

Nontechnical Soil Descriptions  
Riley 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.

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027CS Crete Silt Loam, 1 To 3 Percent Slopes

Crete soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping shoulder, backslope hillslope on upland. The runoff class is high. The parent material consists of silty and clayey loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a very 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 (pe25-34) range site. It is in the nonirrigated land capability classification 2e.

027CX Crete Silty Clay Loam, 3 To 8 Percent Slopes, Eroded

Crete soil makes up 83 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillside on upland. The runoff class is very high. The parent material consists of silty and clayey loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a very 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 (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

027HN Hobbs Silt Loam, Channeled

Hobbs soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on meander belt. The runoff class is low. The parent material consists of fine-silty 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. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Lowland (pe25-34) range site. It is in the nonirrigated land capability classification 5w.

027KS Kipson-Sogn Silty Clay Loams, 5 To 20 Percent Slopes

Kipson soil makes up 70 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep hillslope on upland. The runoff class is high. The parent material consists of loamy residuum weathered from limestone and shale. The soil is 7 to 20 inches deep to bedrock (paralithic). This soil is somewhat excessively drained. The slowest permeability is moderate. It has a low 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 60 percent calcium carbonate. This soil is in the Limy Upland (pe25-34) range site. It is in the nonirrigated land capability classification 6e.

Sogn soil makes up 15 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of loamy residuum weathered from limestone and shale. The soil is 4 to 20 inches deep to bedrock (lithic). This soil is somewhat excessively drained. The slowest permeability is moderate. It has a very low 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 Shallow Limy (pe25-34) range site. It is in the nonirrigated land capability classification 6e.

061BE Benfield-Florence Complex, 5 To 30 Percent Slopes

Benfield soil makes up 42 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to steep backslope hillslope on upland. The runoff class is very high. The parent material consists of clayey pedisidiment derived from limestone and shale over clayey residuum weathered from calcareous shale. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Florence soil makes up 28 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep backslope hillslope on upland. The runoff class is high. The parent material consists of gravelly residuum weathered from cherty limestone. The soil is 40 to 60 inches deep to bedrock (lithic). This soil is well drained. The slowest permeability is moderately slow. It has a low available water capacity and a very 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

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061CF Clime-Sogn Silty Clay Loams, 5 To 20 Percent Slopes

Clime soil makes up 60 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey residuum weathered from shale, calcareous. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 35 percent calcium carbonate. This soil is in the Limy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Sogn soil makes up 20 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately steep hillslope, upland. The runoff class is medium. The parent material consists of loamy residuum weathered from limestone, unspecified. The soil is 4 to 20 inches deep to bedrock (lithic). This soil is somewhat excessively drained. The slowest permeability is moderate. It has a very low 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 Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability classification 6s.

061CR Crete Silty Clay Loam, 0 To 1 Percent Slopes

Crete soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level shoulder, summit ridge on upland. The runoff class is medium. The parent material consists of loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a very 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 (pe25-34) range site. It is in the nonirrigated land capability classification 2s.

061CS Crete Silty Clay Loam, 1 To 4 Percent Slopes

Crete soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping shoulder, backslope hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a very 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 (pe25-34) range site. It is in the nonirrigated land capability classification 2e.

061EU Eudora Silt Loam, Occasionally Flooded

Eudora soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain 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 very high available water capacity and a low 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. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 2w.

061HE Haynie Silt Loam, Frequently Flooded

Haynie soil makes up 55 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is low. The parent material consists of coarse-silty alluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low 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. The soil contains a maximum amount of 30 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 5w.

061KA Kahola Silt Loam, Channeled

Kahola soil makes up 75 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on meander belt. The runoff class is low. The parent material consists of silty 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. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 5w.

061KB Kahola Silt Loam, Occasionally Flooded

Kahola soil makes up 75 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of silty 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 occasionally 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 Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 2w.

NONTECHNICAL SOIL DESCRIPTIONS--Continued  
Riley County, Kansas

061RE Reading Silty Clay Loam, 0 To 2 Percent Slopes

Reading soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of silty 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 rarely 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 (pe30-36) range site. It is in the nonirrigated land capability classification 1.

061TO Tully Silty Clay Loam, 3 To 8 Percent Slopes

Tully soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping footslope hillslope on upland. The runoff class is very high. The parent material consists of clayey colluvium. 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 3e.

117PA Pawnee Clay Loam, 1 To 4 Percent Slopes

Pawnee soil makes up 88 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of clayey drift. This soil is moderately well drained. The slowest permeability is slow. It has a moderate 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 24 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe30-37) range site. It is in the nonirrigated land capability classification 2e.

117PB Pawnee Clay Loam, 4 To 8 Percent Slopes

Pawnee soil makes up 88 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very high. The parent material consists of clayey drift. This soil is moderately well drained. The slowest permeability is slow. It has a moderate 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 24 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe30-37) range site. It is in the nonirrigated land capability classification 3e.

149HS Haynie-Sarpy Complex, Occasionally Flooded

Haynie soil makes up 60 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level flood-plain step on river valley. The runoff class is low. The parent material consists of coarse-silty alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a very high available water capacity and a low 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. The soil contains a maximum amount of 30 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-37) range site. It is in the nonirrigated land capability classification 3w.

Sarpy soil makes up 25 percent of the map unit. This map unit is in the Bluestem Hills 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 sandy alluvium. 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 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 Sandy Lowland (pe30-37) range site. It is in the nonirrigated land capability classification 3w.

149PS Paxico Silt Loam, Frequently Flooded

Paxico soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills 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 loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is very rare flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. It is in the nonirrigated land capability classification 5w.

149SF Sarpy Sand, Frequently Flooded

Sarpy soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills 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 sandy alluvium. 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 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 Sandy Lowland (pe30-37) range site. It is in the nonirrigated land capability classification 4s.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

197CM Clime Silty Clay Loam, 3 To 7 Percent Slopes

Clime soil makes up 85 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping backslope hillslope on upland. The runoff class is high. The parent material consists of silty and clayey residuum weathered from calcareous shale. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 15 percent calcium carbonate. This soil is in the Limy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 4e.

197FL Florence-Labette Complex, 3 To 15 Percent Slopes

Florence soil makes up 40 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep backslope hillslope on upland. The runoff class is high. The parent material consists of clayey residuum weathered from cherty limestone. The soil is 40 to 60 inches deep to bedrock (lithic). This soil is well drained. The slowest permeability is moderately slow. It has a low 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Labette soil makes up 30 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping shoulder ridge on upland. The runoff class is high. The parent material consists of silty and clayey residuum weathered from limestone and shale. The soil is 20 to 40 inches deep to bedrock (lithic). This soil is well drained. The slowest permeability is slow. It has a moderate 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

197IB Irwin Silty Clay Loam, 1 To 3 Percent Slopes

Irwin soil makes up 80 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping shoulder hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey residuum weathered from clayey shale. This soil is moderately well 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 not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Clay Upland (pe30-36) range site. It is in the nonirrigated land capability classification 3e.

197ID Irwin Silty Clay Loam, 3 To 7 Percent Slopes

Irwin soil makes up 85 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping backslope hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey alluvium over clayey residuum weathered from limestone and shale. This soil is moderately well 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 not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 3 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Clay Upland (pe30-36) range site. It is in the nonirrigated land capability classification 4e.

197IV Ivan Silt Loam, Occasionally Flooded

Ivan soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of calcareous fine-silty 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 occasionally 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 10 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 2w.

197IX Ivan Silty Clay Loam, Channeled

Ivan soil makes up 80 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of calcareous fine-silty 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. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 5w.

197PN Pawnee Clay Loam, 3 To 7 Percent Slopes

Pawnee soil makes up 85 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping backslope hillslope on upland. The runoff class is high. The parent material consists of clayey drift. This soil is moderately well drained. The slowest permeability is slow. It has a moderate 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 12 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe30-37) range site. It is in the nonirrigated land capability classification 3e.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

197WE Wamego Silty Clay Loam, 3 To 7 Percent Slopes

Wamego soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping backslope hillslope on upland. The runoff class is high. The parent material consists of sandy and silty residuum weathered from shale, unspecified. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 Clay Upland (pe30-37) range site. It is in the nonirrigated land capability classification 4e.

201CS Crete Silty Clay Loam, 1 To 3 Percent Slopes

Crete soil makes up 95 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland. The runoff class is high. The parent material consists of silty and clayey loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a very 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 (pe26-30) range site. It is in the nonirrigated land capability classification 2e.

201CX Crete Silty Clay Loam, 3 To 7 Percent Slopes, Eroded

Crete, eroded, soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is high. The parent material consists of silty and clayey loess. This soil is moderately well drained. The slowest permeability is impermeable. 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 (pe26-30) range site. It is in the nonirrigated land capability classification 4e.

201KS Kipson-Sogn Complex, 5 To 30 Percent Slopes

Kipson soil makes up 70 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to steep backslope hillslope on upland. The runoff class is medium. The parent material consists of loamy residuum weathered from limestone and shale. The soil is 7 to 20 inches deep to bedrock (paralithic). This soil is somewhat excessively drained. The slowest permeability is moderate. It has a low 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 60 percent calcium carbonate. This soil is in the Limy Upland (pe26-30) range site. It is in the nonirrigated land capability classification 6e.

Sogn soil makes up 15 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep shoulder hillslope on upland. The runoff class is medium. The parent material consists of loamy residuum weathered from limestone. The soil is 4 to 20 inches deep to bedrock (lithic). This soil is somewhat excessively drained. The slowest permeability is moderate. It has a low 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 8 percent calcium carbonate. This soil is in the Shallow Limy (pe26-30) range site. It is in the nonirrigated land capability classification 6e.

201LC Lancaster Loam, 3 To 7 Percent Slopes

Lancaster soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of loamy residuum weathered from sandstone and shale. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a low 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 (pe26-30) range site. It is in the nonirrigated land capability classification 4e.

Ad Ivan Silt Loam, Channeled

Ivan soil makes up 99 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on alluvial plain. 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 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. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Loamy Lowland (pe25-34) range site. It is in the nonirrigated land capability classification 5w.

BE Benfield Silty Clay Loam, 3 To 7 Percent Slopes

Benfield soil makes up 89 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is high. The parent material consists of silty loess over clayey residuum. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

**Bf Benfield-Florence Complex, 5 To 20 Percent Slopes**

Benfield soil makes up 45 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep hillslope on upland. The runoff class is very high. The parent material consists of clayey residuum weathered from limestone and shale. The soil is 22 to 39 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a moderate 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Florence soil makes up 30 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep hillslope on upland. The runoff class is high. The parent material consists of clayey residuum weathered from cherty limestone. The soil is 24 to 39 inches deep to bedrock (lithic). This soil is well drained. The slowest permeability is moderately 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 seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

**Bk Wymore-Kennebec Complex, 0 To 17 Percent Slopes**

Wymore soil makes up 60 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep footslope hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey loess over clayey pedisidiment. This soil is moderately 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 top of the seasonal high water table is at 24 inches. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability classification 6e.

Kennebec soil makes up 45 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on alluvial plain. The runoff class is low. The parent material consists of fine-silty alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a very 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 48 inches. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 1.

**Ca Carr-Sarpy Complex, Occasionally Flooded**

Carr soil makes up 45 percent of the map unit. This map unit is in the Bluestem Hills 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 loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a high available water capacity and a low 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. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 3w.

Sarpy soil makes up 40 percent of the map unit. This map unit is in the Bluestem Hills 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 sandy alluvium. 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 occasionally 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 Sands (pe30-36) range site. It is in the nonirrigated land capability classification 3w.

**Ch Chase Silty Clay Loam, Rarely Flooded**

Chase soil makes up 84 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level terrace on river valley. The runoff class is high. The parent material consists of silty and clayey alluvium. This soil is somewhat poorly drained. The slowest permeability is slow. It has a moderate available water capacity and a very high shrink swell potential. This soil is rarely 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 Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 2w.

**Cs Clime-Sogn Complex, 5 To 20 Percent Slopes**

Clime soil makes up 50 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey residuum weathered from shale, calcareous. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 10 percent calcium carbonate. This soil is in the Limy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Sogn soil makes up 30 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of loamy residuum weathered from limestone, unspecified. The soil is 4 to 20 inches deep to bedrock (lithic). This soil is somewhat excessively drained. The slowest permeability is moderate. It has a very low 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 Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

CT Crete Silty Clay Loam, 3 To 7 Percent Slopes

Crete soil makes up 83 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping backslope hillside on upland. The runoff class is high. The parent material consists of silty and clayey loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a very 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 (pe25-34) range site. It is in the nonirrigated land capability classification 3e.

Dr Dwight-Irwin Complex, 1 To 4 Percent Slopes

Dwight soil makes up 45 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping summit depression on ridge on upland. The runoff class is very high. The parent material consists of silty and clayey residuum weathered from limestone, cherty. The soil is 40 to 60 inches deep to bedrock (lithic). This soil is moderately well drained. The slowest permeability is very slow. It has a low available water capacity and a very 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 contains a slightly saline horizon. This soil is in the Clay Pan (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Irwin soil makes up 40 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping ridge on upland. The runoff class is very high. The parent material consists of clayey pedisidiment derived from limestone and shale. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a very 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 (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Dw Dwight-Irwin Complex, 1 To 4 Percent Slopes, Eroded

Dwight soil makes up 45 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping summit depression on divide on upland. The runoff class is very high. The parent material consists of silty and clayey residuum weathered from limestone, cherty. The soil is 40 to 60 inches deep to bedrock (lithic). This soil is moderately well drained. The slowest permeability is very slow. It has a low available water capacity and a very 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 contains a slightly saline horizon. This soil is in the Clay Pan (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Irwin soil makes up 40 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping summit divide on upland. The runoff class is very high. The parent material consists of clayey pedisidiment derived from limestone and shale. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a very 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 (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Em Elmont Silt Loam, 3 To 8 Percent Slopes

Elmont soil makes up 74 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillside on upland. The runoff class is high. The parent material consists of silty and clayey residuum weathered from shale-siltstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 3e.

En Elmont-Clime Complex, 5 To 15 Percent Slopes

Elmont soil makes up 35 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillside on upland. The runoff class is high. The parent material consists of silty and clayey residuum weathered from shale-siltstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Clime soil makes up 30 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to moderately steep backslope hillside on upland. The runoff class is high. The parent material consists of silty and clayey residuum weathered from shale, calcareous. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 20 percent calcium carbonate. This soil is in the Limy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 6e.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

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Eu Eudora Silt Loam, Rarely Flooded

Eudora soil makes up 88 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain 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 very high available water capacity and a low 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. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 2w.

Ga Geary Silt Loam, 1 To 4 Percent Slopes

Geary soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping backslope hillside on upland. The runoff class is low. The parent material consists of silty loess. 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 (pe30-36) range site. It is in the nonirrigated land capability classification 2e.

Ge Geary Silt Loam, 4 To 8 Percent Slopes

Geary soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillside on upland. The runoff class is medium. The parent material consists of silty loess. 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 (pe30-36) range site. It is in the nonirrigated land capability classification 3e.

Ha Haynie Very Fine Sandy Loam, Occasionally Flooded

Haynie soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills 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 loamy alluvium. This soil is moderately well drained. The slowest permeability is moderately slow. It has a high available water capacity and a low 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. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 1.

HO Hobbs Silt Loam, Occasionally Flooded

Hobbs soil makes up 89 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on alluvial plain. The runoff class is low. The parent material consists of fine-silty 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 occasionally 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 Lowland (pe25-34) range site. It is in the nonirrigated land capability classification 2w.

Ic Irwin Silty Clay Loam, 4 To 8 Percent Slopes

Irwin soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very high. The parent material consists of clayey pediment derived from shale. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is moderately well 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 not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Id Irwin Silty Clay Loam, 4 To 8 Percent Slopes, Eroded

Irwin, eroded, soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very high. The parent material consists of clayey pediment derived from shale. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is moderately well 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 not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Ie Ivan Silty Clay Loam, 1 To 3 Percent Slopes

Ivan soil makes up 88 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping flood plain on valley. The runoff class is low. The parent material consists of calcareous fine-silty colluvium. 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 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 10 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 2e.



NONTECHNICAL SOIL DESCRIPTIONS--Continued  
Riley County, Kansas

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Iv Ivan And Kennebec Silt Loams, Occasionally Flooded

Ivan soil makes up 45 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level flood plain on valley. The runoff class is negligible. The parent material consists of calcareous fine-silty 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 occasionally 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 10 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 2w.

Kennebec soil makes up 45 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level flood plain on valley. The runoff class is low. The parent material consists of fine-silty alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a very 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 48 inches. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 1.

Ka Kahola Silt Loam, Rarely Flooded

Kahola soil makes up 85 percent of the map unit. This map unit is in the Bluestem Hills 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 fine-silty 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 rarely 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 15 percent calcium carbonate. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability classification 1.

Ke Kenesaw Silt Loam, 2 To 6 Percent Slopes

Kenesaw soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping hillslope on upland. The runoff class is low. The parent material consists of coarse-silty loess. This soil is well drained. The slowest permeability is moderate. It has a very 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 3e.

Kf Kenesaw Silt Loam, 6 To 10 Percent Slopes

Kenesaw soil makes up 85 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of coarse-silty loess. This soil is well drained. The slowest permeability is moderate. It has a very 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 4e.

KN Kennebec Silt Loam, Occasionally Flooded

Kennebec soil makes up 95 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of fine-silty alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a very 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 42 inches. This soil is in the Loamy Lowland (pe35-42) range site. It is in the nonirrigated land capability classification 2w.

Ma Mayberry Clay Loam, 2 To 6 Percent Slopes

Mayberry soil makes up 95 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping backslope hillslope on upland. The runoff class is high. The parent material consists of till, unspecified. This soil is moderately well drained. The slowest permeability is slow. It has a moderate available water capacity and a very high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe30-37) range site. It is in the nonirrigated land capability classification 3e.

Mb Mayberry Clay Loam, 2 To 6 Percent Slopes, Eroded

Mayberry soil makes up 95 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping upland on hillslope. The runoff class is high. The parent material consists of clayey till. This soil is moderately well drained. The slowest permeability is slow. It has a moderate available water capacity and a very high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe30-36) range site. It is in the nonirrigated land capability classification 3e.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

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Mu Muir Silt Loam, Rarely Flooded

Muir soil makes up 84 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on alluvial plain. The runoff class is low. The parent material consists of silty 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 rarely 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 2 percent calcium carbonate. This soil is in the Loamy Terrace (pe25-34) range site. It is in the nonirrigated land capability classification 1.

Rd Reading Silt Loam, 0 To 1 Percent Slopes, Rarely Flooded

Reading soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level terrace on river valley. The runoff class is low. The parent material consists of fine-silty 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 rarely 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 (pe30-36) range site. It is in the nonirrigated land capability classification 1.

Re Reading Silt Loam, 1 To 3 Percent Slopes, Rarely Flooded

Reading soil makes up 90 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping alluvial fan on river valley. The runoff class is medium. The parent material consists of fine-silty 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 rarely 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 (pe30-36) range site. It is in the nonirrigated land capability classification 2e.

Sa Sarpy Loamy Fine Sand, 0 To 4 Percent Slopes, Occasionally Flooded

Sarpy soil makes up 98 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level to moderately sloping flood plain on river valley. The runoff class is negligible. The parent material consists of sandy alluvium. 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 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 Sands (pe30-36) range site. It is in the nonirrigated land capability classification 4s.

Sm Smolan Silt Loam, 1 To 4 Percent Slopes

Smolan soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping hillslope on upland. The runoff class is high. The parent material consists of silty and clayey loess. This soil is moderately 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. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 2e.

Sn Smolan Silt Loam, 4 To 8 Percent Slopes

Smolan soil makes up 75 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey loess. This soil is moderately 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. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 3e.

So Smolan Silty Clay Loam, 4 To 8 Percent Slopes, Eroded

Smolan, eroded, soil makes up 80 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey loess. This soil is moderately 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. This soil is in the Clay Upland (pe30-36) range site. It is in the nonirrigated land capability classification 4e.

St Clime Silty Clay Loam, 20 To 40 Percent Slopes, Stony

Clime soil makes up 75 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a steep to steep backslope hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey residuum weathered from shale, calcareous. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is slow. It has a low 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 35 percent calcium carbonate. This soil is in the Limy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 7e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued  
Riley County, Kansas

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Su Sutphen Silty Clay, Occasionally Flooded

Sutphen soil makes up 100 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very high. The parent material consists of clayey 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 occasionally 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 3 percent calcium carbonate. This soil is in the Clay Lowland (pe26-30) range site. It is in the nonirrigated land capability classification 3w.

Ts Tully Silty Clay Loam, 1 To 4 Percent Slopes

Tully soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping footslope hillslope on upland. The runoff class is high. The parent material consists of clayey colluvium. 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 Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability classification 2e.

Tt Tully Silty Clay Loam, 1 To 4 Percent Slopes, Eroded

Tully, eroded, soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping footslope hillslope on upland. The runoff class is high. The parent material consists of clayey colluvium. This soil is well drained. The slowest permeability is slow. It has a moderate 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 (pe25-34) range site. It is in the nonirrigated land capability classification 3e.

Tu Tully Silty Clay Loam, 4 To 8 Percent Slopes

Tully soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping footslope hillslope on upland. The runoff class is very high. The parent material consists of clayey colluvium. This soil is well drained. The slowest permeability is slow. It has a moderate 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 Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability classification 3e.

Tv Tully Silty Clay Loam, 4 To 8 Percent Slopes, Eroded

Tully, eroded, soil makes up 85 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping footslope hillslope on upland. The runoff class is very high. The parent material consists of clayey colluvium. This soil is well drained. The slowest permeability is slow. It has a moderate 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 (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

Wm Wymore Silty Clay Loam, 0 To 1 Percent Slopes

Wymore soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level summit hillslope on upland. The runoff class is medium. The parent material consists of silty and clayey loess over clayey pedisidiment. This soil is moderately 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 top of the seasonal high water table is at 24 inches. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability classification 2s.

Wn Wymore Silty Clay Loam, 1 To 4 Percent Slopes

Wymore soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping backslope, shoulder hillslope on upland. The runoff class is high. The parent material consists of silty and clayey loess over clayey pedisidiment. This soil is moderately 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 top of the seasonal high water table is at 24 inches. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability classification 2e.

Wo Wymore Silty Clay Loam, 1 To 4 Percent Slopes, Eroded

Wymore, eroded, soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping backslope hillslope on upland. The runoff class is high. The parent material consists of silty and clayey loess over clayey pedisidiment. This soil is moderately 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 top of the seasonal high water table is at 24 inches. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability classification 3e.

Nontechnical Soil Descriptions--Continued  
Riley County, Kansas

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Wr Wymore Silty Clay Loam, 4 To 8 Percent Slopes

Wymore soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey loess over clayey pedisidiment. This soil is moderately 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 top of the seasonal high water table is at 24 inches. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability classification 3e.

## Ws Wymore Silty Clay Loam, 4 To 8 Percent Slopes, Eroded

Wymore, eroded, soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is very high. The parent material consists of silty and clayey loess over clayey pedisidiment. This soil is moderately 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 top of the seasonal high water table is at 24 inches. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

