926: Water-----	---	---	---	---	---	---	---	---	---	---	---	-	---	---
4005: Yaggy-----	0-5	54	38	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	3	3	86
	5-11	69	24	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20			
	11-14	31	54	8-26	1.45-1.55	0.60-2.00	0.17-0.20	0.0-2.9	0.0-1.0	.24	.24			
	14-24	98	2	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	24-31	94	5	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	31-42	97	3	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	42-53	96	4	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
	53-69	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
	69-80	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
Saxman-----	0-4	79	15	1-7	1.50-1.60	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.3	.20	.20	5	2	134
	4-8	80	15	1-7	1.50-1.70	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.0	.20	.20			
	8-13	78	14	1-8	1.50-1.70	6.00-19.99	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17			
	13-22	81	12	0-7	1.50-1.60	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.6	.17	.17			
	22-30	90	6	0-7	1.50-1.75	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.17			
	30-37	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	37-48	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	48-54	97	3	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	54-80	97	3	0-1	1.55-1.65	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
Ab: Albion-----	0-8	66	23	7-15	1.35-1.50	2.00-6.00	0.13-0.17	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	8-18	67	19	10-18	1.45-1.60	2.00-6.00	0.12-0.18	0.0-2.9	---	.20	.24			
	18-29	66	24	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	---	.17	.20			
	29-60	92	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	---	.15	.32			
Ao: Albion-----	0-8	66	23	7-15	1.35-1.50	2.00-6.00	0.13-0.17	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	8-18	67	19	10-18	1.45-1.60	2.00-6.00	0.12-0.18	0.0-2.9	---	.20	.24			
	18-29	66	24	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	---	.17	.20			
	29-60	92	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	---	.15	.32			
As: Albion-----	0-8	66	23	7-15	1.35-1.50	2.00-6.00	0.13-0.17	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	8-18	67	19	10-18	1.45-1.60	2.00-6.00	0.12-0.18	0.0-2.9	---	.20	.24			
	18-29	66	24	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	---	.17	.20			
	29-60	92	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	---	.15	.32			
Shellabarger-	0-11	68	20	8-16	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	11-34	60	18	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	---	.28	.32			
	34-60	66	24	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	---	.28	.32			

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth In	Sand Pct	Silt Pct	Clay Pct	Moist bulk density g/cc	Permea- bility (Ksat) in/hr	Available water capacity In/in	Linear extensi- bility Pct	Organic matter Pct	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
Bc:														
Blanket-----	0-13	20	49	27-35	1.30-1.45	0.60-2.00	0.15-0.20	3.0-5.9	1.0-3.0	.37	.37	5	6	48
	13-46	8	50	35-50	1.35-1.55	0.20-0.60	0.12-0.18	3.0-5.9	---	.43	.43			
	46-60	7	51	35-50	1.35-1.55	0.60-2.00	0.12-0.18	3.0-5.9	---	.43	.37			
Be:														
Blanket-----	0-13	26	53	15-27	1.30-1.50	0.60-2.00	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	13-46	8	50	35-50	1.35-1.55	0.20-0.60	0.12-0.18	3.0-5.9	---	.43	.43			
	46-60	7	51	35-50	1.35-1.55	0.60-2.00	0.12-0.18	3.0-5.9	---	.43	.37			
Bh:														
Blanket-----	0-13	26	53	15-27	1.30-1.50	0.60-2.00	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	13-46	8	50	35-50	1.35-1.55	0.20-0.60	0.12-0.18	3.0-5.9	---	.43	.43			
	46-60	7	51	35-50	1.35-1.55	0.60-2.00	0.12-0.18	3.0-5.9	---	.43	.37			
Br:														
Fluvents-----	0-6	43	38	10-27	1.30-1.45	0.60-2.00	0.20-0.24	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	6-60	40	38	10-35	1.30-1.45	0.60-2.00	0.18-0.22	3.0-5.9	---	.43	.43			
Ca:														
Carwile-----	0-10	62	26	5-18	1.30-1.65	0.60-2.00	0.11-0.20	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	10-18	54	14	25-39	1.45-1.75	0.20-2.00	0.12-0.20	3.0-5.9	---	.37	.37			
	18-46	23	29	35-60	1.35-1.75	0.06-0.20	0.12-0.20	6.0-8.9	---	.37	.37			
	46-60	36	32	20-45	1.35-1.75	0.20-2.00	0.12-0.20	6.0-8.9	---	.32	.32			
Cc:														
Case-----	0-6	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	0.0-2.9	1.0-2.0	.32	.32	5	4L	86
	6-50	35	38	18-35	1.35-1.70	0.60-2.00	0.15-0.19	3.0-5.9	0.5-1.0	.32	.32			
Clark-----	0-8	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	8-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.28	.28			
Ck:														
Case-----	0-6	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	0.0-2.9	0.5-2.0	.32	.32	5	4L	86
	6-60	35	38	18-35	1.35-1.70	0.60-2.00	0.15-0.19	3.0-5.9	---	.32	.32			
Clark-----	0-8	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	8-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	---	.28	.28			
Cm:														
Clark-----	0-8	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	8-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	---	.28	.28			
Cn:														
Clark-----	0-8	65	20	10-20	1.30-1.45	0.60-2.00	0.15-0.19	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	8-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	---	.28	.28			
Co:														
Clark-----	0-8	34	37	27-32	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	8-60	35	38	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	---	.28	.28			
Ost-----	0-9	34	37	27-30	1.35-1.40	0.20-0.60	0.15-0.20	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	9-14	35	38	20-34	1.45-1.65	0.20-0.60	0.15-0.20	3.0-5.9	---	.32	.32			
	14-23	36	38	18-34	1.40-1.60	0.20-0.60	0.15-0.20	3.0-5.9	---	.32	.32			
	23-60	39	43	5-30	1.40-1.60	0.20-0.60	0.13-0.20	0.0-2.9	---	.32	.37			
Cs:														
Lincoln-----	0-10	84	6	5-15	1.35-1.50	5.95-19.98	0.06-0.11	0.0-2.9	0.5-0.5	.17	.17	5	2	134
	10-60			5-15	1.30-1.60	5.95-19.98	0.02-0.08	0.0-2.9	0.0-0.5	.17	.17			
Fa:														
Farnum-----	0-7	34	38	27-29	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	7-37	34	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
	37-60	61	19	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	---	.28	.28			
Fe:														
Farnum-----	0-11	63	26	8-14	1.45-1.55	2.00-6.00	0.13-0.18	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	11-41	34	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
	41-60	61	19	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	---	.28	.28			
Fm:														
Farnum-----	0-14	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	14-26	39	37	20-27	1.40-1.50	0.60-2.00	0.17-0.19	0.0-2.9	---	.28	.28			
	26-42	34	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
	42-60	61	19	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	---	.28	.28			
Fn:														
Farnum-----	0-12	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	12-48	34	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
	48-60	61	19	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	---	.28	.28			
Fu:														
Farnum-----	0-12	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	12-48	34	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
	48-60	61	19	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	---	.28	.28			
Fw:														
Farnum-----	0-12	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	12-48	34	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
	48-60	61	19	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	---	.28	.28			
Carwile-----	0-12	62	26	5-18	1.30-1.65	0.60-2.00	0.11-0.20	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	12-20	54	14	25-39	1.45-1.75	0.20-2.00	0.12-0.20	3.0-5.9	---	.37	.37			
	20-33	23	29	35-60	1.35-1.75	0.06-0.20	0.12-0.20	6.0-8.9	---	.37	.37			
	33-60	54	14	20-45	1.35-1.75	0.20-2.00	0.12-0.20	6.0-8.9	---	.32	.32			
GRP:														
Pits-----	0-60	95	1	0-8	1.70-2.00	6.00-20.00	0.02-0.09	0.0-2.9	0.0-0.5	.10	.17	2	8	0
INT:														
Aquolls-----	0-72			---	---	---	---	---	---	---	---	-	---	0
Kp:														
Kanza-----	0-11	86	7	3-12	1.50-1.70	5.95-19.98	0.08-0.13	0.0-2.9	1.0-3.0	.17	.17	5	2	134
	11-40	92	1	1-12	1.50-1.70	5.95-19.98	0.06-0.11	0.0-2.9	---	.17	.20			
Plevna-----	0-10	67	20	8-18	1.40-1.50	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20	5	3	86
	10-40	67	20	8-18	1.40-1.50	2.00-6.00	0.12-0.16	0.0-2.9	---	.20	.20			
	40-60	95	1	1-7	1.50-1.60	2.00-6.00	0.05-0.07	0.0-2.9	---	.20	.20			

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
Ks:	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Elandco-----	0-18	10	68	18-27	1.30-1.50	0.60-2.00	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43	5	6	48
	18-60	7	66	18-35	1.30-1.50	0.60-2.00	0.15-0.22	3.0-5.9	---	.43	.43			
Kw:	0-18	10	68	18-27	1.30-1.50	0.60-2.00	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43	5	6	48
Elandco-----	18-60	7	66	18-35	1.30-1.50	0.60-2.00	0.15-0.22	3.0-5.9	---	.43	.43			
Nd:	0-8	63	26	8-14	1.40-1.50	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
Naron-----	8-38	59	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	---	.32	.32			
	38-60	65	27	2-14	1.50-1.60	2.00-6.00	0.10-0.15	0.0-2.9	---	.32	.32			
Nf:	0-8	63	26	8-14	1.40-1.50	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
Naron-----	8-38	59	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	---	.32	.32			
	38-60	65	27	2-14	1.50-1.60	2.00-6.00	0.10-0.15	0.0-2.9	---	.32	.32			
Ng:	0-8	63	26	8-14	1.40-1.50	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
Naron-----	8-38	59	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	---	.32	.32			
	38-60	65	27	2-14	1.50-1.60	2.00-6.00	0.10-0.15	0.0-2.9	---	.32	.32			
Nk:	0-11	46	43	8-14	1.40-1.50	0.60-2.00	0.18-0.20	0.0-2.9	1.0-3.0	.28	.28	5	5	56
Naron-----	11-38	59	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	---	.32	.32			
	38-60	65	27	2-14	1.50-1.60	2.00-6.00	0.10-0.15	0.0-2.9	---	.32	.32			
Nm:	0-11	46	43	8-14	1.40-1.50	0.60-2.00	0.18-0.20	0.0-2.9	1.0-3.0	.28	.28	5	5	56
Naron-----	11-38	59	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	---	.32	.32			
	38-60	65	27	2-14	1.50-1.60	2.00-6.00	0.10-0.15	0.0-2.9	---	.32	.32			
Nn:	0-11	63	26	8-14	1.40-1.50	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
Naron-----	11-38	59	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	---	.32	.32			
	38-60	65	27	2-14	1.50-1.60	2.00-6.00	0.10-0.15	0.0-2.9	---	.32	.32			
Farnum-----	0-12	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	12-48	34	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
	48-60	61	19	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	---	.28	.28			
Oc:	0-9	34	37	27-30	1.35-1.40	0.20-0.60	0.15-0.20	0.0-2.9	1.0-3.0	.32	.32	5	6	48
Ost-----	9-14	35	38	20-34	1.45-1.65	0.20-0.60	0.15-0.20	3.0-5.9	---	.32	.32			
	14-23	36	38	18-34	1.40-1.60	0.20-0.60	0.15-0.20	3.0-5.9	---	.32	.32			
	23-60	39	43	5-30	1.40-1.60	0.20-0.60	0.13-0.20	0.0-2.9	---	.32	.37			
Os:	0-9	34	37	27-30	1.35-1.40	0.20-0.60	0.15-0.20	0.0-2.9	1.0-3.0	.32	.32	5	6	48
Ost-----	9-14	35	38	20-34	1.45-1.65	0.20-0.60	0.15-0.20	3.0-5.9	---	.32	.32			
	14-23	36	38	18-34	1.40-1.60	0.20-0.60	0.15-0.20	3.0-5.9	---	.32	.32			
	23-60	39	43	5-30	1.40-1.60	0.20-0.60	0.13-0.20	0.0-2.9	---	.32	.37			
Pm:	0-10	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
Pratt-----	10-40	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	40-60	79	16	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
Pn:	0-10	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
Pratt-----	10-40	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	40-60	79	16	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
Po:	0-10	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
Pratt-----	10-40	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	40-60	79	16	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
Carwile-----	0-12	62	26	5-18	1.30-1.65	0.60-2.00	0.11-0.20	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	12-20	54	14	25-39	1.45-1.75	0.20-2.00	0.12-0.20	3.0-5.9	---	.37	.37			
	20-33	23	29	35-60	1.35-1.75	0.06-0.20	0.12-0.20	6.0-8.9	---	.37	.37			
	33-60	54	14	20-45	1.35-1.75	0.20-2.00	0.12-0.20	6.0-8.9	---	.32	.32			
PRR:	0-12	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
Pratt-----	12-36	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	36-60	79	16	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
PSS:	0-8	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
Pratt-----	8-28	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	28-60	79	16	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
Pt:	0-10	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
Pratt-----	10-40	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	40-60	79	16	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
Tivoli-----	0-6	86	7	5-10	1.35-1.50	5.95-19.98	0.07-0.11	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	6-60	93	1	1-10	1.50-1.70	5.95-19.98	0.02-0.08	0.0-2.9	---	.17	.17			
PTT:	0-10	79	16	2-8	1.40-1.55	5.95-19.98	0.10-0.13	0.0-2.9	0.5-1.0	.17	.17	5	2	134
Pratt-----	10-32	86	7	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	---	.17	.17			
	32-60	95	1	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	---	.17	.17			
Tivoli-----	0-7	86	7	5-10	1.35-1.50	5.95-19.98	0.07-0.11	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	7-60	93	1	1-10	1.50-1.70	5.95-19.98	0.02-0.08	0.0-2.9	---	.17	.17			

PHYSICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas: Maintenance needed

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
Sa:	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Albion-----	0-8	63	26	7-15	1.35-1.50	2.00-6.00	0.13-0.17	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	8-18	67	19	10-18	1.45-1.60	2.00-6.00	0.12-0.18	0.0-2.9	---	.20	.24			
	18-29	66	24	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	---	.17	.20			
	29-60	92	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	---	.15	.32			
Kaski-----	0-26	40	38	18-27	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	1.0-3.0	.28	.28	5	6	48
	26-40	38	36	18-35	1.40-1.50	0.60-2.00	0.13-0.19	3.0-5.9	---	.28	.28			
	40-60	66	15	8-30	1.45-1.55	0.60-2.00	0.13-0.19	0.0-2.9	---	.28	.28			
Sb:														
Shellabarger-	0-11	68	20	8-16	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	11-34	60	18	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	---	.28	.32			
	34-60	66	24	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	---	.28	.32			
Se:														
Shellabarger-	0-11	68	20	8-16	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	11-34	60	18	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	---	.28	.32			
	34-60	66	24	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	---	.28	.32			
Sf:														
Shellabarger-	0-11	68	20	8-16	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	11-34	60	18	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	---	.28	.32			
	34-60	66	24	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	---	.28	.32			
Ta:														
Tabler-----	0-10	35	34	27-35	1.30-1.60	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43	5	7	38
	10-40	6	47	40-55	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	---	.37	.37			
	40-60	7	48	35-55	1.35-1.65	0.00-0.06	0.12-0.22	6.0-8.9	---	.37	.37			
Tf:														
Tivoli-----	0-6	93	1	1-10	1.35-1.50	5.95-19.98	0.02-0.08	0.0-2.9	0.0-1.0	.17	.20	5	1	250
	6-60	93	1	1-10	1.50-1.70	5.95-19.98	0.02-0.08	0.0-2.9	---	.17	.20			
W:														
Water-----	---			---	---	---	---	---	---	---	---	-	---	0
Wa:														
Waldeck-----	0-15	68	20	8-16	1.50-1.60	2.00-6.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	15-46	68	20	8-16	1.50-1.60	2.00-6.00	0.12-0.17	0.0-2.9	---	.20	.20			
	46-60	97	1	1-4	1.55-1.65	5.95-19.98	0.05-0.07	0.0-2.9	---	.20	.24			
Wd:														
Kingman-----	0-10	7	62	27-35	1.35-1.45	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.32	.32	5	4L	86
	10-60	64	15	12-30	1.45-1.60	0.20-2.00	0.12-0.19	0.0-2.9	---	.32	.32			
Ze:														
Zenda-----	0-14	34	37	27-32	1.45-1.55	0.60-2.00	0.17-0.22	3.0-5.9	1.0-3.0	.28	.28	5	6	48
	14-60	35	38	18-35	1.45-1.60	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			
Zs:														
Drummond-----	0-8	34	37	27-32	1.30-1.60	0.20-0.60	0.08-0.11	3.0-5.9	0.5-1.0	.49	.49	2	4L	86
	8-30	23	29	35-60	1.40-1.65	0.00-0.06	0.06-0.12	6.0-8.9	---	.37	.37			
	30-60			---	---	---	---	---	---	---	---			
Zenda-----	0-14	34	37	27-32	1.45-1.55	0.60-2.00	0.17-0.22	3.0-5.9	1.0-3.0	.28	.28	5	6	48
	14-60	35	38	18-35	1.45-1.60	0.60-2.00	0.15-0.19	3.0-5.9	---	.28	.28			

CHEMICAL PROPERTIES OF THE SOILS  
Pratt County, Kansas

The Chemical Properties table shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils. Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 2 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
007AE:							
Albion-----	0-11	3.0-10	5.6-6.5	0	0	0	0
	11-24	4.0-11	6.1-7.8	0	0	0	0
	24-60	0.0-6.0	6.1-8.4	0	0	0	0
Shellabarger----	0-12	3.0-11	5.1-6.5	---	---	---	---
	12-60	7.0-16	6.1-7.8	---	---	---	---
007CC:							
Case-----	0-6	11-21	7.4-8.4	0-5	---	---	---
	6-60	7.0-21	7.4-8.4	5-25	---	---	---
Clark-----	0-10	11-21	7.4-8.4	0-5	---	---	---
	10-60	7.0-21	7.4-8.4	15-45	---	---	---
007LN:							
Lincoln-----	0-6	4.0-11	7.4-8.4	---	---	---	---
	6-60	2.0-9.0	7.9-8.4	---	---	---	---
007SB:							
Shellabarger----	0-14	3.0-11	5.1-6.5	---	---	---	---
	14-48	7.0-16	6.1-7.8	---	---	---	---
	48-60	1.0-11	6.1-8.4	---	---	---	---
047PG:							
Pratt-----	0-13	1.0-5.0	5.6-7.3	---	---	---	---
	13-30	1.0-7.0	5.6-7.3	---	---	---	---
	30-60	0.0-5.0	6.1-7.3	---	---	---	---
095AB:							
Albion-----	0-8	3.0-10	5.6-6.5	0	0	0	0
	8-16	4.0-11	6.1-7.8	0	0	0	0
	16-26	1.0-9.0	6.1-8.4	0	0	0	0
	26-60	0.0-6.0	6.1-8.4	0	0	0	0
095DA:							
Dillwyn-----	0-8	0.0-6.0	5.6-7.3	---	---	---	---
	8-60	0.0-5.0	5.6-7.8	---	---	---	---
Plevna-----	0-11	3.0-13	6.6-8.4	0	0	0	0
	11-36	3.0-11	6.6-8.4	0	0	0	0
	36-60	0.0-4.0	6.6-8.4	0	0	0	0
097AS:							
Albion-----	0-11	3.0-10	5.6-6.5	0	0	0	0
	11-24	4.0-11	6.1-7.8	0	0	0	0
	24-60	0.0-6.0	6.1-8.4	0	0	0	0
Shellabarger----	0-12	3.0-11	5.1-6.5	---	---	---	---
	12-60	7.0-16	6.1-7.8	---	---	---	---
097CE:							
Case-----	0-6	11-21	7.4-8.4	0-5	---	---	---
	6-60	7.0-21	7.4-8.4	5-25	---	---	---
097CK:							
Clark-----	0-5	6.0-18	7.4-8.4	0-5	---	---	---
	5-60	7.0-21	7.4-8.4	15-45	---	---	---
097CM:							
Clark-----	0-10	6.0-18	7.4-8.4	0-5	---	---	---
	10-60	7.0-21	7.4-8.4	15-45	---	---	---
1005:							
Albion-----	0-9	5.0-15	5.6-6.5	0	0	0	0
	9-16	5.0-15	6.1-7.8	0	0	0	0
	16-27	5.0-15	6.1-7.8	0	0	0	0
	27-48	2.0-10	6.1-8.4	0	0	0	0
	48-80	2.0-5.0	6.1-8.4	0	0	0	0
1006:							
Albion-----	0-9	5.0-15	5.6-6.5	0	0	0	0
	9-16	5.0-15	6.1-7.8	0	0	0	0
	16-27	5.0-15	6.1-7.8	0	0	0	0
	27-48	2.0-10	6.1-8.4	0	0	0	0
	48-80	2.0-5.0	6.1-8.4	0	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 3 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
1017:							
Albion-----	0-9	5.0-15	5.6-6.5	0	0	0	0
	9-16	5.0-15	6.1-7.8	0	0	0	0
	16-27	5.0-15	6.1-7.8	0	0	0	0
	27-48	2.0-10	6.1-8.4	0	0	0	0
	48-80	2.0-5.0	6.1-8.4	0	0	0	0
Shellabarger, Eroded-----	0-5	6.0-10	5.1-6.5	0	0	0	0
	5-11	9.0-12	6.1-7.8	0	0	0	0
	11-19	9.0-12	6.1-7.8	0	0	0	0
	19-33	9.0-12	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	6.1-8.4	0-5	0	0	0
1324:							
Carway-----	0-7	7.0-12	5.6-6.5	0	0	0	0
	7-10	12-18	6.1-7.3	0	0	0	0
	10-15	12-18	6.1-7.3	0	0	0	0
	15-22	12-18	6.1-7.3	0	0	0	0
	22-35	12-18	6.1-7.3	0	0	0	0
	35-40	24-35	6.6-7.8	0-5	0	0	0
	40-54	24-35	6.6-7.8	0-5	0	0	0
	54-63	24-35	6.6-7.8	0-5	0	0	0
	63-72	24-35	6.6-7.8	0-5	0	0	0
	72-80	9.0-16	6.6-7.8	0-5	0	0	0
Carbika-----	0-11	7.0-12	6.1-7.3	0	0	0	0
	11-15	28-38	6.1-8.4	0-5	0	0	0
	15-22	28-38	6.1-8.4	0-5	0	0	0
	22-34	12-16	6.1-8.4	0-5	0	0	0
	34-41	12-16	6.1-8.4	0-5	0	0	0
	41-60	12-16	6.1-8.4	0-5	0	0	0
	60-80	12-16	7.4-8.4	0-5	0	0	0
1340:							
Case-----	0-6	10-25	7.4-8.4	0-5	0	0	0
	6-20	10-25	7.4-9.0	5-25	0	0	0
	20-35	10-25	7.4-9.0	0-25	0	0	0
	35-80	5.0-20	7.4-9.0	15-25	0	0	0
Clark-----	0-11	10-25	7.4-8.4	0-5	0	0	0
	11-16	10-25	7.4-9.0	5-25	0	0	0
	16-28	10-25	7.4-9.0	0-25	0	0	0
	28-45	10-25	7.4-9.0	15-45	0	0	0
	45-65	5.0-20	7.4-9.0	15-25	0	0	0
	65-80	5.0-20	7.4-9.0	15-25	0	0	0
1341:							
Case-----	0-6	10-25	7.4-8.4	0-5	0	0	0
	6-20	10-25	7.4-9.0	5-25	0	0	0
	20-35	10-25	7.4-9.0	0-25	0	0	0
	35-80	5.0-20	7.4-9.0	15-25	0	0	0
Clark-----	0-11	10-25	7.4-8.4	0-5	0	0	0
	11-16	10-25	7.4-9.0	5-25	0	0	0
	16-28	10-25	7.4-9.0	0-25	0	0	0
	28-45	10-25	7.4-9.0	15-45	0	0	0
	45-65	5.0-20	7.4-9.0	15-25	0	0	0
	65-80	5.0-20	7.4-9.0	15-25	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 4 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
1725:							
Funmar-----	0-6	7.0-19	6.1-7.3	0	0	0	0
	6-12	7.0-19	6.1-7.3	0	0	0	0
	12-17	13-19	6.6-7.3	0	0	0	0
	17-26	13-19	6.6-7.3	0	0	0	0
	26-32	13-19	6.6-7.3	0	0	0	0
	32-38	7.0-19	6.6-7.8	0	0	0	0
	38-54	24-41	6.6-7.8	0-5	0	0	0
	54-66	24-41	6.6-7.8	0-5	0	0	0
	66-80	11-18	6.6-7.8	0-5	0	0	0
Farnum-----	0-5	9.0-15	5.6-7.3	0	0	0	0
	5-15	9.0-15	5.6-7.3	0	0	0	0
	15-21	8.0-18	6.1-7.8	0	0	0	0
	21-34	10-23	6.1-8.4	0	0	0	0
	34-48	10-23	6.1-8.4	0	0	0	0
	48-61	10-23	6.1-8.4	0	0	0	0
	61-73	10-23	6.1-8.4	0	0	0	0
	73-80	4.0-19	6.6-8.4	0	0	0	0
1726:							
Farnum-----	0-5	9.0-15	5.6-7.3	0	0	0	0
	5-15	9.0-15	5.6-7.3	0	0	0	0
	15-21	8.0-18	6.1-7.8	0	0	0	0
	21-34	10-23	6.1-8.4	0	0	0	0
	34-48	10-23	6.1-8.4	0	0	0	0
	48-61	10-23	6.1-8.4	0	0	0	0
	61-73	10-23	6.1-8.4	0	0	0	0
	73-80	4.0-19	6.6-8.4	0	0	0	0
Funmar-----	0-6	7.0-19	6.1-7.3	0	0	0	0
	6-12	7.0-19	6.1-7.3	0	0	0	0
	12-17	13-19	6.6-7.3	0	0	0	0
	17-26	13-19	6.6-7.3	0	0	0	0
	26-32	13-19	6.6-7.3	0	0	0	0
	32-38	7.0-19	6.6-7.8	0	0	0	0
	38-54	24-41	6.6-7.8	0-5	0	0	0
	54-66	24-41	6.6-7.8	0-5	0	0	0
	66-80	11-18	6.6-7.8	0-5	0	0	0
1985:							
Hayes-----	0-8	5.0-8.0	5.1-7.3	0	0	0	0
	8-14	6.0-10	6.1-7.3	0	0	0	0
	14-23	6.0-10	6.1-7.3	0	0	0	0
	23-34	6.0-10	6.1-7.3	0	0	0	0
	34-42	6.0-10	6.1-7.3	0	0	0	0
	42-47	6.0-10	6.1-7.3	0	0	0	0
	47-56	10-15	6.6-7.8	0	0	0	0
	56-69	24-35	6.6-7.8	0-5	0	0	0
	69-80	24-35	6.6-7.8	0-5	0	0	0
1986:							
Hayes-----	0-8	1.0-5.0	5.1-7.3	0	0	0	0
	8-14	6.0-10	6.1-7.3	0	0	0	0
	14-23	6.0-10	6.1-7.3	0	0	0	0
	23-34	6.0-10	6.1-7.3	0	0	0	0
	34-42	6.0-10	6.1-7.3	0	0	0	0
	42-47	6.0-10	6.1-7.3	0	0	0	0
	47-56	10-15	6.6-7.8	0	0	0	0
	56-69	24-35	6.6-7.8	0-5	0	0	0
	69-80	24-35	6.6-7.8	0-5	0	0	0
Solvay-----	0-5	1.0-7.0	6.1-6.5	0	0	0	0
	5-14	8.0-19	6.1-7.3	0	0	0	0
	14-23	8.0-19	6.1-7.3	0	0	0	0
	23-37	8.0-19	6.1-7.3	0	0	0	0
	37-58	5.0-12	6.1-7.3	0	0	0	0
	58-76	5.0-12	6.1-7.3	0	0	0	0
	76-80	5.0-12	6.1-7.3	0	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 5 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
1987:							
Hayes-----	0-8	1.0-5.0	5.1-7.3	0	0	0	0
	8-14	6.0-10	6.1-7.3	0	0	0	0
	14-23	6.0-10	6.1-7.3	0	0	0	0
	23-34	6.0-10	6.1-7.3	0	0	0	0
	34-42	6.0-10	6.1-7.3	0	0	0	0
	42-47	6.0-10	6.1-7.3	0	0	0	0
	47-56	10-15	6.6-7.8	0	0	0	0
	56-69	24-35	6.6-7.8	0-5	0	0	0
	69-80	24-35	6.6-7.8	0-5	0	0	0
Turon-----	0-8	1.0-3.0	5.1-7.3	0	0	0	0
	8-28	2.0-5.0	5.1-7.3	0	0	0	0
	28-40	3.0-7.0	5.1-7.3	0	0	0	0
	40-58	24-33	6.6-7.8	0	0	0	0
	58-75	24-33	6.6-7.8	0	0	0	0
	75-80	24-33	6.6-7.8	0	0	0	0
1988:							
Hayes-----	0-8	5.0-8.0	5.1-7.3	0	0	0	0
	8-14	6.0-10	6.1-7.3	0	0	0	0
	14-23	6.0-10	6.1-7.3	0	0	0	0
	23-34	6.0-10	6.1-7.3	0	0	0	0
	34-42	6.0-10	6.1-7.3	0	0	0	0
	42-47	6.0-10	6.1-7.3	0	0	0	0
	47-56	10-15	6.6-7.8	0	0	0	0
	56-69	24-35	6.6-7.8	0-5	0	0	0
	69-80	24-35	6.6-7.8	0-5	0	0	0
2556:							
Langdon-----	0-8	0.0-3.0	5.1-7.3	0	0	0	0
	8-47	0.0-4.0	5.1-7.3	0	0	0	0
	47-64	0.0-1.0	5.1-7.3	0	0	0	0
	64-80	0.0-4.0	4.5-6.5	0	0	0	0
2948:							
Nalim-----	0-6	9.0-15	5.6-7.3	0	0	0	0
	6-9	9.0-20	5.6-7.3	0	0	0	0
	9-13	15-25	5.6-8.4	0	0	0	0
	13-21	15-24	5.6-8.4	0	0	0	0
	21-31	15-20	5.6-8.4	0	0	0	0
	31-39	7.0-20	5.6-8.4	0	0	0	0
	39-44	7.0-20	5.6-8.4	0	0	0	0
	44-52	3.0-20	5.6-8.4	0	0	0	0
	52-62	2.0-10	5.6-7.3	0	0	0	0
	62-72	2.0-10	5.6-7.3	0	0	0	0
	72-80	2.0-5.0	5.6-7.3	0	0	0	0
3051:							
Ost-----	0-8	15-20	6.1-8.4	0	0	0	0
	8-12	10-25	6.6-8.4	0	0	0	0
	12-18	10-25	6.6-8.4	0	0	0	0
	18-23	10-25	7.4-8.4	15-34	0	0	0
	23-38	5.0-15	7.4-8.4	15-30	0	0	0
	38-54	5.0-15	7.4-8.4	15-30	0	0	0
	54-80	5.0-17	7.4-8.4	15-30	0	0	0
3053:							
Ost-----	0-8	15-20	6.1-8.4	0	0	0	0
	8-12	10-25	6.6-8.4	0	0	0	0
	12-18	10-25	6.6-8.4	0	0	0	0
	18-23	10-25	7.4-8.4	15-34	0	0	0
	23-38	5.0-15	7.4-8.4	15-30	0	0	0
	38-54	5.0-15	7.4-8.4	15-30	0	0	0
	54-80	5.0-17	7.4-8.4	15-30	0	0	0
3180:							
Pratt-----	0-8	0.0-3.0	5.6-7.3	0	0	0	0
	8-24	2.0-5.0	5.6-7.3	0	0	0	0
	24-64	3.0-7.0	5.6-7.3	0	0	0	0
	64-80	1.0-3.0	6.1-7.3	0	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 6 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
3181:							
Pratt-----	0-8	0.0-3.0	5.6-7.3	0	0	0	0
	8-24	2.0-5.0	5.6-7.3	0	0	0	0
	24-64	3.0-7.0	5.6-7.3	0	0	0	0
	64-80	1.0-3.0	6.1-7.3	0	0	0	0
Turon-----	0-8	1.0-3.0	5.1-7.3	0	0	0	0
	8-28	2.0-5.0	5.1-7.3	0	0	0	0
	28-40	3.0-7.0	5.1-7.3	0	0	0	0
	40-58	24-33	6.6-7.8	0	0	0	0
	58-75	24-33	6.6-7.8	0	0	0	0
	75-80	24-33	6.6-7.8	0	0	0	0
3445:							
Shellabarger, Moderately Eroded-----	0-6	6.0-10	5.1-6.5	0	0	0	0
	6-11	9.0-12	6.1-7.8	0	0	0	0
	11-19	9.0-12	6.1-7.8	0	0	0	0
	19-33	9.0-12	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	6.1-8.4	0-5	0	0	0
3510:							
Saltcreek-----	0-5	5.0-10	4.5-6.6	0	0	0	0
	5-10	5.0-10	4.5-6.6	0	0	0	0
	10-26	10-18	6.1-7.3	0	0	0	0
	26-39	10-18	6.1-7.3	0	0	0	0
	39-56	24-35	6.1-8.4	0-5	0	0	0
	56-66	24-35	6.1-8.4	0-5	0	0	0
	66-80	24-35	6.1-8.4	0-5	0	0	0
Funmar-----	0-6	7.0-19	6.1-7.3	0	0	0	0
	6-12	7.0-19	6.1-7.3	0	0	0	0
	12-17	13-19	6.6-7.3	0	0	0	0
	17-26	13-19	6.6-7.3	0	0	0	0
	26-32	13-19	6.6-7.3	0	0	0	0
	32-38	7.0-19	6.6-7.8	0	0	0	0
	38-54	24-41	6.6-7.8	0-5	0	0	0
	54-66	24-41	6.6-7.8	0-5	0	0	0
	66-80	11-18	6.6-7.8	0-5	0	0	0
Farnum-----	0-5	9.0-15	5.6-7.3	0	0	0	0
	5-15	9.0-15	5.6-7.3	0	0	0	0
	15-21	8.0-18	6.1-7.8	0	0	0	0
	21-34	10-23	6.1-8.4	0	0	0	0
	34-48	10-23	6.1-8.4	0	0	0	0
	48-61	10-23	6.1-8.4	0	0	0	0
	61-73	10-23	6.1-8.4	0	0	0	0
	73-80	4.0-19	6.6-8.4	0	0	0	0
3512:							
Saltcreek-----	0-5	5.0-10	4.5-6.6	0	0	0	0
	5-10	5.0-10	4.5-6.6	0	0	0	0
	10-26	10-18	6.1-7.3	0	0	0	0
	26-39	10-18	6.1-7.3	0	0	0	0
	39-56	24-35	6.1-8.4	0-5	0	0	0
	56-66	24-35	6.1-8.4	0-5	0	0	0
	66-80	24-35	6.1-8.4	0-5	0	0	0
Naron-----	0-8	5.0-15	5.6-7.3	0	0	0	0
	8-14	5.0-15	5.6-7.3	0	0	0	0
	14-28	10-15	5.6-7.8	0	0	0	0
	28-39	10-15	5.6-7.8	0	0	0	0
	39-55	10-15	5.6-7.8	0	0	0	0
	55-66	5.0-10	6.1-8.4	0	0	0	0
	66-80	5.0-10	6.1-8.4	0	0	0	0
3533:							
Shellabarger----	0-7	6.0-10	5.1-6.5	0	0	0	0
	7-11	9.0-12	6.1-7.8	0	0	0	0
	11-19	9.0-12	6.1-7.8	0	0	0	0
	19-33	9.0-12	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	6.1-8.4	0-5	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 7 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
3534: Shellabarger----	0-7	6.0-10	5.1-6.5	0	0	0	0
	7-11	9.0-12	6.1-7.8	0	0	0	0
	11-19	9.0-12	6.1-7.8	0	0	0	0
	19-33	9.0-12	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	6.1-8.4	0-5	0	0	0
3540: Solvay-----	0-5	1.0-7.0	6.1-6.5	0	0	0	0
	5-14	8.0-19	6.1-7.3	0	0	0	0
	14-23	8.0-19	6.1-7.3	0	0	0	0
	23-37	8.0-19	6.1-7.3	0	0	0	0
	37-58	5.0-12	6.1-7.3	0	0	0	0
	58-76	5.0-12	6.1-7.3	0	0	0	0
	76-80	5.0-12	6.1-7.3	0	0	0	0
3639: Taver-----	0-7	10-15	6.1-7.3	0	0	0	0
	7-17	30-40	6.6-8.4	0-5	0	0	0
	17-33	30-40	6.6-8.4	0-5	0	0	0
	33-53	30-40	6.6-8.4	0-5	0	0	0
	53-64	12-17	7.4-8.4	0-5	0	0	0
	64-80	12-17	7.4-8.4	0-5	0	0	0
3640: Tivin-----	0-7	0.0-1.0	5.6-6.5	0	0	0	0
	7-18	0.0-1.0	6.1-7.3	0	0	0	0
	18-80	0.0-1.0	6.1-7.3	0	0	0	0
3644: Turon-----	0-8	1.0-3.0	5.1-7.3	0	0	0	0
	8-28	2.0-5.0	5.1-7.3	0	0	0	0
	28-40	3.0-7.0	5.1-7.3	0	0	0	0
	40-58	24-33	6.6-7.8	0	0	0	0
	58-75	24-33	6.6-7.8	0	0	0	0
	75-80	24-33	6.6-7.8	0	0	0	0
Carway-----	0-7	1.0-5.0	5.6-6.5	0	0	0	0
	7-10	12-18	6.1-7.3	0	0	0	0
	10-15	12-18	6.1-7.3	0	0	0	0
	15-22	12-18	6.1-7.3	0	0	0	0
	22-35	12-18	6.1-7.3	0	0	0	0
	35-40	24-35	6.6-7.8	0-5	0	0	0
	40-54	24-35	6.6-7.8	0-5	0	0	0
	54-63	24-35	6.6-7.8	0-5	0	0	0
	63-72	24-35	6.6-7.8	0-5	0	0	0
	72-80	9.0-16	6.6-7.8	0-5	0	0	0
3926: Water-----	---	---	---	---	---	---	---
4005: Yaggy-----	0-5	6.0-9.0	7.4-8.4	0-3	0	0	0
	5-11	6.0-9.0	7.4-8.4	0-3	0	0	0
	11-14	5.0-16	7.4-8.4	0-5	0	0	0
	14-24	0.0-4.0	7.4-8.4	0	0	0	0
	24-31	0.0-4.0	7.4-8.4	0	0	0	0
	31-42	0.0-4.0	7.4-8.4	0	0	0	0
	42-53	0.0-4.0	7.4-8.4	0	0	0	0
	53-69	0.0-4.0	7.4-8.4	0	0	0	0
	69-80	0.0-4.0	7.4-8.4	0	0	0	0
Saxman-----	0-4	1.0-5.0	4.5-6.0	0	0	0	0
	4-8	1.0-5.0	4.5-6.0	0	0	0	0
	8-13	1.0-5.0	4.5-6.0	0	0	0	0
	13-22	1.0-4.0	6.6-8.4	0	0	0	0
	22-30	1.0-4.0	6.6-8.4	0	0	0	0
	30-37	0.0-2.0	6.6-8.4	0	0	0	0
	37-48	0.0-2.0	6.6-8.4	0	0	0	0
	48-54	0.0-2.0	6.6-8.4	0	0	0	0
	54-80	0.0-0.0	6.6-8.4	0	0	0	0
Ab: Albion-----	0-8	3.0-10	5.6-6.5	0	0	0	0
	8-18	4.0-11	6.1-7.8	0	0	0	0
	18-29	1.0-9.0	6.1-8.4	0	0	0	0
	29-60	0.0-6.0	6.1-8.4	0	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 8 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
Ao:							
Albion-----	0-8	3.0-10	5.6-6.5	0	0	0	0
	8-18	4.0-11	6.1-7.8	0	0	0	0
	18-29	1.0-9.0	6.1-8.4	0	0	0	0
	29-60	0.0-6.0	6.1-8.4	0	0	0	0
As:							
Albion-----	0-8	3.0-10	5.6-6.5	0	0	0	0
	8-18	4.0-11	6.1-7.8	0	0	0	0
	18-29	1.0-9.0	6.1-8.4	0	0	0	0
	29-60	0.0-6.0	6.1-8.4	0	0	0	0
Shellabarger----	0-11	3.0-11	5.1-6.5	---	---	---	---
	11-34	7.0-16	6.1-7.8	---	---	---	---
	34-60	1.0-11	6.1-8.4	---	---	---	---
Bc:							
Blanket-----	0-13	11-23	6.1-7.8	0	0	0	0
	13-46	14-30	6.1-8.4	---	0	0	0
	46-60	14-30	7.9-8.4	---	0	0	0
Be:							
Blanket-----	0-13	6.0-18	6.1-7.8	0	0	0	0
	13-46	14-30	6.1-8.4	---	0	0	0
	46-60	14-30	7.9-8.4	---	0	0	0
Bh:							
Blanket-----	0-13	6.0-18	6.1-7.8	0	0	0	0
	13-46	14-30	6.1-8.4	---	0	0	0
	46-60	14-30	7.9-8.4	---	0	0	0
Br:							
Fluvents-----	0-6	4.0-18	6.6-8.4	---	---	---	---
	6-60	4.0-21	7.4-8.4	---	---	---	---
Ca:							
Carwile-----	0-10	2.0-13	5.1-7.3	---	---	---	---
	10-18	10-24	5.1-7.3	---	---	---	---
	18-46	14-36	6.1-8.4	---	---	---	---
	46-60	8.0-27	6.6-8.4	---	---	---	---
Cc:							
Case-----	0-6	11-21	7.4-8.4	---	---	---	---
	6-50	7.0-21	7.4-8.4	---	---	---	---
Clark-----	0-8	11-21	7.4-8.4	---	---	---	---
	8-60	7.0-21	7.4-8.4	---	---	---	---
Ck:							
Case-----	0-6	11-21	7.4-8.4	0-5	---	---	---
	6-60	7.0-21	7.4-8.4	5-25	---	---	---
Clark-----	0-8	11-21	7.4-8.4	0-5	---	---	---
	8-60	7.0-21	7.4-8.4	15-45	---	---	---
Cm:							
Clark-----	0-8	11-21	7.4-8.4	0-5	---	---	---
	8-60	7.0-21	7.4-8.4	15-45	---	---	---
Cn:							
Clark-----	0-8	4.0-13	7.4-8.4	0-5	---	---	---
	8-60	7.0-21	7.4-8.4	15-45	---	---	---
Co:							
Clark-----	0-8	11-21	7.4-8.4	0-5	---	---	---
	8-60	7.0-21	7.4-8.4	15-45	---	---	---
Ost-----	0-9	11-20	6.1-8.4	---	---	---	---
	9-14	8.0-21	6.6-8.4	---	---	---	---
	14-23	7.0-21	7.4-8.4	15-34	---	---	---
	23-60	2.0-18	7.4-8.4	15-34	---	---	---
Cs:							
Lincoln-----	0-10	2.0-9.0	7.4-8.4	---	---	---	---
	10-60	2.0-9.0	7.9-8.4	1-5	---	---	---
Fa:							
Farnum-----	0-7	11-19	5.6-7.3	---	---	---	---
	7-37	10-21	6.1-8.4	---	---	---	---
	37-60	4.0-18	6.6-8.4	---	---	---	---
Fe:							
Farnum-----	0-11	3.0-10	5.6-7.3	---	---	---	---
	11-41	10-21	6.1-8.4	---	---	---	---
	41-60	4.0-18	6.6-8.4	---	---	---	---

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 9 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
Fm:							
Farnum-----	0-14	6.0-18	5.6-7.3	---	---	---	---
	14-26	8.0-16	6.1-7.8	---	---	---	---
	26-42	10-21	6.1-8.4	---	---	---	---
	42-60	4.0-18	6.6-8.4	---	---	---	---
Fn:							
Farnum-----	0-12	6.0-18	5.6-7.3	---	---	---	---
	12-48	10-21	6.1-8.4	---	---	---	---
	48-60	4.0-18	6.6-8.4	---	---	---	---
Fu:							
Farnum-----	0-12	6.0-18	5.6-7.3	---	---	---	---
	12-48	10-21	6.1-8.4	---	---	---	---
	48-60	4.0-18	6.6-8.4	---	---	---	---
Fw:							
Farnum-----	0-12	6.0-18	5.6-7.3	---	---	---	---
	12-48	10-21	6.1-8.4	---	---	---	---
	48-60	4.0-18	6.6-8.4	---	---	---	---
Carwile-----	0-12	2.0-13	5.1-7.3	---	---	---	---
	12-20	10-24	5.1-7.3	---	---	---	---
	20-33	14-36	6.1-8.4	---	---	---	---
	33-60	8.0-27	6.6-8.4	---	---	---	---
GRP:							
Pits-----	0-60	0.0-5.0	6.6-8.4	0	0	0	0
INT:							
Aquolls-----	0-72	---	---	---	---	---	---
Kp:							
Kanza-----	0-11	1.0-9.0	5.6-6.5	---	---	---	---
	11-40	0.0-7.0	5.6-8.4	---	---	---	---
Plevna-----	0-10	3.0-13	6.6-8.4	0	0	0	0
	10-40	3.0-11	6.6-8.4	0	0	0	0
	40-60	0.0-4.0	6.6-8.4	0	0	0	0
Ks:							
Elandco-----	0-18	7.0-18	6.6-8.4	---	0	---	0
	18-60	7.0-21	7.4-8.4	---	0	---	0
Kw:							
Elandco-----	0-18	7.0-18	6.6-8.4	---	0	---	0
	18-60	7.0-21	7.4-8.4	---	0	---	0
Nd:							
Naron-----	0-8	3.0-10	5.6-7.3	---	---	---	---
	8-38	7.0-16	5.6-7.8	---	---	---	---
	38-60	0.0-9.0	6.1-8.4	---	---	---	---
Nf:							
Naron-----	0-8	3.0-10	5.6-7.3	---	---	---	---
	8-38	7.0-16	5.6-7.8	---	---	---	---
	38-60	0.0-9.0	6.1-8.4	---	---	---	---
Ng:							
Naron-----	0-8	3.0-10	5.6-7.3	---	---	---	---
	8-38	7.0-16	5.6-7.8	---	---	---	---
	38-60	0.0-9.0	6.1-8.4	---	---	---	---
Nk:							
Naron-----	0-11	3.0-10	5.6-7.3	---	---	---	---
	11-38	7.0-16	5.6-7.8	---	---	---	---
	38-60	0.0-9.0	6.1-8.4	---	---	---	---
Nm:							
Naron-----	0-11	3.0-10	5.6-7.3	---	---	---	---
	11-38	7.0-16	5.6-7.8	---	---	---	---
	38-60	0.0-9.0	6.1-8.4	---	---	---	---
Nn:							
Naron-----	0-11	3.0-10	5.6-7.3	---	---	---	---
	11-38	7.0-16	5.6-7.8	---	---	---	---
	38-60	0.0-9.0	6.1-8.4	---	---	---	---
Farnum-----	0-12	6.0-18	5.6-7.3	---	---	---	---
	12-48	10-21	6.1-8.4	---	---	---	---
	48-60	4.0-18	6.6-8.4	---	---	---	---
Oc:							
Ost-----	0-9	11-20	6.1-8.4	---	---	---	---
	9-14	8.0-21	6.6-8.4	---	---	---	---
	14-23	7.0-21	7.4-8.4	15-34	---	---	---
	23-60	2.0-18	7.4-8.4	15-34	---	---	---

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 10 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
Os:							
Ost-----	0-9	11-20	6.1-8.4	---	---	---	---
	9-14	8.0-21	6.6-8.4	---	---	---	---
	14-23	7.0-21	7.4-8.4	15-34	---	---	---
	23-60	2.0-18	7.4-8.4	15-34	---	---	---
Pm:							
Pratt-----	0-10	1.0-5.0	5.6-7.3	---	---	---	---
	10-40	1.0-7.0	5.6-7.3	---	---	---	---
	40-60	0.0-5.0	6.1-7.3	---	---	---	---
Pn:							
Pratt-----	0-10	1.0-5.0	5.6-7.3	---	---	---	---
	10-40	1.0-7.0	5.6-7.3	---	---	---	---
	40-60	0.0-5.0	6.1-7.3	---	---	---	---
Po:							
Pratt-----	0-10	1.0-5.0	5.6-7.3	---	---	---	---
	10-40	1.0-7.0	5.6-7.3	---	---	---	---
	40-60	0.0-5.0	6.1-7.3	---	---	---	---
Carwile-----	0-12	2.0-13	5.1-7.3	---	---	---	---
	12-20	10-24	5.1-7.3	---	---	---	---
	20-33	14-36	6.1-8.4	---	---	---	---
	33-60	8.0-27	6.6-8.4	---	---	---	---
PRR:							
Pratt-----	0-12	1.0-5.0	5.6-7.3	---	---	---	---
	12-36	1.0-7.0	5.6-7.3	---	---	---	---
	36-60	0.0-5.0	6.1-7.3	---	---	---	---
PSS:							
Pratt-----	0-8	1.0-5.0	5.6-7.3	---	---	---	---
	8-28	1.0-7.0	5.6-7.3	---	---	---	---
	28-60	0.0-5.0	6.1-7.3	---	---	---	---
Pt:							
Pratt-----	0-10	1.0-5.0	5.6-7.3	---	---	---	---
	10-40	1.0-7.0	5.6-7.3	---	---	---	---
	40-60	0.0-5.0	6.1-7.3	---	---	---	---
Tivoli-----	0-6	2.0-7.0	6.1-7.8	---	---	---	---
	6-60	0.0-6.0	6.1-8.4	---	---	---	---
PTT:							
Pratt-----	0-10	1.0-5.0	5.6-7.3	---	---	---	---
	10-32	1.0-7.0	5.6-7.3	---	---	---	---
	32-60	0.0-5.0	6.1-7.3	---	---	---	---
Tivoli-----	0-7	2.0-7.0	6.1-7.8	---	---	---	---
	7-60	0.0-6.0	6.1-8.4	---	---	---	---
Sa:							
Albion-----	0-8	3.0-10	5.6-6.5	0	0	0	0
	8-18	4.0-11	6.1-7.8	0	0	0	0
	18-29	1.0-9.0	6.1-8.4	0	0	0	0
	29-60	0.0-6.0	6.1-8.4	0	0	0	0
Kaski-----	0-26	7.0-18	5.6-7.3	---	---	---	---
	26-40	7.0-21	5.6-7.8	---	---	---	---
	40-60	3.0-18	5.6-8.4	---	---	---	---
Sb:							
Shellabarger----	0-11	3.0-11	5.1-6.5	---	---	---	---
	11-34	7.0-16	6.1-7.8	---	---	---	---
	34-60	1.0-11	6.1-8.4	---	---	---	---
Se:							
Shellabarger----	0-11	3.0-11	5.1-6.5	---	---	---	---
	11-34	7.0-16	6.1-7.8	---	---	---	---
	34-60	1.0-11	6.1-8.4	---	---	---	---
Sf:							
Shellabarger----	0-11	3.0-11	5.1-6.5	---	---	---	---
	11-34	7.0-16	6.1-7.8	---	---	---	---
	34-60	1.0-11	6.1-8.4	---	---	---	---
Ta:							
Tabler-----	0-10	11-23	5.6-8.4	0	0	0	0
	10-40	16-33	6.1-8.4	0	0	0	0
	40-60	14-33	7.4-8.4	0	0	0	0
Tf:							
Tivoli-----	0-6	0.0-7.0	6.1-7.8	---	---	---	---
	6-60	0.0-6.0	6.1-8.4	---	---	---	---
W:							
Water-----	---	---	---	---	---	---	---

CHEMICAL PROPERTIES OF THE SOILS--Continued  
Pratt County, Kansas

PAGE 11 of 11

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
Wa:							
Waldeck-----	0-15	3.0-11	7.4-8.4	---	---	---	---
	15-46	3.0-10	7.4-8.4	---	---	---	---
	46-60	0.0-3.0	7.4-8.4	---	---	---	---
Wd:							
Kingman-----	0-10	11-24	7.4-8.4	0	0	0.0-4.0	0
	10-60	4.0-18	7.4-8.4	0	0	0.0-4.0	0
Ze:							
Zenda-----	0-14	11-21	6.6-8.4	---	---	0.0-4.0	---
	14-60	7.0-21	7.4-8.4	---	---	0.0-4.0	---
Zs:							
Zenda-----	0-14	11-21	6.6-8.4	---	---	0.0-4.0	---
	14-60	7.0-21	7.4-8.4	---	---	0.0-4.0	---
Drummond-----	0-8	11-20	7.4-8.4	---	---	4.0-16.0	---
	8-30	14-36	7.9-9.0	---	---	4.0-16.0	---
	30-60	---	---	---	---	---	---

# WATER FEATURES Pratt County, Kansas

The Water Features table gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The Water Features table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The Water Features table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.



(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
007AE: Albion-----	B		---	---	---	---	---	---	---
Shellabarger-----	B		---	---	---	---	---	---	---
007CC: Case-----	B		---	---	---	---	---	---	---
Clark-----	B		---	---	---	---	---	---	---
007LN: Lincoln-----	A		---	---	---	---	---	---	---
		January	5.0-6.0	>6.0	---	---	---	---	None
		February	5.0-6.0	>6.0	---	---	---	---	None
		March	5.0-6.0	>6.0	---	---	---	---	None
		April	5.0-6.0	>6.0	---	---	---	Brief	Frequent
		May	5.0-6.0	>6.0	---	---	---	Brief	Frequent
		June	---	---	---	---	---	Brief	Frequent
		July	---	---	---	---	---	Brief	Frequent
		August	---	---	---	---	---	Brief	Frequent
		September	---	---	---	---	---	Brief	Frequent
		October	---	---	---	---	---	Brief	Frequent
		November	5.0-6.0	>6.0	---	---	---	---	None
		December	5.0-6.0	>6.0	---	---	---	---	None
007SB: Shellabarger-----	B		---	---	---	---	---	---	---
047PG: Pratt-----	A		---	---	---	---	---	---	---
095AB: Albion-----	B		---	---	---	---	---	---	---
095DA: Dillwyn-----	A		---	---	---	---	---	---	---
		January	1.0-3.0	>6.0	---	---	---	---	None
		February	1.0-3.0	>6.0	---	---	---	---	None
		March	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		April	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		June	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		July	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		August	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		September	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		October	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		November	1.0-3.0	>6.0	---	---	---	---	None
		December	1.0-3.0	>6.0	---	---	---	---	None
Plevna-----	D		---	---	---	---	---	---	---
		January	0.0-2.0	>6.0	---	---	---	---	None
		February	0.0-2.0	>6.0	---	---	---	---	None
		March	0.0-2.0	>6.0	---	---	---	Long	Frequent
		April	0.0-2.0	>6.0	---	---	---	Long	Frequent
		May	0.0-2.0	>6.0	---	---	---	Long	Frequent
		June	0.0-2.0	>6.0	---	---	---	Long	Frequent
		July	0.0-2.0	>6.0	---	---	---	Long	Frequent
		August	0.0-2.0	>6.0	---	---	---	Long	Frequent
		September	0.0-2.0	>6.0	---	---	---	Long	Frequent
		October	0.0-2.0	>6.0	---	---	---	Long	Frequent
		November	0.0-2.0	>6.0	---	---	---	---	None
		December	0.0-2.0	>6.0	---	---	---	---	None
097AS: Albion-----	B		---	---	---	---	---	---	---
Shellabarger-----	B		---	---	---	---	---	---	---
097CE: Case-----	B		---	---	---	---	---	---	---
097CK: Clark-----	B		---	---	---	---	---	---	---
097CM: Clark-----	B		---	---	---	---	---	---	---
1005: Albion-----	B		---	---	---	---	---	---	---
1006: Albion-----	B		---	---	---	---	---	---	---
1017: Shellabarger, Eroded-----	B		---	---	---	---	---	---	---
Albion-----	B		---	---	---	---	---	---	---

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
1324: Carway-----	D		---	---	---	---	---	---	---
		January	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		February	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		March	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		April	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		May	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		June	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		July	---	---	0.3-1.0	Long	Occasional	---	None
		August	---	---	0.3-1.0	Brief	Rare	---	None
		September	---	---	0.3-1.0	Brief	Rare	---	None
		October	---	---	0.3-1.0	Long	Occasional	---	None
		November	---	---	0.3-1.0	Long	Occasional	---	None
		December	0.0	2.0	0.3-1.0	Long	Occasional	---	None
Carbika-----	D								
		January	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		February	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		March	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		April	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		May	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		June	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		July	---	---	0.3-1.0	Long	Occasional	---	None
		August	---	---	0.0-0.5	Brief	Rare	---	None
		September	---	---	0.0-0.5	Brief	Rare	---	None
		October	---	---	0.3-1.0	Long	Occasional	---	None
		November	---	---	0.3-1.0	Long	Occasional	---	None
		December	0.0	2.0	0.3-1.0	Long	Occasional	---	None
1340: Case-----	B								
Clark-----	B								
1341: Case-----	B								
Clark-----	B								
1725: Farnum-----	B								
Funmar-----	C								
1726: Farnum-----	B								
Funmar-----	C								
1985: Hayes-----	B								
1986: Hayes-----	B								
Solvay-----	D								
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
1987: Hayes-----	B								
Turon-----	A								
1988: Hayes-----	B								
2556: Langdon-----	A								
2948: Nalim-----	B								
3051: Ost-----	B								
3053: Ost-----	B								
3180: Pratt-----	A								
3181: Pratt-----	A								

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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Turon-----	A		Ft ---	Ft ---	Ft ---	---	---	---	---
3445: Shellabarger, Moderately Eroded-----	B		---	---	---	---	---	---	---
3510: Saltcreek-----	C		---	---	---	---	---	---	---
Funmar-----	C		---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---
3512: Saltcreek-----	C		---	---	---	---	---	---	---
Naron-----	B		---	---	---	---	---	---	---
3533: Shellabarger-----	B		---	---	---	---	---	---	---
3534: Shellabarger-----	B		---	---	---	---	---	---	---
3540: Solvay-----	D		---	---	---	---	---	---	---
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
3639: Taver-----	D		---	---	---	---	---	---	---
3640: Tivin-----	A		---	---	---	---	---	---	---
3644: Turon-----	A		---	---	---	---	---	---	---
Carway-----	D		---	---	---	---	---	---	---
		January	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		February	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		March	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		April	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		May	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		June	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		July	---	---	0.3-1.0	Long	Occasional	---	None
		August	---	---	0.3-1.0	Brief	Rare	---	None
		September	---	---	0.3-1.0	Brief	Rare	---	None
		October	---	---	0.3-1.0	Long	Occasional	---	None
		November	---	---	0.3-1.0	Long	Occasional	---	None
		December	0.0	2.0	0.3-1.0	Long	Occasional	---	None
3926: Water-----	---		---	---	---	---	---	---	---
4005: Yaggy-----	C		---	---	---	---	---	---	---
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		April	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		May	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		August	---	---	---	---	---	Brief	Occasional
		September	---	---	---	---	---	Brief	Occasional
		October	---	---	---	---	---	Brief	Occasional
		December	2.0-4.0	>6.0	---	---	---	---	None
Saxman-----	A		---	---	---	---	---	---	Rare
		January	---	---	---	---	---	---	Rare
		February	2.0-3.0	>6.0	---	---	---	---	Rare
		March	2.0-3.0	>6.0	---	---	---	---	Rare
		April	2.0-3.0	>6.0	---	---	---	---	Rare
		May	2.0-3.0	>6.0	---	---	---	---	Rare
		June	2.0-3.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
Ab: Albion-----	B		---	---	---	---	---	---	---

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Ao:			---	---	---	---	---	---	---
Albion-----	B		---	---	---	---	---	---	---
As:			---	---	---	---	---	---	---
Albion-----	B		---	---	---	---	---	---	---
Shellabarger-----	B		---	---	---	---	---	---	---
Bc:			---	---	---	---	---	---	---
Blanket-----	C		---	---	---	---	---	---	---
Be:			---	---	---	---	---	---	---
Blanket-----	C		---	---	---	---	---	---	---
Bh:			---	---	---	---	---	---	---
Blanket-----	C		---	---	---	---	---	---	---
Br:			---	---	---	---	---	---	---
Fluvents-----	B	April	---	---	---	---	---	Brief	Frequent
		May	---	---	---	---	---	Brief	Frequent
		June	---	---	---	---	---	Brief	Frequent
		July	---	---	---	---	---	Brief	Frequent
		August	---	---	---	---	---	Brief	Frequent
		September	---	---	---	---	---	Brief	Frequent
Ca:									
Carwile-----	D	January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		October	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		November	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		December	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
Cc:									
Case-----	B		---	---	---	---	---	---	---
Clark-----	B		---	---	---	---	---	---	---
Ck:			---	---	---	---	---	---	---
Case-----	B		---	---	---	---	---	---	---
Clark-----	B		---	---	---	---	---	---	---
Cm:			---	---	---	---	---	---	---
Clark-----	B		---	---	---	---	---	---	---
Cn:			---	---	---	---	---	---	---
Clark-----	B		---	---	---	---	---	---	---
Co:			---	---	---	---	---	---	---
Clark-----	B		---	---	---	---	---	---	---
Ost-----	B		---	---	---	---	---	---	---
Cs:			---	---	---	---	---	---	---
Lincoln-----	A	January	5.0-6.0	>6.0	---	---	---	---	None
		February	5.0-6.0	>6.0	---	---	---	---	None
		March	5.0-6.0	>6.0	---	---	---	---	None
		April	5.0-6.0	>6.0	---	---	---	Very brief	Occasional
		May	5.0-6.0	>6.0	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		August	---	---	---	---	---	Very brief	Occasional
		September	---	---	---	---	---	Very brief	Occasional
		October	---	---	---	---	---	Very brief	Occasional
		November	5.0-6.0	>6.0	---	---	---	---	None
		December	5.0-6.0	>6.0	---	---	---	---	None
Fa:			---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---
Fe:			---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---
Fm:			---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---
Fn:			---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---
Fu:			---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Fw: Farnum-----	B		---	---	---	---	---	---	---
Carwile-----	D		---	---	---	---	---	---	---
		January	0.0	>6.0	0.0-1.0	Long	---	---	None
		February	0.0	>6.0	0.0-1.0	Long	---	---	None
		March	0.0	>6.0	0.0-1.0	Long	---	---	None
		April	0.0	>6.0	0.0-1.0	Long	---	---	None
		May	---	---	0.0-	---	---	---	None
		June	---	---	0.0-	---	---	---	None
		July	---	---	0.0-	---	---	---	None
		August	---	---	0.0-	---	---	---	None
		September	---	---	0.0-	---	---	---	None
		October	0.0	>6.0	0.0-1.0	Long	---	---	None
		November	0.0	>6.0	0.0-1.0	Long	---	---	None
		December	0.0	>6.0	0.0-1.0	Long	---	---	None
GRP: Pits-----	A		---	---	---	---	---	---	---
INT: Aquolls-----	C								
		March	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		April	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		May	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		June	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
Kp: Kanza-----	D								
		January	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
		February	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
		March	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
		April	---	---	---	---	---	Very brief	Frequent
		May	---	---	---	---	---	Very brief	Frequent
		June	---	---	---	---	---	Very brief	Frequent
		July	---	---	---	---	---	Very brief	Frequent
		August	---	---	---	---	---	Very brief	Frequent
		September	---	---	---	---	---	Very brief	Frequent
		October	---	---	---	---	---	Very brief	Frequent
		November	---	---	---	---	---	Very brief	Frequent
		December	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
Plevna-----	D								
		January	0.0-2.0	>6.0	---	---	---	---	None
		February	0.0-2.0	>6.0	---	---	---	---	None
		March	0.0-2.0	>6.0	---	---	---	Long	Frequent
		April	0.0-2.0	>6.0	---	---	---	Long	Frequent
		May	0.0-2.0	>6.0	---	---	---	Long	Frequent
		June	0.0-2.0	>6.0	---	---	---	Long	Frequent
		July	0.0-2.0	>6.0	---	---	---	Long	Frequent
		August	0.0-2.0	>6.0	---	---	---	Long	Frequent
		September	0.0-2.0	>6.0	---	---	---	Long	Frequent
		October	0.0-2.0	>6.0	---	---	---	Long	Frequent
		November	0.0-2.0	>6.0	---	---	---	---	None
		December	0.0-2.0	>6.0	---	---	---	---	None
Ks: Elandco-----	B								
		January	---	---	---	---	---	Brief	Occasional
		February	---	---	---	---	---	Brief	Occasional
		March	---	---	---	---	---	Brief	Occasional
		April	---	---	---	---	---	Brief	Occasional
		May	---	---	---	---	---	Brief	Occasional
		October	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	Brief	Occasional
Kw: Elandco-----	B								
		January	---	---	---	---	---	Brief	Frequent
		February	---	---	---	---	---	Brief	Frequent
		March	---	---	---	---	---	Brief	Frequent
		April	---	---	---	---	---	Brief	Frequent
		May	---	---	---	---	---	Brief	Frequent
		October	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	Brief	Frequent
Nd: Naron-----	B								
Nf: Naron-----	B								
Ng: Naron-----	B								
Nk: Naron-----	B								

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Nm: Naron-----	B		---	---	---	---	---	---	---
Nn: Naron-----	B		---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---
Oc: Ost-----	B		---	---	---	---	---	---	---
Os: Ost-----	B		---	---	---	---	---	---	---
Pm: Pratt-----	A		---	---	---	---	---	---	---
Pn: Pratt-----	A		---	---	---	---	---	---	---
Po: Pratt-----	A		---	---	---	---	---	---	---
Carwile-----	D		---	---	---	---	---	---	---
		January	0.0	>6.0	0.0-1.0	Long	---	---	None
		February	0.0	>6.0	0.0-1.0	Long	---	---	None
		March	0.0	>6.0	0.0-1.0	Long	---	---	None
		April	0.0	>6.0	0.0-1.0	Long	---	---	None
		May	---	---	0.0-	---	---	---	None
		June	---	---	0.0-	---	---	---	None
		July	---	---	0.0-	---	---	---	None
		August	---	---	0.0-	---	---	---	None
		September	---	---	0.0-	---	---	---	None
		October	0.0	>6.0	0.0-1.0	Long	---	---	None
		November	0.0	>6.0	0.0-1.0	Long	---	---	None
		December	0.0	>6.0	0.0-1.0	Long	---	---	None
PRR: Pratt-----	A		---	---	---	---	---	---	---
PSS: Pratt-----	A		---	---	---	---	---	---	---
Pt: Pratt-----	A		---	---	---	---	---	---	---
Tivoli-----	A		---	---	---	---	---	---	---
PTT: Pratt-----	A		---	---	---	---	---	---	---
Tivoli-----	A		---	---	---	---	---	---	---
Sa: Albion-----	B		---	---	---	---	---	---	---
Kaski-----	B		---	---	---	---	---	---	---
		March	---	---	---	---	---	Very brief	Occasional
		April	---	---	---	---	---	Very brief	Occasional
		May	---	---	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		August	---	---	---	---	---	Very brief	Occasional
Sb: Shellabarger-----	B		---	---	---	---	---	---	---
Se: Shellabarger-----	B		---	---	---	---	---	---	---
Sf: Shellabarger-----	B		---	---	---	---	---	---	---
Ta: Tabler-----	D		---	---	---	---	---	---	---
Tf: Tivoli-----	A		---	---	---	---	---	---	---
W: Water-----	---		---	---	---	---	---	---	---
Wa:			---	---	---	---	---	---	---

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Waldeck-----	C		Ft	Ft	Ft				
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		April	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		May	---	---	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		August	---	---	---	---	---	Brief	Occasional
		September	---	---	---	---	---	Brief	Occasional
		October	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		November	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None
Wd: Kingman-----	D								
		January	0.0-2.0	>6.0	---	---	---	Very brief	Occasional
		February	0.0-2.0	>6.0	---	---	---	Very brief	Occasional
		March	0.0-2.0	>6.0	---	---	---	Very brief	Occasional
		April	---	---	---	---	---	Very brief	Occasional
		May	---	---	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		August	---	---	---	---	---	Very brief	Occasional
		September	---	---	---	---	---	Very brief	Occasional
		October	---	---	---	---	---	Very brief	Occasional
		November	---	---	---	---	---	Very brief	Occasional
		December	0.0-2.0	>6.0	---	---	---	Very brief	Occasional
Ze: Zenda-----	C								
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	Very brief	Occasional
		May	---	---	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		August	---	---	---	---	---	Very brief	Occasional
		September	---	---	---	---	---	Very brief	Occasional
		October	2.0-4.0	>6.0	---	---	---	---	None
		November	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None
Zs: Drummond-----	D								
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		November	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None
Zenda-----	C								
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	Very brief	Occasional
		May	---	---	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		August	---	---	---	---	---	Very brief	Occasional
		September	---	---	---	---	---	Very brief	Occasional
		October	2.0-4.0	>6.0	---	---	---	---	None
		November	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None

The following table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as low, moderate, or high, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as low, moderate, or high. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.



Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
007AE:							
Albion-----	---	---	---	---	Low	Low	Low
Shellabarger----	---	---	---	---	Low	Low	Moderate
007CC:							
Case-----	---	---	---	---	Low	Moderate	Low
Clark-----	---	---	---	---	Low	Moderate	Low
007LN:							
Lincoln-----	---	---	---	---	Low	Low	Low
007SB:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
047PG:							
Pratt-----	---	---	---	---	Low	Low	Moderate
095AB:							
Albion-----	---	---	---	---	None	Low	Low
095DA:							
Dillwyn-----	---	---	---	---	Low	Low	Low
Plevna-----	---	---	---	---	Low	High	Low
097AS:							
Albion-----	---	---	---	---	Low	Low	Low
Shellabarger----	---	---	---	---	Low	Low	Moderate
097CE:							
Case-----	---	---	---	---	Low	Moderate	Low
097CK:							
Clark-----	---	---	---	---	Low	Moderate	Low
097CM:							
Clark-----	---	---	---	---	Low	Moderate	Low
1005:							
Albion-----	---	---	---	---	Low	Low	Low
1006:							
Albion-----	---	---	---	---	Low	Low	Low
1017:							
Shellabarger, Eroded-----	---	---	---	---	Low	Low	Moderate
Albion-----	---	---	---	---	Low	Low	Low
1324:							
Carway-----	---	---	---	---	Low	High	Moderate
Carbika-----	---	---	---	---	Low	Moderate	Low
1340:							
Case-----	---	---	---	---	Low	Moderate	Low
Clark-----	---	---	---	---	Low	Moderate	Low
1341:							
Case-----	---	---	---	---	Low	Moderate	Low
Clark-----	---	---	---	---	Low	Moderate	Low
1725:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Funmar-----	---	---	---	---	Low	Moderate	Low
1726:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Funmar-----	---	---	---	---	Low	Moderate	Low
1985:							
Hayes-----	---	---	---	---	Low	Moderate	Low
1986:							
Hayes-----	---	---	---	---	Low	Moderate	Low
Solvay-----	---	---	---	---	Low	High	Moderate
1987:							
Hayes-----	---	---	---	---	Low	Moderate	Low
Turon-----	---	---	---	---	Low	Low	Moderate
1988:							
Hayes-----	---	---	---	---	Low	Moderate	Low
2556:							
Langdon-----	---	---	---	---	Low	Low	Low
2946:							
Nalim-----	---	---	---	---	Low	Moderate	Low
3051:							
Ost-----	---	---	---	---	Low	Moderate	Low
3053:							
Ost-----	---	---	---	---	Low	Moderate	Low
3180:							
Pratt-----	---	---	---	---	Low	Low	Moderate
3181:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Turon-----	---	---	---	---	Low	Low	Moderate
3445:							
Shellabarger, Moderately Eroded-----	---	---	---	---	Low	Low	Moderate
3510:							
Saltcreek-----	---	---	---	---	Low	Moderate	Low
Funmar-----	---	---	---	---	Low	Moderate	Low
Farnum-----	---	---	---	---	Low	Moderate	Low
3512:							
Saltcreek-----	---	---	---	---	Low	Moderate	Low
Naron-----	---	---	---	---	Low	Low	Low
3533:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
3534:							
Shellabarger----	---	---	---	---	Low	Low	Moderate

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
3540:							
Solvay-----	---	---	---	---	Low	High	Moderate
3639:							
Taver-----	---	---	---	---	Low	High	Low
3640:							
Tivin-----	---	---	---	---	Low	Low	Low
3644:							
Turon-----	---	---	---	---	Low	Low	Moderate
Carway-----	---	---	---	---	Low	High	Moderate
3926:							
Water-----	---	---	---	---	Low	---	---
4005:							
Yaggy-----	---	---	---	---	Low	High	Low
Saxman-----	---	---	---	---	Low	Low	High
Ab:							
Albion-----	---	---	---	---	Low	Low	Low
Ao:							
Albion-----	---	---	---	---	Low	Low	Low
As:							
Albion-----	---	---	---	---	Low	Low	Low
Shellabarger----	---	---	---	---	Low	Low	Moderate
Bc:							
Blanket-----	---	---	---	---	Low	High	Low
Be:							
Blanket-----	---	---	---	---	Low	High	Low
Bh:							
Blanket-----	---	---	---	---	Low	High	Low
Br:							
Fluvents-----	---	---	---	---	Low	Low	Low
Ca:							
Carwile-----	---	---	---	---	Low	High	Moderate
Cc:							
Case-----	---	---	---	---	---	Moderate	Low
Clark-----	---	---	---	---	---	Moderate	Low
Ck:							
Case-----	---	---	---	---	Low	Moderate	Low
Clark-----	---	---	---	---	Low	Moderate	Low
Cm:							
Clark-----	---	---	---	---	Low	Moderate	Low
Cn:							
Clark-----	---	---	---	---	Low	Moderate	Low
Co:							
Clark-----	---	---	---	---	Low	Moderate	Low
Ost-----	---	---	---	---	Low	Moderate	Low
Cs:							
Lincoln-----	---	---	---	---	Low	Low	Low
Fa:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Fe:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Fm:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Fn:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Fu:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Fw:							
Farnum-----	---	---	---	---	Low	Moderate	Low
Carwile-----	---	---	---	---	Low	High	Low
GRP:							
Pits-----	---	---	---	---	Low	Low	Low
INT:							
Aquolls-----	---	---	---	---	Low	---	---
Kp:							
Kanza-----	---	---	---	---	Low	High	Moderate
Plevna-----	---	---	---	---	Low	High	Low
Ks:							
Elandco-----	---	---	---	---	Low	Moderate	Low
Kw:							
Elandco-----	---	---	---	---	Low	Moderate	Low
Nd:							
Naron-----	---	---	---	---	Low	Low	Low
Nf:							
Naron-----	---	---	---	---	Low	Low	Low
Ng:							
Naron-----	---	---	---	---	Low	Low	Low
Nk:							
Naron-----	---	---	---	---	Low	Low	Low
Nm:							
Naron-----	---	---	---	---	Low	Low	Low
Nn:							
Naron-----	---	---	---	---	Low	Low	Low
Farnum-----	---	---	---	---	Low	Moderate	Low
Oc:							
Ost-----	---	---	---	---	Low	Moderate	Low
Os:							
Ost-----	---	---	---	---	Low	Moderate	Low

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
Pm:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Pn:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Po:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Carwile-----	---	---	---	---	Low	High	Moderate
PRR:							
Pratt-----	---	---	---	---	Low	Low	Moderate
PSS:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Pt:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Tivoli-----	---	---	---	---	Low	Low	Low
PTT:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Tivoli-----	---	---	---	---	Low	Low	Low
Sa:							
Albion-----	---	---	---	---	Low	Low	Low
Kaski-----	---	---	---	---	Low	Low	Low
Sb:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
Se:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
Sf:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
Ta:							
Tabler-----	---	---	---	---	Low	High	Low
Tf:							
Tivoli-----	---	---	---	---	Low	Low	Low
W:							
Water-----	---	---	---	---	---	---	---
Wa:							
Waldeck-----	---	---	---	---	Low	Moderate	Low
Wd:							
Kingman-----	---	---	---	---	Low	High	Low
Ze:							
Zenda-----	---	---	---	---	Low	High	Low
Zs:							
Drummond-----	---	---	---	---	Low	High	High
Zenda-----	---	---	---	---	Low	High	Low

WATER MANAGEMENT  
Pratt County, Kansas

The soils of the survey area are rated in the Water Management table according to limitations that affect their suitability for water management. Soils are rated for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways. Restrictive features that affect each soil for the specified use is also provided in the table.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Moderately limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limited indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but generally require special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate to high maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Limitation class terms, such as very limited or limited, etc., limitation ratings, and numerical ratings are shown for each soil feature listed. As many as three soil features may be listed for each soil component if applicable. The overall limitation rating for the soil component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects traffic ability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditch banks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a very limited hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, which conduct surface water to outlets at a non-erosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
007AE: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing	Limitation: slope
007CC: Case-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Clark-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
007LN: Lincoln-----	Limitation: deep to water	Limitation: flooding soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
007SB: Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
047PG: Pratt-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
095AB: Albion-----	Limitation: deep to water	Limitation: soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
095DA: Dillwyn-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
Plevna-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Limitation: wetness
097AS: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing	Limitation: slope
097CE: Case-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
097CK: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
097CM: Clark-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
1005: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
1006: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
1017: Shellabarger, Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
1324: Carway-----	Limitation: percs slowly	Limitation: wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly wetness
Carbika-----	Limitation: percs slowly ponding	Limitation: percs slowly soil blowing ponding	Limitation: erodes easily soil blowing ponding	Limitation: erodes easily percs slowly wetness
1340: Case-----	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Clark----- 1341: Case----- Clark----- 1725: Farnum----- Funmar-----	Limitation: deep to water Limitation: deep to water Limitation: deep to water Limitation: deep to water Limitation: deep to water	Favorable Limitation: slope Favorable Favorable Limitation: percs slowly	Favorable Limitation: slope Favorable Favorable Limitation: erodes easily percs slowly	Favorable Limitation: slope Favorable Favorable Limitation: erodes easily percs slowly
1726: Farnum----- Funmar-----	Limitation: deep to water Limitation: deep to water	Favorable Limitation: percs slowly	Favorable Favorable Limitation: erodes easily percs slowly	Favorable Favorable Limitation: erodes easily percs slowly
1985: Hayes----- 1986: Hayes----- Solvay-----	Limitation: deep to water Limitation: deep to water Favorable	Limitation: fast intake soil blowing Limitation: fast intake soil blowing Limitation: wetness soil blowing	Limitation: soil blowing Limitation: soil blowing Limitation: wetness soil blowing	Favorable Favorable Favorable
1987: Hayes----- Turon-----	Limitation: deep to water Limitation: deep to water	Limitation: fast intake soil blowing Limitation: fast intake slope droughty	Limitation: soil blowing Limitation: too sandy soil blowing	Favorable Favorable Limitation: droughty
1988: Hayes----- 2556: Langdon-----	Limitation: deep to water Limitation: deep to water	Limitation: fast intake soil blowing Limitation: fast intake slope droughty	Limitation: soil blowing Limitation: too sandy soil blowing	Favorable Favorable Limitation: droughty
2948: Nalim----- 3051: Ost----- 3053: Ost-----	Limitation: deep to water Limitation: deep to water Limitation: deep to water	Favorable Favorable Favorable	Favorable Favorable Favorable	Favorable Favorable Favorable
3180: Pratt----- 3181: Pratt----- Turon-----	Limitation: deep to water Limitation: deep to water Limitation: deep to water	Limitation: fast intake slope droughty Limitation: fast intake slope droughty	Limitation: too sandy soil blowing Limitation: too sandy soil blowing	Limitation: droughty Limitation: droughty Limitation: droughty
3445: Shellabarger, Moderately Eroded----- 3510: Saltcreek-----	Limitation:  deep to water Limitation: deep to water	Favorable  Limitation: soil blowing	Limitation:  soil blowing Limitation: erodes easily percs slowly soil blowing	Favorable  Limitation: erodes easily percs slowly
Funmar----- Farnum-----	Limitation: deep to water Limitation: deep to water	Limitation: percs slowly Favorable	Limitation: erodes easily percs slowly Favorable	Limitation: erodes easily percs slowly Favorable

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
3512: Saltcreek-----	Limitation: deep to water	Limitation: soil blowing	Limitation: erodes easily percs slowly soil blowing	Limitation: erodes easily percs slowly
Naron-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3533: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3534: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3540: Solvay-----	Favorable	Limitation: wetness soil blowing	Limitation: wetness soil blowing	Favorable
3639: Taver-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
3640: Tivin-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
3644: Turon-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Carway-----	Limitation: percs slowly	Limitation: wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly wetness
3926: Water-----	---	---	---	---
4005: Yaggy-----	Limitation: flooding cutbanks cave	Limitation: wetness soil blowing droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
Saxman-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
Ab: Albion-----	Limitation: deep to water	Limitation: soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
Ao: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
As: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope too sandy soil blowing	Limitation: slope
Bc: Blanket-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
Be: Blanket-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
Bh: Blanket-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
Br: Fluvents-----	Limitation: deep to water	Limitation: erodes easily flooding slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Ca: Carwile-----	Limitation: percs slowly	Limitation: percs slowly wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly rooting depth
Cc: Case-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Clark-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Ck: Case-----	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope
Clark-----	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope
Cm: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
Cn: Clark-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Co: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
Cs: Lincoln-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
Fa: Farnum-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Fe: Farnum-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Fm: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Fn: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Fu: Farnum-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Fw: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Carwile-----	Limitation: percs slowly	Limitation: percs slowly wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly rooting depth
GRP: Pits-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy	Limitation: rooting depth slope droughty
INT: Aquolls-----	---	---	---	---
Kp: Kanza-----	Limitation: flooding cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
Plevna-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Limitation: wetness
Ks: Elandco-----	Limitation: deep to water	Limitation: erodes easily flooding	Limitation: erodes easily	Limitation: erodes easily
Kw: Elandco-----	Limitation: deep to water	Limitation: erodes easily flooding	Limitation: erodes easily	Limitation: erodes easily
Nd: Naron-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Nf: Naron-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Ng: Naron-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
Nk: Naron-----	Limitation: deep to water	Favorable	Favorable	Favorable
Nm: Naron-----	Limitation: deep to water	Favorable	Favorable	Favorable



WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Nn: Naron-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Oc: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
Os: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
Pm: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Pn: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Po: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Carwile-----	Limitation: percs slowly	Limitation: percs slowly wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly rooting depth
PRR: Pratt-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
PSS: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Pt: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Tivoli-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
PTT: Pratt-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Tivoli-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Sa: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Kaski-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
Sb: Shellabarger----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
Se: Shellabarger----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
Sf: Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: too sandy soil blowing	Favorable
Ta: Tabler-----	Limitation: percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Tf: Tivoli-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
W: Water-----	---	---	---	---
Wa: Waldeck-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Favorable
Wd: Kingman-----	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Limitation: wetness
Ze: Zenda-----	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Favorable
Zs: Drummond-----	Limitation: excess sodium excess salt percs slowly	Limitation: percs slowly wetness droughty	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily excess sodium excess salt
Zenda-----	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Favorable

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Shellabarger-----	35	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.10	Very limited Deep to water	1.00
007CC: Case-----	50	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Clark-----	50	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
007LN: Lincoln-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.22	Very limited Deep to water	1.00
007SB: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
047PG: Pratt-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
095AB: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.49	Very limited Deep to water	1.00
095DA: Dillwyn-----	60	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.18	Very limited Cutbanks cave Deep to water	1.00 0.00
Plevna-----	40	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Cutbanks cave	1.00
097AS: Albion-----	65	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Shellabarger-----	35	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.10	Very limited Deep to water	1.00
097CE: Case-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
097CK: Clark-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
097CM: Clark-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
1005: Albion-----	75	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
1006: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
1017: Shellabarger, Eroded	40	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Albion-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
1324: Carway-----	50	Somewhat limited Seepage	0.70	Very limited Ponding	1.00	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Carbika-----	30	Somewhat limited Seepage	0.70	Depth to saturated zone Very limited Ponding Depth to saturated zone Piping	1.00 1.00 1.00 0.40	Very limited Deep to water	1.00
1340: Case-----	70	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.50	Very limited Deep to water	1.00
Clark-----	30	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.52	Very limited Deep to water	1.00
1341: Case-----	60	Somewhat limited Seepage Slope	0.70 0.00	Somewhat limited Piping	0.50	Very limited Deep to water	1.00
Clark-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.52	Very limited Deep to water	1.00
1725: Farnum-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
Funmar-----	40	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
1726: Farnum-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
Funmar-----	40	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
1985: Hayes-----	60	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
1986: Hayes-----	55	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Solvay-----	20	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.44 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
1987: Hayes-----	40	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Turon-----	35	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
1988: Hayes-----	70	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
2556: Langdon-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Deep to water	1.00
2948: Nalim-----	80	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
3051: Ost-----	90	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
3053: Ost-----	85	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3180: Pratt-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
3181: Pratt-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
Turon-----	30	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
3445: Shellabarger, Moderately Eroded--	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3510: Saltcreek-----	50	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Funmar-----	30	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Farnum-----	20	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
3512: Saltcreek-----	50	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Naron-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.55	Very limited Deep to water	1.00
3533: Shellabarger-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3534: Shellabarger-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3540: Solvay-----	90	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.44 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
3639: Taver-----	90	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.00	Very limited Deep to water	1.00
3640: Tivin-----	95	Very limited Seepage Slope	1.00 0.03	Very limited Seepage	1.00	Very limited Deep to water	1.00
3644: Turon-----	65	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
Carway-----	20	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
3926: Water-----	100	Not rated		Not rated		Not rated	
4005: Yaggy-----	60	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Saxman-----	30	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Cutbanks cave	1.00

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
				Depth to saturated zone	0.86	Deep to water	0.06
Ab: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Ao: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
As: Albion-----	50	Very limited Seepage Slope	1.00 0.00	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Shellabarger-----	50	Somewhat limited Seepage Slope	0.70 0.00	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Bc: Blanket-----	100	Somewhat limited Seepage	0.70	Somewhat limited Hard to pack	0.33	Very limited Deep to water	1.00
Be: Blanket-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Bh: Blanket-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Br: Fluvents-----	100	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.88	Very limited Deep to water	1.00
Ca: Carwile-----	100	Somewhat limited Seepage	0.57	Very limited Ponding Depth to saturated zone	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Cc: Case-----	70	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Clark-----	30	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Ck: Case-----	60	Somewhat limited Seepage Slope	0.70 0.00	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Clark-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Cm: Clark-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Cn: Clark-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping Seepage	0.12 0.08	Very limited Deep to water	1.00
Co: Clark-----	70	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Ost-----	30	Somewhat limited Seepage	0.05	Very limited Piping	1.00	Very limited Deep to water	1.00
Cs: Lincoln-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.39	Very limited Deep to water	1.00
Fa: Farnum-----	100	Somewhat limited		Somewhat limited		Very limited	

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Seepage	0.70	Piping Seepage	0.21 0.06	Deep to water	1.00
Fe: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping Seepage	0.15 0.06	Very limited Deep to water	1.00
Fm: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping Seepage	0.57 0.06	Very limited Deep to water	1.00
Fn: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage Piping	0.06 0.02	Very limited Deep to water	1.00
Fu: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage Piping	0.06 0.02	Very limited Deep to water	1.00
Fw: Farnum-----	60	Somewhat limited Seepage	0.70	Somewhat limited Seepage Piping	0.06 0.02	Very limited Deep to water	1.00
Carwile-----	40	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone Seepage	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
GRP: Pits-----	100	Not rated		Not rated		Not rated	
INT: Aguolls-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Somewhat limited Cutbanks cave	0.10
Kp: Kanza-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.98	Very limited Cutbanks cave	1.00
Plevna-----	50	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Cutbanks cave	1.00
Ks: Elandco-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.67	Very limited Deep to water	1.00
Kw: Elandco-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.67	Very limited Deep to water	1.00
Nd: Naron-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
Nf: Naron-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
Ng: Naron-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
Nk: Naron-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Nm: Naron-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
Nn: Naron-----	55	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
Farnum-----	45	Somewhat limited Seepage	0.70	Somewhat limited Seepage Piping	0.06 0.02	Very limited Deep to water	1.00
Oc: Ost-----	100	Somewhat limited Seepage	0.05	Very limited Piping	1.00	Very limited Deep to water	1.00
Os: Ost-----	100	Somewhat limited Seepage	0.05	Very limited Piping	1.00	Very limited Deep to water	1.00
Pm: Pratt-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Pn: Pratt-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Po: Pratt-----	60	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Carwile-----	40	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone Seepage	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
PRR: Pratt-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
PSS: Pratt-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Pt: Pratt-----	60	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Tivoli-----	40	Very limited Seepage Slope	1.00 0.00	Somewhat limited Seepage	0.99	Very limited Deep to water	1.00
PTT: Pratt-----	60	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Tivoli-----	40	Very limited Seepage	1.00	Somewhat limited Seepage	0.99	Very limited Deep to water	1.00
Sa: Albion-----	70	Very limited Seepage Slope	1.00 0.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Kaski-----	30	Somewhat limited Seepage	0.70	Somewhat limited Piping Seepage	0.78 0.09	Very limited Deep to water	1.00
Sb: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Se: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Sf: Shellabarger-----	100	Somewhat limited		Somewhat limited		Very limited	



WATER MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ta: Tabler-----	100	Seepage	0.70	Seepage	0.09	Deep to water	1.00
		Not limited		Somewhat limited Hard to pack	0.17	Very limited Deep to water	1.00
Tf: Tivoli-----	100	Very limited Seepage Slope	1.00 0.10	Somewhat limited Seepage	0.99	Very limited Deep to water	1.00
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Wd: Kingman-----	100	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone Piping Seepage	1.00 0.88 0.08	Somewhat limited Slow refill Cutbanks cave	0.43 0.10
Ze: Zenda-----	100	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Piping	0.43 0.15	Somewhat limited Slow refill Deep to water Cutbanks cave	0.30 0.25 0.10
Zs: Drummond-----	50	Not limited		Somewhat limited Depth to saturated zone Salinity	0.43 0.12	Somewhat limited Salty water Deep to water Cutbanks cave	0.50 0.25 0.10
Zenda-----	50	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Piping	0.43 0.15	Somewhat limited Slow refill Deep to water Cutbanks cave	0.30 0.25 0.10

SANITARY FACILITIES  
Pratt County, Kansas

Sanitary Facilities

The following tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A trench sanitary landfill is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

SANITARY FACILITIES  
Pratt County, Kansas

In an area sanitary landfill, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

SANITARY FACILITIES--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
Shellabarger-----	35	Slope	0.16	Slope	1.00
		Somewhat limited Restricted permeability	0.50	Very limited Slope	1.00
		Slope	0.16	Seepage	0.50
007CC: Case-----	50	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Clark-----	50	Somewhat limited Restricted permeability	0.50	Slope	0.33
				Somewhat limited Seepage	0.50
				Slope	0.33
007LN: Lincoln-----	100	Very limited Flooding	1.00	Very limited Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	0.08		
007SB: Shellabarger-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
				Seepage	0.50
047PG: Pratt-----	100	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
				Slope	0.09
095AB: Albion-----	100	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
				Slope	0.00
095DA: Dillwyn-----	60	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Plevna-----	40	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
097AS: Albion-----	65	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
Shellabarger-----	35	Slope	0.16	Slope	1.00
		Somewhat limited Restricted permeability	0.50	Very limited Slope	1.00
		Slope	0.16	Seepage	0.50
097CE: Case-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
				Seepage	0.50
097CK: Clark-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
				Slope	0.00
097CM: Clark-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
				Seepage	0.50
1005: Albion-----	75	Very limited Filtering capacity	1.00	Very limited Seepage	1.00

SANITARY FACILITIES--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1006: Albion-----	100	Very limited Filtering capacity	1.00	Slope	0.09
1017: Shellabarger, Eroded	40	Somewhat limited Restricted permeability	0.50	Very limited Seepage	1.00
Albion-----	45	Slope	0.16	Slope	0.67
		Very limited Filtering capacity	1.00	Very limited Slope	1.00
		Slope	0.16	Seepage	0.50
1324: Carway-----	50	Very limited Restricted permeability	1.00	Very limited Seepage	1.00
		Ponding	1.00	Slope	1.00
		Depth to saturated zone	1.00		
Carbika-----	30	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Seepage	0.50
		Restricted permeability	0.50		
1340: Case-----	70	Very limited Restricted permeability	1.00	Somewhat limited Slope	0.91
Clark-----	30	Somewhat limited Restricted permeability	0.50	Seepage	0.50
				Somewhat limited Slope	0.91
				Seepage	0.50
1341: Case-----	60	Very limited Restricted permeability	1.00	Very limited Slope	1.00
Clark-----	40	Slope	0.37	Seepage	0.50
		Somewhat limited Restricted permeability	0.50	Very limited Slope	1.00
		Slope	0.16	Seepage	0.50
1725: Farnum-----	40	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Funmar-----	40	Very limited Restricted permeability	1.00	Not limited	
1726: Farnum-----	40	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Funmar-----	40	Slope		Slope	0.00
		Very limited Restricted permeability	1.00	Somewhat limited Slope	0.00
1985: Hayes-----	60	Very limited Restricted permeability	1.00	Very limited Seepage	1.00
				Slope	0.09
1986: Hayes-----	55	Very limited Restricted permeability	1.00	Very limited Seepage	1.00
Solvay-----	20	Slope		Slope	0.09
		Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Restricted permeability	0.68	Depth to saturated zone	1.00
1987: Hayes-----	40	Very limited Restricted permeability	1.00	Very limited Seepage	1.00

SANITARY FACILITIES--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Turon-----	35	Very limited Restricted permeability Filtering capacity	1.00 1.00	Slope Very limited Seepage Slope	0.09 1.00 0.09
1988: Hayes-----	70	Very limited Restricted permeability	1.00	Very limited Seepage Slope	1.00 0.91
2556: Langdon-----	50	Very limited Filtering capacity Slope	1.00 0.00	Very limited Seepage Slope	1.00 1.00
2948: Nalim-----	80	Very limited Restricted permeability Filtering capacity	1.00 1.00	Very limited Seepage	1.00
3051: Ost-----	90	Very limited Restricted permeability	1.00	Not limited	
3053: Ost-----	85	Very limited Restricted permeability	1.00	Somewhat limited Slope	0.00
3180: Pratt-----	85	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 1.00
3181: Pratt-----	45	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 0.09
Turon-----	30	Very limited Restricted permeability Filtering capacity	1.00 1.00	Very limited Seepage Slope	1.00 0.09
3445: Shellabarger, Moderately Eroded--	100	Somewhat limited  Restricted permeability	 0.50	Somewhat limited  Seepage Slope	 0.50 0.33
3510: Saltcreek-----	50	Very limited Restricted permeability	1.00	Somewhat limited Seepage Slope	0.50 0.00
Funmar-----	30	Very limited Restricted permeability	1.00	Not limited	
Farnum-----	20	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
3512: Saltcreek-----	50	Very limited Restricted permeability	1.00	Somewhat limited Seepage Slope	0.50 0.00
Naron-----	50	Very limited Filtering capacity Restricted permeability	1.00 0.50	Very limited Seepage Slope	1.00 0.00
3533: Shellabarger-----	85	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
3534: Shellabarger-----	85	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50

SANITARY FACILITIES--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3540: Solway-----	90	Very limited Depth to saturated zone	1.00	Slope	0.00
		Restricted permeability	0.68	Very limited Seepage	1.00
3639: Taver-----	90	Very limited Restricted permeability	1.00	Depth to saturated zone	1.00
3640: Tivin-----	95	Very limited Filtering capacity	1.00	Not limited	
		Slope	1.00	Very limited Slope	1.00
3644: Turon-----	65	Very limited Restricted permeability	1.00	Seepage	1.00
		Filtering capacity	1.00	Very limited Seepage	1.00
Carway-----	20	Very limited Restricted permeability	1.00	Slope	0.33
		Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Seepage	0.50
3926: Water-----	100	Not rated		Not rated	
4005: Yaggy-----	60	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Saxman-----	30	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
Ab: Albion-----	100	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
				Slope	0.09
Ao: Albion-----	100	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
				Slope	0.67
As: Albion-----	50	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slope	0.37	Slope	1.00
Shellabarger-----	50	Somewhat limited Restricted permeability	0.50	Very limited Slope	1.00
		Slope	0.37	Seepage	0.50
Bc: Blanket-----	100	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
				Slope	0.09
Be: Blanket-----	100	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
Bh: Blanket-----	100	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
				Slope	0.00
Br: Fluvents-----	100	Very limited Flooding	1.00	Very limited Flooding	1.00

SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ca: Carwile-----	100	Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Very limited Restricted permeability	1.00	Very limited Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
Cc: Case-----	70	Depth to saturated zone	1.00	Seepage	0.32
		Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
Clark-----	30	Somewhat limited Restricted permeability	0.50	Seepage	0.50
				Somewhat limited Slope	0.67
Ck: Case-----	60			Seepage	0.50
		Somewhat limited Restricted permeability	0.50	Very limited Slope	1.00
Clark-----	40	Slope	0.37	Seepage	0.50
		Somewhat limited Restricted permeability	0.50	Very limited Slope	1.00
Cm: Clark-----	100	Slope	0.16	Seepage	0.50
		Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Cn: Clark-----	100			Slope	0.09
		Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Co: Clark-----	70			Slope	0.00
		Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Ost-----	30	Very limited Restricted permeability	1.00	Not limited	
Cs: Lincoln-----	100	Very limited Flooding	1.00	Very limited Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	0.08		
Fa: Farnum-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
Fe: Farnum-----	100			Seepage	0.50
		Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Fm: Farnum-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Fn: Farnum-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
				Slope	0.00
Fu: Farnum-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
				Seepage	0.50
Fw: Farnum-----	60	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50



SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Carwile-----	40	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 0.32
GRP: Pits-----	100	Not rated		Not rated	
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Kp: Kanza-----	50	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Plevna-----	50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Ks: Elandco-----	100	Very limited Flooding Restricted permeability	1.00 0.50	Very limited Flooding Seepage	1.00 0.50
Kw: Elandco-----	100	Very limited Flooding Restricted permeability	1.00 0.50	Very limited Flooding Seepage	1.00 0.50
Nd: Naron-----	100	Somewhat limited Restricted permeability	0.50	Very limited Seepage	1.00
Nf: Naron-----	100	Somewhat limited Restricted permeability	0.50	Very limited Seepage Slope	1.00 0.00
Ng: Naron-----	100	Somewhat limited Restricted permeability	0.50	Very limited Seepage Slope	1.00 0.67
Nk: Naron-----	100	Somewhat limited Restricted permeability	0.50	Very limited Seepage	1.00
Nm: Naron-----	100	Somewhat limited Restricted permeability	0.50	Very limited Seepage Slope	1.00 0.00
Nn: Naron-----	55	Somewhat limited Restricted permeability	0.50	Very limited Seepage Slope	1.00 0.00
Farnum-----	45	Somewhat limited Restricted permeability	0.50	Slope Somewhat limited Seepage	0.00 0.50
Oc: Ost-----	100	Very limited Restricted permeability	1.00	Not limited	
Os: Ost-----	100	Very limited Restricted permeability	1.00	Somewhat limited Slope	0.09
Pm: Pratt-----	100	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 0.91

SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Pn: Pratt-----	100	Very limited Filtering capacity Slope	1.00 0.16	Very limited Slope Seepage	1.00 1.00
Po: Pratt-----	60	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
Carwile-----	40	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Slope Very limited Depth to saturated zone Seepage	0.91 1.00 0.32
PRR: Pratt-----	100	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 0.09
PSS: Pratt-----	100	Very limited Filtering capacity Slope	1.00 0.00	Very limited Seepage Slope	1.00 1.00
Pt: Pratt-----	60	Very limited Filtering capacity Slope	1.00 0.16	Very limited Slope Seepage	1.00 1.00
Tivoli-----	40	Very limited Filtering capacity Slope	1.00 0.63	Very limited Slope Seepage	1.00 1.00
PTT: Pratt-----	60	Very limited Filtering capacity Slope	1.00 0.16	Very limited Seepage Slope	1.00 1.00
Tivoli-----	40	Very limited Filtering capacity Slope	1.00 0.16	Very limited Seepage Slope	1.00 1.00
Sa: Albion-----	70	Very limited Filtering capacity Slope	1.00 0.37	Very limited Seepage Slope	1.00 1.00
Kaski-----	30	Very limited Flooding Restricted permeability	1.00 0.50	Very limited Flooding Seepage	1.00 0.50
Sb: Shellabarger-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Se: Shellabarger-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage Slope	0.50 0.09
Sf: Shellabarger-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope Seepage	0.67 0.50
Ta: Tabler-----	100	Very limited Restricted permeability	1.00	Not limited	
Tf: Tivoli-----	100	Very limited Slope Filtering capacity	1.00 1.00	Very limited Slope Seepage	1.00 1.00
W: Water-----	100	Not rated		Not rated	
Wa: Waldeck-----	100	Very limited		Very limited	

SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Wd: Kingman-----	100	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Very limited		Very limited	
Ze: Zenda-----	100	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.68	Seepage	0.32
		Very limited		Very limited	
Zs: Drummond-----	50	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
		Very limited		Very limited	
Zenda-----	50	Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50

SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Very limited Seepage Too Sandy Slope	1.00 1.00 0.16	Very limited Seepage Slope	1.00 0.16	Very limited Too Sandy Seepage Slope Gravel content	1.00 1.00 0.16 0.00
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
007CC: Case-----	50	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Clark-----	50	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
007LN: Lincoln-----	100	Very limited Flooding Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage	1.00 1.00
007SB: Shellabarger-----	100	Not limited		Not limited		Not limited	
047PG: Pratt-----	100	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Seepage Too Sandy	1.00 0.50
095AB: Albion-----	100	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage Gravel content	1.00 1.00 0.00
095DA: Dillwyn-----	60	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Seepage Depth to saturated zone Too Sandy	1.00 0.86 0.50
Plevna-----	40	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 0.50
097AS: Albion-----	65	Very limited Seepage Too Sandy Slope	1.00 1.00 0.16	Very limited Seepage Slope	1.00 0.16	Very limited Too Sandy Seepage Slope Gravel content	1.00 1.00 0.16 0.00
Shellabarger-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
097CE: Case-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
097CK: Clark-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
097CM: Clark-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
1005: Albion-----	75	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
1006: Albion-----	100	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
1017: Shellabarger, Eroded Albion-----	40 45	Somewhat limited Slope Very limited Seepage Too Sandy Slope	0.16 1.00 1.00 0.16	Somewhat limited Slope Very limited Seepage Slope	0.16 1.00 0.16	Somewhat limited Slope Very limited Too Sandy Seepage Slope	0.16 1.00 1.00 0.16
1324: Carway-----	50	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00

SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Carbika-----	30	Too clayey	0.50			Hard to compact	1.00
		Very limited		Very limited		Too clayey	0.50
		Depth to	1.00	Ponding	1.00	Very limited	
		saturated zone		Depth to		Ponding	1.00
1340: Case-----	70	Ponding	1.00	Depth to	1.00	Depth to	1.00
		Too clayey	0.50	saturated zone		saturated zone	
						Too clayey	0.50
1341: Clark-----	30	Not limited		Not limited		Not limited	
		Not limited		Not limited		Not limited	
1341: Case-----	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
Clark-----	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16	Slope	0.16
1725: Farnum-----	40	Not limited		Not limited		Not limited	
		Somewhat limited		Not limited		Very limited	
Funmar-----	40	Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
1726: Farnum-----	40	Not limited		Not limited		Not limited	
		Somewhat limited		Not limited		Very limited	
Funmar-----	40	Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
1985: Hayes-----	60	Very limited		Very limited		Very limited	
		Too clayey	1.00	Seepage	1.00	Hard to compact	1.00
1986: Hayes-----	55	Very limited		Very limited		Very limited	
		Too clayey	1.00	Seepage	1.00	Hard to compact	1.00
Solvay-----	20	Very limited		Very limited		Somewhat limited	
		Depth to	1.00	Depth to	1.00	Seepage	0.50
		saturated zone		saturated zone			
		Seepage	1.00	Seepage	1.00	Depth to	0.09
1987: Hayes-----	40	Very limited		Very limited		Very limited	
		Too clayey	1.00	Seepage	1.00	Hard to compact	1.00
Turon-----	35	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
1988: Hayes-----	70	Very limited		Very limited		Too Sandy	0.50
		Too clayey	1.00	Seepage	1.00	Very limited	
2556: Langdon-----	50	Very limited		Very limited		Hard to compact	1.00
		Seepage	1.00	Seepage	1.00		
		Too Sandy	1.00	Slope	0.00	Very limited	
		Slope	0.00			Too Sandy	1.00
2948: Nalim-----	80	Very limited		Not limited		Seepage	1.00
		Seepage	1.00			Too clayey	0.50
		Too clayey	0.50				
3051: Ost-----	90	Not limited		Not limited			
3053: Ost-----	85	Not limited		Not limited		Not limited	
3180: Pratt-----	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
3181: Pratt-----	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
Turon-----	30	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
3445: Shellabarger, Moderately Eroded--	100	Not limited		Not limited		Too Sandy	0.50
3510: Saltcreek-----	50	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
Funmar-----	30	Somewhat limited		Not limited		Hard to compact	1.00
		Too clayey	0.50			Very limited	
Farnum-----	20					Hard to compact	1.00
						Too clayey	0.50
		Not limited		Not limited		Not limited	

SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3512: Saltcreek-----	50	Very limited Too clayey	1.00	Not limited		Very limited Too clayey	1.00
Naron-----	50	Very limited Seepage	1.00	Not limited		Hard to compact Not limited	1.00
3533: Shellabarger-----	85	Not limited		Not limited		Not limited	
3534: Shellabarger-----	85	Not limited		Not limited		Not limited	
3540: Solvay-----	90	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Somewhat limited Seepage	0.50
3639: Taver-----	90	Somewhat limited Too clayey	0.50	Not limited		Depth to saturated zone	0.09
3640: Tivin-----	95	Very limited Seepage Too Sandy Slope	1.00 1.00 1.00	Very limited Seepage Slope	1.00 1.00	Very limited Too Sandy Seepage Slope	1.00 1.00 1.00
3644: Turon-----	65	Very limited Too Sandy	1.00	Very limited Seepage	1.00	Very limited Seepage Too Sandy	1.00 0.50
Carway-----	20	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
		Too clayey	0.50	Depth to saturated zone	1.00	Depth to saturated zone Hard to compact Too clayey	1.00 1.00 0.50
3926: Water-----	100	Not rated		Not rated		Not rated	
4005: Yaggy-----	60	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage	1.00 1.00
		Too Sandy	1.00			Depth to saturated zone	0.09
Saxman-----	30	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 0.47
Ab: Albion-----	100	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
Ao: Albion-----	100	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
As: Albion-----	50	Very limited Seepage Too Sandy Slope	1.00 1.00 0.37	Very limited Seepage Slope	1.00 0.37	Very limited Too Sandy Seepage Slope	1.00 1.00 0.37
Shellabarger-----	50	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37
Bc: Blanket-----	100	Very limited Too clayey	1.00	Not limited		Very limited Too clayey Hard to compact	1.00 1.00
Be: Blanket-----	100	Very limited Too clayey	1.00	Not limited		Very limited Too clayey Hard to compact	1.00 1.00
Bh: Blanket-----	100	Very limited Too clayey	1.00	Not limited		Very limited Too clayey Hard to compact	1.00 1.00

SANITARY FACILITIES--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Br: Fluvents-----	100	Very limited Flooding Slope	1.00 1.00	Very limited Flooding Slope	1.00 1.00	Very limited Slope	1.00
Ca: Carwile-----	100	Very limited Depth to saturated zone Ponding  Too clayey	1.00 1.00 1.00	Very limited Ponding  Depth to saturated zone	1.00 1.00	Very limited Ponding  Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
Cc: Case-----	70	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Clark-----	30	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Ck: Case-----	60	Somewhat limited Too clayey Slope	0.50 0.37	Somewhat limited Slope	0.37	Somewhat limited Too clayey Slope	0.50 0.37
Clark-----	40	Somewhat limited Too clayey Slope	0.50 0.16	Somewhat limited Slope	0.16	Somewhat limited Too clayey Slope	0.50 0.16
Cm: Clark-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Cn: Clark-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Co: Clark-----	70	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Ost-----	30	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Cs: Lincoln-----	100	Very limited Flooding Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage	1.00 1.00
Fa: Farnum-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Fe: Farnum-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Fm: Farnum-----	100	Not limited		Not limited		Not limited	
Fn: Farnum-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Fu: Farnum-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Fw: Farnum-----	60	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Carwile-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Hard to compact	1.00 1.00
GRP: Pits-----	100	Not rated		Not rated		Not rated	
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Kp: Kanza-----	50	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage  Depth to saturated zone	1.00 1.00 1.00

SANITARY FACILITIES--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Plevna-----	50	Too Sandy Very limited Flooding	1.00 1.00	Very limited Flooding	1.00	Very limited Depth to saturated zone Seepage	1.00 0.50
		Depth to saturated zone Seepage	1.00 1.00	Depth to saturated zone Seepage	1.00 1.00		
Ks: Elandco-----	100	Very limited Flooding Too clayey	1.00 0.50	Very limited Flooding	1.00	Somewhat limited Too clayey	0.50
Kw: Elandco-----	100	Very limited Flooding Too clayey	1.00 0.50	Very limited Flooding	1.00	Somewhat limited Too clayey	0.50
Nd: Naron-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
Nf: Naron-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
Ng: Naron-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
Nk: Naron-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
Nm: Naron-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
Nn: Naron-----	55	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
Farnum-----	45	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Oc: Ost-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Os: Ost-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Pm: Pratt-----	100	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Seepage Too Sandy	1.00 0.50
Pn: Pratt-----	100	Very limited Seepage Too Sandy Slope	1.00 1.00 0.16	Very limited Seepage Slope	1.00 0.16	Very limited Seepage Too Sandy Slope	1.00 0.50 0.16
Po: Pratt-----	60	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Seepage Too Sandy	1.00 0.50
Carwile-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Hard to compact	1.00 1.00
PRR: Pratt-----	100	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Seepage Too Sandy	1.00 0.50
PSS: Pratt-----	100	Very limited Seepage Too Sandy Slope	1.00 1.00 0.00	Very limited Seepage Slope	1.00 0.00	Very limited Seepage Too Sandy Slope	1.00 0.50 0.00
Pt: Pratt-----	60	Very limited Seepage Too Sandy Slope	1.00 1.00 0.16	Very limited Seepage Slope	1.00 0.16	Very limited Seepage Too Sandy Slope	1.00 0.50 0.16
Tivoli-----	40	Very limited Seepage Too Sandy Slope	1.00 1.00 0.63	Very limited Seepage Slope	1.00 0.63	Very limited Too Sandy Seepage Slope	1.00 1.00 0.63
PTT: Pratt-----	60	Very limited Seepage Too Sandy Slope	1.00 1.00 0.16	Very limited Seepage Slope	1.00 0.16	Very limited Too Sandy Seepage Slope	1.00 1.00 0.16
Tivoli-----	40	Very limited		Very limited		Very limited	



SANITARY FACILITIES--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Sa: Albion-----	70	Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00	Slope	0.16	Seepage	1.00
		Slope	0.16			Slope	0.16
Kaski-----	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00	Slope	0.37	Seepage	1.00
Sb: Shellabarger-----	100	Slope	0.37			Slope	0.37
		Flooding	1.00	Flooding	1.00	Not limited	
Se: Shellabarger-----	100	Not limited		Not limited		Not limited	
Sf: Shellabarger-----	100	Not limited		Not limited		Not limited	
Ta: Tabler-----	100	Not limited		Not limited		Not limited	
Tf: Tivoli-----	100	Very limited		Very limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
W: Water-----	100	Seepage	1.00	Seepage	1.00	Very limited	
		Too Sandy	1.00	Slope	1.00	Too Sandy	1.00
		Slope	1.00			Seepage	1.00
Wa: Waldeck-----	100	Not rated		Not rated		Slope	1.00
						Not rated	
Wd: Kingman-----	100	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.50
		Depth to	1.00	Depth to	1.00	Depth to	0.09
Ze: Zenda-----	100	saturated zone		saturated zone		saturated zone	
		Seepage	1.00	Seepage	1.00		
Zs: Drummond-----	50	Very limited		Very limited		Very limited	
		Depth to	1.00	Depth to	1.00	Hard to compact	1.00
		saturated zone		saturated zone		Depth to	0.09
Zenda-----	50	Seepage	1.00			saturated zone	
				Very limited		Somewhat limited	
				Flooding	1.00	Too clayey	0.50
		Depth to	1.00	Depth to	1.00	Depth to	0.09
		saturated zone		saturated zone		saturated zone	
		Too clayey	0.50				

# AGRICULTURAL WASTE MANAGEMENT Pratt County, Kansas

The nature of the soil is also important in the application of organic wastes and wastewater to land as fertilizers and irrigation; it is also important when the soil is used as a medium for treatment and disposal of these wastes. Favorable soil properties are required to prevent environmental damage.

The use of organic wastes and wastewater as production resources will result in energy conservation, prevent the waste of these important resources, and prevent problems associated with their disposal. Where disposal is the goal, and a maximum amount is disposed in a minimum area to hold costs to a minimum, risk of environmental damage is the principal constraint. Where the reuse goal is pursued, and a minimum amount is applied to a maximum area to obtain the greatest benefit, environmental damage is unlikely.

Interpretations developed for waste management may include ratings for (1) manure and food processing wastes; (2) municipal sewage sludge; (3) irrigation use of wastewater; or (4) treatment of wastewater by the slow rate process, overland flow process, or rapid infiltration process. If available, these should be located in this subsection.

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The Ag-Waste tables show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, phosphorus, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are generally favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

AGRICULTURAL WASTE MANAGEMENT  
Pratt County, Kansas

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding.

The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

See the National Soil Handbook, September 1992, Part 620, for criteria used in rating soils for sanitary facilities and waste management.

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
007AE: Albion-----	65	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Slope	0.16	Slope	0.16	Filtering capacity	1.00
		Too acid	0.03	Too acid	0.14	Too steep for sprinkler application	0.39
Shellabarger-----	35					Too acid	0.14
		Somewhat limited Slope	0.16	Somewhat limited Too acid	0.42	Very limited Too steep for surface application	1.00
		Too acid	0.11	Slope	0.16	Too acid	0.42
007CC: Case-----	50	Not limited		Not limited		Too steep for sprinkler application	0.39
Clark-----	50	Not limited		Not limited			
007LN: Lincoln-----	100					Somewhat limited Too steep for surface application	0.08
		Very limited Flooding	1.00	Very limited Flooding	1.00		
		Filtering capacity	1.00	Filtering capacity	1.00	Somewhat limited Too steep for surface application	0.08
		Droughty Leaching limitation	0.94 0.45	Droughty	0.94		
007SB: Shellabarger-----	100	Somewhat limited Too acid	0.11	Somewhat limited Too acid	0.42	Very limited Flooding	1.00
						Filtering capacity	1.00
047PG: Pratt-----	100					Too steep for surface application	0.94
		Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00		
095AB: Albion-----	100					Very limited Filtering capacity	1.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Too acid	0.14
		Too acid Droughty	0.03 0.00	Too acid Droughty	0.14 0.00	Droughty	0.00
095DA: Dillwyn-----	60						
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00		
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Very limited Filtering capacity	1.00
		Leaching limitation Droughty	0.45 0.21	Droughty	0.21	Depth to saturated zone	1.00
Plevna-----	40					Droughty	0.21
		Very limited Flooding	1.00	Very limited Flooding	1.00		
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Very limited Flooding	1.00
		Runoff limitation	0.40	Filtering capacity	0.00	Depth to saturated zone	1.00
097AS: Albion-----	65	Filtering capacity	0.00			Filtering capacity	0.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00		
						Very limited Too steep for surface application	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Shellabarger-----	35	Slope	0.16	Slope	0.16	Filtering capacity	1.00
		Too acid	0.03	Too acid	0.14	Too steep for sprinkler application	0.39
		Somewhat limited Slope	0.16	Somewhat limited Too acid	0.42	Too acid	0.14
						Very limited Too steep for surface application	1.00
		Too acid	0.11	Slope	0.16	Too acid Too steep for sprinkler application	0.42 0.39
097CE: Case-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.31
097CK: Clark-----	100	Not limited		Not limited		Not limited	
097CM: Clark-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.31
1005: Albion-----	75	Very limited Filtering capacity Too acid	1.00 0.03	Very limited Filtering capacity Too acid	1.00 0.14	Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.14 0.00
1006: Albion-----	100	Very limited Filtering capacity Too acid	1.00 0.03	Very limited Filtering capacity Too acid	1.00 0.14	Very limited Filtering capacity Too steep for surface application Too acid	1.00 0.31 0.14
1017: Shellabarger, Eroded	40	Somewhat limited Slope	0.16	Somewhat limited Too acid	0.42	Very limited Too steep for surface application	1.00
		Too acid Filtering capacity	0.11 0.00	Slope Filtering capacity	0.16 0.00	Too acid Too steep for sprinkler application	0.42 0.39
						Filtering capacity	0.00
Albion-----	45	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Slope	0.16	Slope	0.16	Filtering capacity	1.00
		Too acid	0.03	Too acid	0.14	Too steep for sprinkler application	0.39
						Too acid	0.14
1324: Carway-----	50	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.14	Too acid	0.14
		Too acid	0.03	Filtering capacity	0.00	Filtering capacity	0.00
		Very limited Restricted permeability Ponding	1.00 1.00	Very limited Restricted permeability Ponding	1.00 1.00	Very limited Restricted permeability Ponding	1.00 1.00
Carbika-----	30						

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1340: Case-----	70	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.14	Too acid	0.14
		Too acid	0.03				
Clark-----	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Restricted permeability	0.37	Too steep for surface application	0.66
						Restricted permeability	0.37
1341: Case-----	60					Too steep for sprinkler application	0.00
		Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.66
Clark-----	40					Too steep for sprinkler application	0.00
		Somewhat limited		Somewhat limited			
		Restricted permeability	0.50	Restricted permeability	0.37	Very limited	
1725: Farnum-----	40	Slope	0.37	Slope	0.37	Too steep for surface application	1.00
						Too steep for sprinkler application	0.59
						Restricted permeability	0.37
1726: Farnum-----	40	Somewhat limited		Somewhat limited		Restricted permeability	
		Slope	0.16	Slope	0.16	Very limited	
						Too steep for surface application	1.00
1726: Funmar-----	40					Too steep for sprinkler application	0.39
		Somewhat limited		Somewhat limited			
		Too acid	0.00	Too acid	0.01	Somewhat limited	
1985: Hayes-----	60	Very limited		Very limited		Too acid	0.01
		Restricted permeability	1.00	Restricted permeability	1.00	Very limited	
						Restricted permeability	1.00
1986: Hayes-----	55	Too acid	0.00	Too acid	0.01	Somewhat limited	
		Very limited		Very limited		Too acid	0.01
		Restricted permeability	1.00	Restricted permeability	1.00	Very limited	
Solvay-----	20	Filtering capacity	0.00	Filtering capacity	0.00	Restricted permeability	1.00
						Too acid	0.07
						Too steep for surface application	0.00
1986: Hayes-----	55	Very limited		Very limited		Too steep for surface application	
		Filtering capacity	1.00	Filtering capacity	1.00	Somewhat limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Depth to saturated zone	0.43
Solvay-----	20	Too acid	0.02	Too acid	0.07	Too acid	0.07
						Too steep for surface application	0.00
Solvay-----	20	Very limited		Somewhat limited			
		Depth to dense layer	1.00	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Depth to saturated zone	0.43	Too acid	0.03	Too acid	0.03
Solvay-----	20	Runoff limitation	0.40	Filtering capacity	0.00	Filtering capacity	0.00
		Too acid	0.01				

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1987: Hayes-----	40	Filtering capacity	0.00				
		Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
Turon-----	35	Too acid	0.02	Too acid	0.07	Too acid	0.07
						Too steep for surface application	0.00
		Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
1988: Hayes-----	70	Restricted permeability	0.89	Restricted permeability	0.78	Restricted permeability	0.78
		Leaching limitation	0.45	Too acid	0.21	Too acid	0.21
		Too acid	0.05			Too steep for surface application	0.00
2556: Langdon-----	50	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too acid	0.02	Too acid	0.07	Too steep for surface application	0.66
						Too acid	0.07
2948: Nalim-----	80	Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
						Too steep for sprinkler application	0.00
		Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
3051: Ost-----	90	Droughty	0.62	Too acid	0.67	Too steep for surface application	1.00
		Leaching limitation	0.45			Too acid	0.67
		Too acid	0.18	Droughty	0.62	Droughty	0.62
		Slope	0.00	Slope	0.00	Too steep for sprinkler application	0.10
3053: Ost-----	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Too acid	0.00	Too acid	0.01	Too acid	0.01
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
3180: Pratt-----	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
3181: Pratt-----	45	Low adsorption	1.00	Too acid	0.42	Low adsorption	1.00
		Leaching limitation	0.45			Too steep for surface application	0.91
		Too acid	0.11			Too acid	0.42
						Too steep for sprinkler application	0.02

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Turon-----	30	Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Low adsorption	1.00	Too acid	0.42	Low adsorption	1.00
		Leaching limitation	0.45			Too acid	0.42
		Too acid	0.11			Too steep for surface application	0.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
3445: Shellabarger, Moderately Eroded--	100	Restricted permeability	0.89	Restricted permeability	0.78	Restricted permeability	0.78
		Leaching limitation	0.45	Too acid	0.21	Too acid	0.21
		Too acid	0.05			Too steep for surface application	0.00
		Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid	0.11	Too acid	0.42	Too acid	0.42
3510: Saltcreek-----	50	Filtering capacity	0.00	Filtering capacity	0.00	Too steep for surface application	0.08
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Filtering capacity	0.00
		Too acid	0.73	Too acid	1.00	Very limited Restricted permeability	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too acid	1.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Filtering capacity	0.00
Funmar-----	30	Somewhat limited		Somewhat limited		Very limited Restricted permeability	1.00
		Too acid	0.00	Too acid	0.01	Somewhat limited Too acid	0.01
Farnum-----	20						
3512: Saltcreek-----	50	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
		Somewhat limited		Somewhat limited		Somewhat limited	
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
Naron-----	50						
3533: Shellabarger-----	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid	0.11	Too acid	0.42	Too acid	0.42
3534: Shellabarger-----	85	Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
		Somewhat limited		Somewhat limited		Somewhat limited	
3540: Solvay-----	90	Too acid	0.11	Too acid	0.42	Too acid	0.42
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
		Very limited		Very limited		Very limited	
		Depth to dense layer	1.00	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Depth to saturated zone	0.43	Too acid	0.03	Too acid	0.03
3639: Taver-----	90	Runoff limitation	0.40	Filtering capacity	0.00	Filtering capacity	0.00
		Too acid	0.01				
		Filtering capacity	0.00				
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Runoff limitation	0.40				
3640: Tivin-----	95	Very limited		Very limited		Very limited	



AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3644: Turon-----	65	Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Droughty	0.64	Droughty	0.64	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Too acid	0.01	Droughty	0.64
		Too acid	0.00			Too acid	0.01
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	0.89	Restricted permeability	0.78	Restricted permeability	0.78
		Leaching limitation	0.45	Too acid	0.21	Too acid	0.21
		Too acid	0.05			Too steep for surface application	0.08
Carway-----	20	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3926: Water-----	100	Runoff limitation	0.40	Too acid	0.14	Too acid	0.14
		Not rated		Not rated		Not rated	
4005: Yaggy-----	60	Very limited Filtering capacity	1.00	Very limited Flooding	1.00	Very limited Filtering capacity	1.00
		Flooding	0.60	Filtering capacity	1.00	Flooding	0.60
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Droughty	0.07	Droughty	0.07	Droughty	0.07
Saxman-----	30	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Depth to saturated zone	0.86	Too acid	1.00	Too acid	1.00
		Too acid	0.62	Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Leaching limitation	0.45	Flooding	0.40	Droughty	0.11
		Droughty	0.11	Droughty	0.11		
Ab: Albion-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Too acid	0.03	Too acid	0.14	Too acid Too steep for surface application	0.14 0.00
Ao: Albion-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Too acid	0.03	Too acid	0.14	Too steep for surface application Too acid	0.31 0.14
As: Albion-----	50	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Slope	0.37	Slope	0.37	Filtering capacity	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Shellabarger-----	50	Too acid	0.03	Too acid	0.14	Too steep for sprinkler application	0.59
		Somewhat limited Slope	0.37	Somewhat limited Too acid	0.42	Too acid	0.14
		Too acid	0.11	Slope	0.37	Very limited Too steep for surface application	1.00
Bc: Blanket-----	100	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Too steep for sprinkler application	0.59
Be: Blanket-----	100	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Too acid	0.42
Bh: Blanket-----	100	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Restricted permeability	0.22
Br: Fluvents-----	100	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Too steep for surface application	0.00
Ca: Carwile-----	100	Very limited Flooding Slope	1.00	Very limited Flooding Slope	1.00	Too steep for sprinkler application	1.00
			1.00		1.00	Too steep for surface application	1.00
		Ponding Depth to saturated zone	1.00	Very limited Ponding Depth to saturated zone	1.00	Too steep for surface application	1.00
		Restricted permeability Runoff limitation Too acid	1.00	Restricted permeability Too acid	1.00	Too steep for sprinkler application	1.00
Cc: Case-----	70	Not limited	0.40	Not limited	0.07	Very limited Flooding	1.00
Clark-----	30	Not limited	0.02	Not limited		Too steep for surface application	1.00
		Not limited		Not limited		Too steep for surface application	1.00
Ck: Case-----	60	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Somewhat limited Too steep for surface application	0.31
Clark-----	40	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Too steep for surface application	1.00
						Too steep for surface application	0.59
						Too steep for sprinkler application	0.39
Cm: Clark-----	100	Not limited		Not limited		Very limited Too steep for surface application	1.00
Cn: Clark-----	100	Not limited		Not limited		Too steep for sprinkler application	0.39
Co: Clark-----	70	Not limited		Not limited		Somewhat limited Too steep for surface application	0.00

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ost-----	30	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Restricted permeability	0.22
Cs: Lincoln-----	100	Very limited Filtering capacity Droughty	1.00 0.96	Very limited Flooding Filtering capacity Droughty	1.00 1.00 0.96	Very limited Filtering capacity Droughty Flooding	1.00 0.96 0.60
Fa: Farnum-----	100	Flooding Leaching limitation	0.60 0.45	Not limited		Somewhat limited Too steep for surface application	0.31
Fe: Farnum-----	100	Not limited		Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
Fm: Farnum-----	100	Filtering capacity	0.00	Not limited		Not limited	
Fn: Farnum-----	100	Not limited		Not limited		Not limited	
Fu: Farnum-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.31
Fw: Farnum-----	60	Not limited		Not limited		Not limited	
Carwile-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation Too acid	0.40 0.02	Too acid	0.07	Too acid	0.07
GRP: Pits-----	100	Not rated		Not rated		Not rated	
INT: Aquolls-----	100	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00
Kp: Kanza-----	50	Very limited Flooding Depth to saturated zone Filtering capacity Droughty Runoff limitation	1.00 1.00 1.00 0.82 0.40	Very limited Flooding Depth to saturated zone Filtering capacity Droughty Too acid	1.00 1.00 1.00 0.82 0.14	Very limited Flooding Depth to saturated zone Filtering capacity Droughty Too acid	1.00 1.00 1.00 0.82 0.14
Plevna-----	50	Very limited Flooding Depth to saturated zone Runoff limitation Filtering capacity	1.00 1.00 0.40 0.00	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 0.00	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 0.00
Ks: Elandco-----	100	Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
Kw: Elandco-----	100	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
Nd: Naron-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Nf: Naron-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
Ng: Naron-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Too steep for surface application Filtering capacity	0.31 0.00
Nk: Naron-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
Nm: Naron-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
Nn: Naron-----	55	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
Farnum-----	45	Not limited		Not limited		Not limited	
Oc: Ost-----	100	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Restricted permeability	0.22
Os: Ost-----	100	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Restricted permeability Too steep for surface application	0.22 0.00
Pm: Pratt-----	100	Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 0.66 0.00
Pn: Pratt-----	100	Very limited Filtering capacity  Leaching limitation Slope	1.00  0.45 0.16	Very limited Filtering capacity  Slope	1.00  0.16	Very limited Too steep for surface application Filtering capacity Too steep for sprinkler application	1.00  1.00 0.39
Po: Pratt-----	60	Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 0.66 0.00
Carwile-----	40	Very limited Depth to saturated zone Restricted permeability Runoff limitation Too acid	1.00 1.00 0.40 0.02	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 1.00 0.07
PRR: Pratt-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PSS: Pratt-----	100	Leaching limitation	0.45			Too steep for surface application	0.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Leaching limitation	0.45	Slope	0.00	Too steep for surface application	1.00
		Slope	0.00			Too steep for sprinkler application	0.10
Pt: Pratt-----	60	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Leaching limitation	0.45	Slope	0.16	Filtering capacity	1.00
		Slope	0.16			Too steep for sprinkler application	0.39
Tivoli-----	40	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Droughty	0.98	Droughty	0.98	Filtering capacity	1.00
		Slope	0.63	Slope	0.63	Droughty	0.98
		Leaching limitation	0.45			Too steep for sprinkler application	0.77
PTT: Pratt-----	60	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Leaching limitation	0.45	Slope	0.16	Filtering capacity	1.00
		Slope	0.16			Too steep for sprinkler application	0.39
Tivoli-----	40	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Droughty	0.98	Droughty	0.98	Filtering capacity	1.00
		Leaching limitation	0.45	Slope	0.16	Droughty	0.98
		Slope	0.16			Too steep for sprinkler application	0.39
Sa: Albion-----	70	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Slope	0.37	Slope	0.37	Filtering capacity	1.00
		Too acid	0.03	Too acid	0.14	Too steep for sprinkler application	0.59
Kaski-----	30	Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Too acid Somewhat limited Flooding	0.14 0.60
Sb: Shellabarger-----	100	Somewhat limited Too acid	0.11	Somewhat limited Too acid	0.42	Somewhat limited Too acid	0.42
Se: Shellabarger-----	100	Somewhat limited Too acid	0.11	Somewhat limited Too acid	0.42	Somewhat limited Too acid Too steep for surface application	0.42 0.00
Sf: Shellabarger-----	100	Somewhat limited		Somewhat limited		Somewhat limited	

AGRICULTURAL WASTE MANAGEMENT--Continued  
Pratt County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ta: Tabler-----	100	Too acid	0.11	Too acid	0.42	Too acid Too steep for surface application	0.42 0.31
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Runoff limitation	0.40				
Tf: Tivoli-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for sprinkler application	1.00
		Droughty	1.00	Droughty	1.00	Filtering capacity Droughty	1.00
W: Water-----	100	Leaching limitation	0.45				1.00
		Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Very limited Filtering capacity	1.00	Very limited Flooding	1.00	Very limited Filtering capacity	1.00
		Flooding	0.60	Filtering capacity	1.00	Flooding	0.60
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
Wd: Kingman-----	100	Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00
		Flooding	0.60	Depth to saturated zone	1.00	Flooding	0.60
		Runoff limitation	0.40	Restricted permeability	0.22	Restricted permeability	0.22
Ze: Zenda-----	100	Restricted permeability	0.30				
		Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
Zs: Drummond-----	50	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Droughty	1.00	Droughty	1.00	Droughty	1.00
		Salinity	0.50	Salinity	1.00	Salinity	1.00
Zenda-----	50	Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Runoff limitation	0.40				
		Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43

WIN-PST SPISP II  
SOIL SENSITIVITY TO PESTICIDE LOSS RATING REPORT

Soils Data Table: SOIL\_KS Sort Order: MUSYM

Pratt County, Kansas: KS151

MUSYM/SEQ#	COMPONENT/TEXTURE/MU%	HYD	KFACT	SURFACE DEPTH	% OM	SPISP II Ratings		
						Leaching (SLP)	Solution Runoff (SSRP)	Adsorbed Runoff (SARP)
007AE 1	ALBION SL 65%	B	0.20	11"	1.5%	I	I	I
007AE 2	SHELLABARGER SL 35%	B	0.20	12"	1.5%	I	I	I
007CC 1	CASE CL 50%	B	0.32	6"	1.3%	H	I	I
007CC 2	CLARK CL 50%	B	0.28	10"	1.5%	I	I	I
007LN 1	LINCOLN FSL 100%	A	0.20	6"	0.5%	H	L	L
007SB 1	SHELLABARGER SL 100%	B	0.20	14"	1.5%	I	I	I
047PG 1	PRATT LFS 100%	A	0.17	13"	0.8%	H	L	L
095AB 1	ALBION SL 100%	B	0.20	8"	1.5%	H	I	I
095AD 1	ALBION SL 100%	B	0.20	8"	1.5%	H	I	I
095DA 1	DILLWYN LFS 60%	A	0.17	8"	1.0%	H (w)	L	L
095DA 2	PLEVNA FSL 40%	D	0.20	11"	2.5%	H (w)	H	H
095SB 1	SHELLABARGER SL 100%	B	0.20	10"	1.5%	H	I	I
097AS 1	ALBION SL 65%	B	0.20	11"	1.5%	I	I	I
097AS 2	SHELLABARGER SL 35%	B	0.20	12"	1.5%	I	I	I
097CE 1	CASE CL 100%	B	0.32	6"	1.3%	H	I	I
097CK 1	CLARK L 100%	B	0.28	5"	1.5%	H	I	I
097CM 1	CLARK L 100%	B	0.28	10"	1.5%	I	I	I
097TH 1	TIVOLI FS 100%	A	0.17	6"	0.5%	H	L	I (s)
1005 1	ALBION SL 75%	B	0.20	9"	1.5%	H	I	I
1006 1	ALBION SL 100%	B	0.20	9"	1.5%	H	I	I
1017 1	ALBION SL 45%	B	0.20	9"	1.5%	H	I	I
1017 2	SHELLABARGER SL 40%	B	0.20	5"	0.8%	H	I	I
1324 1	CARWAY FSL 50%	D	0.20	7"	0.8%	V	H	H
1324 2	CARBIKA SIL 30%	D	0.24	11"	1.5%	V	H	H
1340 1	CASE L 70%	B	0.28	6"	1.5%	H	I	I
1340 2	CLARK L 30%	B	0.28	11"	1.5%	I	I	I
1341 1	CASE L 60%	B	0.28	6"	1.5%	H	I	I
1341 2	CLARK L 40%	B	0.28	11"	1.5%	I	I	I

WIN-PST SPISP II  
SOIL SENSITIVITY TO PESTICIDE LOSS RATING REPORT

Soils Data Table: SOIL\_KS Sort Order: MUSYM

Pratt County, Kansas: KS151

1725	1	FARNUM L 40%	B	0.28	5"	2.0% I	I	I
1725	2	FUNMAR L 40%	C	0.28	6"	2.0% L	H	H
1726	1	FARNUM L 40%	B	0.28	5"	2.0% I	I	I
1726	2	FUNMAR L 40%	C	0.28	6"	2.0% L	H	H
1985	1	HAYES FSL 60%	B	0.20	8"	0.8% H	I	I
1986	1	HAYES LFS 55%	B	0.17	8"	0.8% H	I	I
1986	2	SOLVAY LFS 20%	D	0.17	5"	0.8% H (w)	H	H
1987	1	HAYES LFS 40%	B	0.17	8"	0.8% H	I	I
1987	2	TURON FS 35%	A	0.15	8"	0.5% H	L	L
1988	1	HAYES FSL 70%	B	0.20	8"	0.8% H	I	I
2556	1	LANGDON FS 50%	A	0.15	8"	0.5% H	L	L
2948	1	NALIM L 80%	B	0.28	6"	2.0% I	I	I
2956	1	NICKERSON LFS 85%	B	0.15	6"	0.4% H (w)	I	I
3051	1	OST L 90%	B	0.28	8"	2.0% I	I	I
3053	1	OST L 85%	B	0.28	8"	2.0% I	I	I
3180	1	PRATT FS 85%	A	0.15	8"	0.8% H	L	L
3181	1	PRATT FS 45%	A	0.15	8"	0.8% H	L	L
3181	2	TURON FS 30%	A	0.15	8"	0.5% H	L	L
3445	1	SHELLABARGER SL 100%	B	0.20	6"	0.7% H	I	I
3510	1	SALTCREEK FSL 50%	C	0.20	5"	1.5% I	H	I
3510	2	FUNMAR L 30%	C	0.28	6"	2.0% L	H	H
3510	3	FARNUM L 20%	B	0.28	5"	2.0% I	I	I
3511	1	SALTCREEK FSL 70%	C	0.20	5"	1.5% I	H	I
3511	2	NARON FSL 30%	B	0.20	7"	2.0% H	I	I
3512	1	NARON FSL 50%	B	0.20	8"	2.0% I	I	I
3512	2	SALTCREEK FSL 50%	C	0.20	5"	1.5% I	H	I
3530	1	SHELLABARGER SL 45%	B	0.20	5"	0.8% H	I	I
3530	2	ALBION SL 40%	B	0.20	9"	1.5% H	I	I
3533	1	SHELLABARGER SL 85%	B	0.20	7"	1.5% H	I	I
3534	1	SHELLABARGER SL 85%	B	0.20	7"	1.5% H	I	I



WIN-PST SPISP II  
SOIL SENSITIVITY TO PESTICIDE LOSS RATING REPORT

Soils Data Table: SOIL\_KS Sort Order: MUSYM

Pratt County, Kansas: KS151

3540 1	SOLVAY LFS 90%	D	0.17	5"	0.8% H (w)	H	H
3639 1	TAYER L 90%	D	0.28	7"	2.0% V	H	H
3640 1	TIVIN FS 95%	A	0.15	7"	0.5% H	L	I (s)
3644 1	TURON FS 65%	A	0.15	8"	0.5% H	L	L
3644 2	CARWAY LFS 20%	D	0.17	7"	0.8% V	H	H
4005 1	YAGGY FSL 60%	C	0.20	5"	0.8% H (w)	H	I
4005 2	SAXMAN LS 30%	A	0.20	4"	0.7% H (w)	L	L
Ab 1	ALBION SL 100%	B	0.20	8"	1.5% H	I	I
Ao 1	ALBION SL 100%	B	0.20	8"	1.5% H	I	I
As 1	ALBION SL 50%	B	0.20	8"	1.5% H	I	I
As 2	SHELLABARGER FSL 50%	B	0.20	11"	1.5% I	I	I
Bc 1	BLANKET SICL 100%	C	0.37	13"	2.0% L	H	H
Be 1	BLANKET SIL 100%	C	0.37	13"	2.0% L	H	H
Bh 1	BLANKET SIL 100%	C	0.37	13"	2.0% L	H	H
Br 1	FLUVENTS L 100%	B	0.37	6"	1.3% H	I	H (s)
Ca 1	CARWILE FSL 100%	D	0.24	10"	2.0% H (w)	H	H
Cc 1	CASE L 70%	B	0.28	6"	1.5% H	I	I
Cc 2	CLARK L 30%	B	0.28	11"	1.5% I	I	I
Ck 1	CASE CL 60%	B	0.32	6"	1.3% H	I	I
Ck 2	CLARK CL 40%	B	0.28	8"	1.5% I	I	I
Cm 1	CLARK CL 100%	B	0.28	8"	1.5% I	I	I
Cn 1	CLARK FSL 100%	B	0.20	8"	1.5% H	I	I
Co 1	CLARK CL 70%	B	0.28	8"	1.5% I	I	I
Co 2	OST CL 30%	B	0.32	9"	2.0% I	I	I
Cs 1	CROFT SOILS LFS 100%	A	0.17	13"	0.8% H	L	L
Fa 1	FARNUM CL 100%	B	0.28	7"	2.0% I	I	I
Fe 1	FARNUM FSL 100%	B	0.20	11"	1.5% I	I	I
Fm 1	FARNUM L 100%	B	0.28	14"	2.0% I	I	I
Fn 1	FARNUM L 100%	B	0.28	12"	2.0% I	I	I
Fu 1	FARNUM L 100%	B	0.28	12"	2.0% I	I	I

WIN-PST SPISP II  
SOIL SENSITIVITY TO PESTICIDE LOSS RATING REPORT

Soils Data Table: SOIL\_KS Sort Order: MUSYM

Pratt County, Kansas: KS151

Fw 1	FARNUM L 60%	B	0.28	12"	2.0% I	I	I
Fw 2	CARWILE FSL 40%	D	0.24	12"	2.0% H (w)	H	H
GRP 1	PITS GR-S 100%	A	0.10	60"	0.3% H	L	I (s)
INT 1	AQUOLLS VAR 100%	C	0.00	72"	0.0% ?	H	?
Kp 1	KANZA LFS 50%	D	0.17	11"	2.0% H (w)	H	H
Kp 2	PLEVNA FSL 50%	D	0.20	10"	2.5% H (w)	H	H
Ks 1	ELANDCO SIL 100%	B	0.43	18"	2.0% L	I	I
Kw 1	ELANDCO SIL 100%	B	0.43	18"	2.0% L	I	I
Nd 1	NARON FSL 100%	B	0.20	8"	2.0% I	I	I
Nf 1	NARON FSL 100%	B	0.20	8"	2.0% I	I	I
Ng 1	NARON FSL 100%	B	0.20	8"	2.0% I	I	I
Nk 1	NARON L 100%	B	0.28	11"	2.0% I	I	I
Nm 1	NARON L 100%	B	0.28	11"	2.0% I	I	I
Nn 1	NARON FSL 55%	B	0.20	11"	2.0% I	I	I
Nn 2	FARNUM L 45%	B	0.28	12"	2.0% I	I	I
Oc 1	OST CL 100%	B	0.32	9"	2.0% I	I	I
Os 1	OST CL 100%	B	0.32	9"	2.0% I	I	I
Pm 1	PRATT LFS 100%	A	0.17	10"	0.8% H	L	L
Pn 1	PRATT LFS 100%	A	0.17	10"	0.8% H	L	L
Po 1	PRATT LFS 60%	A	0.17	10"	0.8% H	L	L
Po 2	CARWILE FSL 40%	D	0.24	12"	2.0% H (w)	H	H
PRR 1	PRATT LFS 100%	A	0.17	12"	0.8% H	L	L
PSS 1	PRATT LFS 100%	A	0.17	8"	0.8% H	L	L
Pt 1	PRATT LFS 60%	A	0.17	10"	0.8% H	L	L
Pt 2	TIVOLI LFS 40%	A	0.17	6"	0.5% H	L	L
PTT 1	PRATT LFS 60%	A	0.17	10"	0.8% H	L	L
PTT 2	TIVOLI LFS 40%	A	0.17	7"	0.5% H	L	L
Sa 1	ALBION FSL 70%	B	0.20	8"	1.5% H	I	I
Sa 2	KASKI L 30%	B	0.28	26"	2.0% L	I	I
Sb 1	SHELLABARGER FSL 100%	B	0.20	11"	1.5% I	I	I

WIN-PST SPISP II  
SOIL SENSITIVITY TO PESTICIDE LOSS RATING REPORT

Soils Data Table: SOIL\_KS Sort Order: MUSYM

Pratt County, Kansas: KS151

Se 1	SHELLABARGER FSL 100%	B	0.20	11"	1.5% I	I	I
Sf 1	SHELLABARGER FSL 100%	B	0.20	11"	1.5% I	I	I
Ta 1	TABLER CL 100%	D	0.43	10"	2.0% V	H	H
Tf 1	TIVOLI FS 100%	A	0.17	6"	0.5% H	L	I (s)
W 1	WATER 100%		0.00	0"	0.0% ?	?	?
Wa 1	WALDECK FSL 100%	C	0.20	15"	1.5% H (w)	H	I
Wd 1	KINGMAN SICL 100%	D	0.32	10"	3.0% H (w)	H	H
Ze 1	ZENDA CL 100%	C	0.28	14"	2.0% H (w)	H	H
Zs 1	DRUMMOND CL 50%	D	0.49	8"	0.8% H (w)	H	H
Zs 2	ZENDA CL 50%	C	0.28	14"	2.0% H (w)	H	H

(.\REPORTS\SOILS.TXT generated on 12/12/01 at 12:11:15)

H -- High  
I -- Intermediate  
L -- Low  
V -- Very Low

Conditions that affect ratings:

m -- There are macropores in the surface horizon deeper than 24"  
w -- The high water table comes within 24" of the surface during the growing season  
s -- The field slope is greater than 15%

SPISP II S-Ratings:

SLP -- Soil Leaching Potential  
SSRP -- Soil Solution Runoff Potential  
SARP -- Soil Adsorbed Runoff Potential

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (USDA, 1999) and "Keys to Soil Taxonomy" (USDA, 1998) and in the "Soil Survey Manual" (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units in the Hydric Soil Interpretations table meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

These map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 2 of 9

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
007AE: ALBION AND SHELLABARGER SOILS, 4 TO 15 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	SHELLABARGER Unnamed wet soils	No Yes	paleoterrace drainageway	--- 2B3, 2A, 2B2	--- YES	--- NO	--- NO
007CC: CASE-CLARK CLAY LOAMS, 2 TO 6 PERCENT SLOPES	CASE	No	paleoterrace	---	---	---	---
	CLARK	No	paleoterrace	---	---	---	---
007LN: LINCOLN SOILS, FREQUENTLY FLOODED	LINCOLN	No	flood plain	---	---	---	---
	KANZA	Yes	flood plain	2B2	YES	NO	NO
007SB: SHELLABARGER SANDY LOAM, 3 TO 6 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
047PG: PRATT LOAMY FINE SAND, 1 TO 4 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	CARWILE	Yes	depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	3, 2A, 2B3	YES	NO	YES
095AB: ALBION SANDY LOAM, 1 TO 3 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
095DA: DILLWYN-PLEVNA COMPLEX, OCCASIONALLY FLOODED	DILLWYN	No	interdune, dune, paleoterrace	---	---	---	---
	PLEVNA	Yes	flood plain	4, 2B3	YES	YES	NO
	Unnamed wet soils	Yes	depression	2A, 2B3, 3	YES	NO	YES
097AS: ALBION-SHELLABARGER SANDY LOAMS, 4 TO 15 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	SHELLABARGER Unnamed wet soils	No Yes	paleoterrace drainageway	--- 2B2, 2B3, 2A	--- YES	--- NO	--- NO
097CE: CASE CLAY LOAM, 2 TO 7 PERCENT SLOPES	CASE	No	paleoterrace	---	---	---	---
097CK: CLARK LOAM, 1 TO 3 PERCENT SLOPES	CLARK	No	paleoterrace	---	---	---	---
097CM: CLARK LOAM, 3 TO 7 PERCENT SLOPES	CLARK	No	paleoterrace	---	---	---	---
1005: ALBION SANDY LOAM, 1 TO 3 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	SHELLABARGER Unnamed Wet Soils	No Yes	paleoterrace drainageway	--- 2A, 2B1, 2B2, 2B3	--- YES	--- NO	--- NO
1006: ALBION SANDY LOAM, 3 TO 7 PERCENT SLOPES, ERODED	ALBION	No	paleoterrace	---	---	---	---
1017: ALBION AND SHELLABARGER SOILS, 7 TO 15 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	ALBION	No	paleoterrace	---	---	---	---
	CLARK	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 2B1, 2B3, 2B2	YES	NO	NO
1324: CARWAY AND CARBIKA SOILS, 0 TO 1 PERCENT SLOPES	CARWAY	Yes	depression, interdune, paleoterrace	2B3, 3	YES	NO	YES
	CARBIKA	Yes	depression, interdune, paleoterrace	3, 2B3	YES	NO	YES
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
1340: CASE-CLARK COMPLEX, 3 TO 7 PERCENT SLOPES	CASE	No	paleoterrace	---	---	---	---
	CLARK	No	paleoterrace	---	---	---	---

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 3 of 9

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
1341: CASE-CLARK COMPLEX, 7 TO 15 PERCENT SLOPES	CASE	No	paleoterrace	---	---	---	---
	CLARK	No	paleoterrace	---	---	---	---
1725: FUNMAR AND FARNUM LOAMS, 0-1 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
	FUNMAR	No	paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
1726: FUNMAR AND FARNUM LOAMS, 1 TO 3 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
	FUNMAR	No	paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
1985: HAYES LOAMY FINE SAND, 1 TO 5 PERCENT SLOPES	HAYES	No	dune, paleoterrace	---	---	---	---
	ATTICA	No	dune, paleoterrace	---	---	---	---
	SALTCREEK	No	dune, paleoterrace	---	---	---	---
1986: HAYES-SOLVAY LOAMY FINE SANDS, 0 TO 5 PERCENT SLOPES	HAYES	No	dune, paleoterrace	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	FARNUM	No	paleoterrace	---	---	---	---
1987: HAYES-TURON COMPLEX, 0 TO 5 PERCENT SLOPES	HAYES	No	dune, paleoterrace	---	---	---	---
	TURON	No	dune, paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
1988: HAYES LOAMY FINE SAND, 5 TO 10 PERCENT SLOPES	HAYES	No	dune, paleoterrace	---	---	---	---
	PRATT	No	dune, paleoterrace	---	---	---	---
2556: LANGDON FINE SAND, 0 TO 15 PERCENT SLOPES	LANGDON	No	dune, paleoterrace	---	---	---	---
	TIVIN	No	dune, paleoterrace	---	---	---	---
	TURON	No	dune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	WARNUT	Yes	interdune, depression, paleoterrace	2B3,3	YES	NO	YES
2948: NALIM LOAM, 0 TO 1 PERCENT SLOPES	NALIM	No	paleoterrace	---	---	---	---
	FARNUM	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	depression	2B3,3	YES	NO	YES

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 4 of 9

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3051: OST LOAM, 0 TO 1 PERCENT SLOPE	OST	No	paleoterrace	---	---	---	---
	CLARK Unnamed Wet Soils	No Yes	paleoterrace depression	--- 2A, 2B3, 3	--- YES	--- NO	--- YES
3053: OST LOAM, 1 TO 3 PERCENT SLOPES	OST	No	paleoterrace	---	---	---	---
	SHELLABARGER CLARK	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	No Yes	paleoterrace drainageway	--- 2A, 2B1, 2B2, 2B3	--- YES	--- NO	--- NO
3180: PRATT FINE SAND, 5 TO 10 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	ATTICA	No	dune, paleoterrace	---	---	---	---
3181: PRATT-TURON FINE SANDS, 1 TO 5 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	TURON	No	dune, paleoterrace	---	---	---	---
	HAYES	No	dune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	2B3, 3	YES	NO	YES
	WARNUT	Yes	interdune, depression, paleoterrace	3, 2B3	YES	NO	YES
3445: SHELLABARGER FINE SANDY LOAM, 3 TO 7 PERCENT SLOPES, ERODED	SHELLABARGER	No	paleoterrace	---	---	---	---
3510: SALTCREEK-FUNMAR-FARNUM COMPLEX, 1 TO 3 PERCENT SLOPES	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	FUNMAR FARNUM	No	paleoterrace	---	---	---	---
	CARBIKA	No Yes	paleoterrace depression, interdune, paleoterrace	--- 2B3, 3	--- YES	--- NO	--- YES
	CARWAY	Yes	depression, interdune, paleoterrace	3, 2B3	YES	NO	YES
3512: SALTCREEK AND NARON FINE SANDY LOAMS, 1 TO 3 PERCENT SLOPES	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---
	FUNMAR CARBIKA	No Yes	paleoterrace depression, interdune, paleoterrace	--- 2B3, 3	--- YES	--- NO	--- YES
	CARWAY	Yes	depression, interdune, paleoterrace	3, 2B3	YES	NO	YES
	TAVER	No	paleoterrace	---	---	---	---
3533: SHELLABARGER SANDY LOAM, 0 TO 1 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	NALIM Unnamed Wet Soils	No Yes	paleoterrace depression	--- 2A, 2B3, 3	--- YES	--- NO	--- YES
3534: SHELLABARGER SANDY LOAM, 1 TO 3 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	ALBION Unnamed Wet Soils	No Yes	paleoterrace drainageway	--- 2A, 2B3	--- YES	--- NO	--- NO

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 5 of 9

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3540: SOLVAY LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	HAYES	No	dune, paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
3639: TAVER LOAM, 0 TO 1 PERCENT SLOPES	TAVER	No	paleoterrace	---	---	---	---
	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
3640: TIVIN FINE SAND, 10 TO 30 PERCENT SLOPES	TIVIN	No	dune, paleoterrace	---	---	---	---
	LANGDON	No	dune, paleoterrace	---	---	---	---
	PLEV	Yes	depression, interdune, paleoterrace	2B2	YES	NO	NO
3644: TURON-CARWAY COMPLEX, 0 TO 5 PERCENT SLOPES	TURON	No	dune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
3926: WATER	WATER	Yes	---	3,4	NO	YES	YES
4005: YAGGY-SAXMAN LOAMY SAND, 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED	YAGGY	No	flood plain	---	---	---	---
	SAXMAN	No	flood plain	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	KANZA NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
Ab: ALBION SANDY LOAM, 1 TO 4 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	drainageway	2A,2B3	YES	NO	NO
Ao: ALBION SANDY LOAM, 3 TO 7 PERCENT SLOPES, ERODED	ALBION	No	paleoterrace	---	---	---	---
As: ALBION AND SHELLABARGER SOILS, 7 TO 15 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	SHELLABARGER	No	paleoterrace	---	---	---	---
Bc: BLANKET SILTY CLAY LOAM, 1 TO 4 PERCENT SLOPES, ERODED	BLANKET	No	paleoterrace	---	---	---	---
Be: BLANKET SILT LOAM, 0 TO 1 PERCENT SLOPES	BLANKET	No	paleoterrace	---	---	---	---
Bh: BLANKET SILT LOAM, 1 TO 3 PERCENT SLOPES	BLANKET	No	paleoterrace	---	---	---	---
Br: FLUVENTS, FREQUENTLY FLOODED	FLUVENTS	No	flood plain	---	---	---	---
Ca: CARWILE FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	CARWILE	Yes	depression, paleoterrace	2A,3	YES	NO	YES
	Unnamed wet soils	Yes	depression	2A,2B3,3	YES	NO	YES



HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 6 of 9

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
Cc: CASE-CLARK COMPLEX, 3 TO 7 PERCENT SLOPES	CASE	No	paleoterrace	---	---	---	---
	CLARK	No	paleoterrace	---	---	---	---
Ck: CASE-CLARK COMPLEX, 7 TO 15 PERCENT SLOPES	CASE	No	paleoterrace	---	---	---	---
	CLARK	No	paleoterrace	---	---	---	---
Cm: CLARK CLAY LOAM, 1 TO 4 PERCENT SLOPES	CLARK	No	paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	drainageway	2A,3,4	YES	YES	YES
Cn: CLARK FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	CLARK	No	paleoterrace	---	---	---	---
Co: CLARK-OST CLAY LOAMS, 0 TO 1 PERCENT SLOPES	CLARK	No	paleoterrace	---	---	---	---
	OST	No	paleoterrace	---	---	---	---
Cs: LINCOLN LOAMY SAND, OCCASIONALLY FLOODED	LINCOLN	No	flood plain	---	---	---	---
	Unnamed wet soils	Yes	drainageway	2A,2B2,2B3	YES	NO	NO
Fa: FARNUM CLAY LOAM, 3 TO 6 PERCENT SLOPES, ERODED	FARNUM	No	paleoterrace	---	---	---	---
Fe: FARNUM FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
	CARWILE	Yes	depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	2A,3	YES	NO	YES
Fm: FARNUM LOAM, 0 TO 1 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	depression	2A,3,2B3	YES	NO	YES
Fn: FARNUM LOAM, 1 TO 3 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	depression	3,2B3	YES	NO	YES
Fu: FARNUM LOAM, 3 TO 6 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
Fw: FARNUM-CARWILE COMPLEX, 0 TO 1 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
	CARWILE	Yes	depression, paleoterrace	3,2A	YES	NO	YES
GRP: GRAVEL PIT	PITS	Unranked	---	---	---	---	---
INT: AQUOLLS	AQUOLLS	Yes	depression, terrace	2B3,3	YES	NO	YES
Kp: KANZA-PLEVNA COMPLEX, FREQUENTLY FLOODED	KANZA	Yes	flood plain	2B3	YES	NO	NO
	PLEVNA	Yes	flood plain	2B3,4	YES	YES	NO
Ks: ELANDCO SILT LOAM, OCCASIONALLY FLOODED	ELANDCO	No	flood plain	---	---	---	---
Kw: ELANDCO SILT LOAM, FREQUENTLY FLOODED	ELANDCO	No	flood plain	---	---	---	---
Nd: NARON FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	NARON	No	dune, paleoterrace	---	---	---	---
Nf: NARON FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	NARON	No	dune, paleoterrace	---	---	---	---
	CARWILE	Yes	depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	3,2B3	YES	NO	YES

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 7 of 9

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
Ng: NARON FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	NARON	No	dune,	---	---	---	---
	CARWILE	Yes	paleoterrace depression, paleoterrace	2A	YES	NO	NO
Nk: NARON LOAM, 0 TO 1 PERCENT SLOPES	NARON	No	dune,	---	---	---	---
	CARWILE	Yes	paleoterrace depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	2A, 3, 2B3	YES	NO	YES
Nm: NARON LOAM, 1 TO 3 PERCENT SLOPES	NARON	No	dune,	---	---	---	---
	CARWILE	Yes	paleoterrace depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	drainageway	2B3, 2A, 3, 4	YES	YES	YES
Nn: NARON-FARNUM COMPLEX, 0 TO 3 PERCENT SLOPES	NARON	No	dune,	---	---	---	---
	FARNUM	No	paleoterrace	---	---	---	---
	CARWILE	Yes	depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	2A, 3, 2B3, 4	YES	YES	YES
Oc: OST CLAY LOAM, 0 TO 1 PERCENT SLOPES	OST	No	paleoterrace	---	---	---	---
Os: OST CLAY LOAM, 1 TO 4 PERCENT SLOPES	OST	No	paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	depression	2A, 3, 2B3, 4	YES	YES	YES
Pm: PRATT LOAMY FINE SAND, 3 TO 8 PERCENT SLOPES	PRATT	No	dune,	---	---	---	---
	CARWILE	Yes	paleoterrace depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	2A, 2B3, 3	YES	NO	YES
Pn: PRATT LOAMY FINE SAND, 8 TO 12 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
Po: PRATT-CARWILE COMPLEX, 0 TO 8 PERCENT SLOPES	PRATT	No	dune,	---	---	---	---
	CARWILE	Yes	paleoterrace depression, paleoterrace	2A, 3	YES	NO	YES
	Unnamed wet soils	Yes	depression	3, 2B3	YES	NO	YES
PRR: PRATT LOAMY FINE SAND, 1 TO 5 PERCENT SLOPES	PRATT	No	dune,	---	---	---	---
	CARWILE	Yes	paleoterrace depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	3, 2B3, 2A	YES	NO	YES
PSS: PRATT LOAMY FINE SAND, 5 TO 10 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	CARWILE	Yes	depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	depression	3, 2B2, 2B3, 2A	YES	NO	YES
Pt: PRATT-TIVOLI LOAMY FINE SANDS, 8 TO 15 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	TIVOLI	No	dune, paleoterrace	---	---	---	---
PTT: PRATT-TIVOLI LOAMY FINE SANDS, 5 TO 15 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	TIVOLI	No	dune, paleoterrace	---	---	---	---

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 8 of 9

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
Sa: ALBION-KASKI COMPLEX, 0 TO 15 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	KASKI	No	flood plain	---	---	---	---
Sb: SHELLABARGER FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
Se: SHELLABARGER FINE SANDY LOAM, 1 TO 4 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	drainageway	2A,2B3	YES	NO	NO
Sf: SHELLABARGER FINE SANDY LOAM, 3 TO 7 PERCENT SLOPES, ERODED	SHELLABARGER	No	paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	drainageway	2A,2B3	YES	NO	NO
Ta: TABLER CLAY LOAM, 0 TO 1 PERCENT SLOPES	TABLER	No	paleoterrace	---	---	---	---
	CARWILE	Yes	depression, paleoterrace	2A	YES	NO	NO
	Unnamed wet soils	Yes	drainageway	3,2B3,2A,4	YES	YES	YES
Tf: TIVOLI FINE SAND, 12 TO 25 PERCENT SLOPES	TIVOLI	No	dune, paleoterrace	---	---	---	---
W: WATER	WATER	Unranked	---	---	---	---	---
Wa: WALDECK FINE SANDY LOAM, OCCASIONALLY FLOODED	WALDECK	No	flood plain	---	---	---	---
	PLEVNA	Yes	flood plain	2B3	YES	NO	NO
Wd: KINGMAN CLAY LOAM, OCCASIONALLY FLOODED	KINGMAN	Yes	flood plain	2B2	YES	NO	NO
Ze: ZENDA CLAY LOAM, OCCASIONALLY FLOODED	ZENDA	No	dune, paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	depression	2B3,3,2A	YES	NO	YES
Zs: ZENDA-DRUMMOND COMPLEX, OCCASIONALLY FLOODED	DRUMMOND	No	terrace	---	---	---	---
	ZENDA	No	dune, paleoterrace	---	---	---	---
	Unnamed wet soils	Yes	depression	3,2A,2B3	YES	NO	YES

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Pratt County, Kansas

PAGE 9 of 9

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria

FOOTNOTE: There may be small areas of included soils or miscellaneous areas that are significant to use and management of the soil; yet are too small to delineate on the soil map at the map's original scale. These may be designated as spot symbols and are defined in the published Soil Survey Report or the USDA-NRCS Technical Guide, Part II.

Areas mapped as water or any map unit that contains one of the following conventional symbols is considered a hydric soil map unit: marshes or swamps; wet spots; depressions; streams, lakes and ponds.

1. All Histosols except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:
  - a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
  - b. poorly drained or very poorly drained and have either:
    - (1) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in),  
or for other soils
    - (2) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
    - (3) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
3. Soils that are frequently ponded for long duration or very long duration during the growing season, or
4. Soils that are frequently flooded for long duration or very long duration during the growing season.