

Nontechnical Soil Descriptions
Butler 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.

017RA Reading Silt Loam, 0 To 1 Percent Slopes, Rarely Flooded

Reading soils make 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 terrace on river valley with a low runoff class. The parent material consists of silty alluvium. It is well drained. The slowest permeability is moderately slow. This soil has a low available water capacity and a moderate shrink swell potential. This soil is rare flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability class 1.

017TU Tully Cherty Silty Clay Loam, 5 To 15 Percent Slopes

Tully soils make up 70 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 on upland with a very high runoff class. The parent material consists of clayey colluvium. It is well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 4e.

035LE Labette-Sogn Silty Clay Loams, 2 To 8 Percent Slopes

Labette soils make up 60 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 strongly sloping hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone-shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Sogn soils make up 30 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 strongly sloping hillslope on upland with a low runoff class. The parent material consists of loamy residuum weathered from limestone, unspecified. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability class 7s.

035MA Martin Silty Clay Loam, 1 To 3 Percent Slopes

Martin soils make 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 footslope, backslope hillslope on upland with a high runoff class. The parent material consists of silty and clayey colluvium derived from limestone-shale over silty and clayey residuum weathered from limestone-shale. It is moderately well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 2e.

035MB Martin Silty Clay Loam, 3 To 7 Percent Slopes

Martin soils make 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, footslope hillslope on upland with a high runoff class. The parent material consists of silty and clayey colluvium derived from limestone-shale over silty and clayey residuum weathered from limestone-shale. It is moderately well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 3e.

035SD Sogn Silty Clay Loam, 0 To 10 Percent Slopes

Sogn soils make 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 strongly sloping hillslope on upland with a medium runoff class. The parent material consists of loamy residuum weathered from limestone, unspecified. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability class 7s.

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049CK Clime Stony Silty Clay Loam, 20 To 30 Percent Slopes

Clime soils make up 100 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 steep backslope hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from shale, calcareous. The depth to bedrock is 20 to 40 inches to bedrock (paralithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Limy Upland (pe30-36) range site. It is in the nonirrigated land capability class 7e.

049FM Florence-Martin Complex, 2 To 12 Percent Slopes

Florence soils make up 60 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 strongly sloping backslope, summit hillslope on upland with a high runoff class. The parent material consists of limestone, cherty. The depth to bedrock is 40 to 60 inches to bedrock (lithic). It is well drained. The slowest permeability is moderately slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Martin soils make up 30 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 strongly sloping backslope hillslope on upland with a very high runoff class. The parent material consists of silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale. It is well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 4e.

073LS Labette-Sogn Silty Clay Loams, 0 To 8 Percent Slopes

Labette soils make up 50 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 strongly sloping hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone and shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Sogn soils make up 35 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 strongly sloping hillslope on upland with a low runoff class. The parent material consists of loamy residuum weathered from limestone. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability class 7s.

073MB Martin Silty Clay Loam, 4 To 7 Percent Slopes

Martin soils make 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 with a very high runoff class. The parent material consists of silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale. It is moderately well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 3e.

079DE Detroit Silty Clay Loam, Rarely Flooded

Detroit soils make 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 river valley, flood plain with a negligible runoff class. The parent material consists of alluvium. It is moderately well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is rare flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Terrace (pe25-34) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability class 1.

079GC Geary Silt Loam, 0 To 1 Percent Slopes

Geary soils make 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 hillslope, upland with a negligible runoff class. The parent material consists of loess. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability class 1.

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079GD Geary Silt Loam, 1 To 3 Percent Slopes

Geary soils make 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 gently sloping upland, hillslope with a low runoff class. The parent material consists of loess. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability class 2e.

079GE Geary Silt Loam, 3 To 6 Percent Slopes

Geary soils make 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 gently sloping to moderately sloping hillslope, upland with a low runoff class. The parent material consists of loess. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability class 3e.

079HO Hobbs Silt Loam, Occasionally Flooded

Hobbs soils make 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 flood plain with a negligible runoff class. The parent material consists of alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The water table depth is greater than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe25-34) range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability class 2w.

115CH Chase Silty Clay Loam, Occasionally Flooded

Chase soils make up 95 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 with a medium runoff class. The parent material consists of silty and clayey alluvium. It is somewhat poorly drained. The slowest permeability is slow. This soil has a low available water capacity and a high 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 does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability class 2w.

115CS Clime-Sogn Silty Clay Loams, 3 To 20 Percent Slopes

Clime soils make up 65 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 on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from calcareous shale. The depth to bedrock is 20 to 40 inches to bedrock (paralithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Limy Upland (pe25-34) range site. It is in the nonirrigated land capability class 6e.

Sogn soils make 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 on upland with a medium runoff class. The parent material consists of loamy residuum weathered from limestone. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe25-34) range site. It is in the nonirrigated land capability class 6s.

115LG Labette-Sogn Silty Clay Loams, 2 To 15 Percent Slopes

Labette soils make up 65 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 strongly sloping hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone and shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 6e.

Sogn soils make up 25 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 on upland with a medium runoff class. The parent material consists of loamy residuum weathered from limestone. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe25-34) range site. It is in the nonirrigated land capability class 6s.

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115VC Verdigris Silt Loam, Channeled

Verdigris soils make up 88 percent of the map unit. This map unit is in the Central Loess Plains Bluestem Hills Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley with a low runoff class. The parent material consists of silty alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is frequently flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe35-42) range site. It is in the nonirrigated land capability class 5w.

115WB Wells Loam, 1 To 3 Percent Slopes

Wells soils make up 90 percent of the map unit. This map unit is in the Central Loess Plains Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland with a low runoff class. The parent material consists of fine-loamy residuum weathered from sandstone. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 2e.

173EA Elandco Silt Loam, Rarely Flooded

Elandco soils make 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 flood plain on river valley with a negligible runoff class. The parent material consists of alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is rare flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a sodium problem. This soil is in the Loamy Terrace (pe24-32) range site. It is in the nonirrigated land capability class 1.

173EC Elandco Silt Loam, Frequently Flooded

Elandco soils make 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 flood plain on river valley with a negligible runoff class. The parent material consists of alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is frequently flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe24-32) range site. It is in the nonirrigated land capability class 5w.

173VC Vanoss Silt Loam, 3 To 6 Percent Slopes

Vanoss soils make 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 gently sloping to moderately sloping paleoterrace on river valley with a low runoff class. The parent material consists of alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability class 3e.

Be Benfield-Labette Cherty Silty Clay Loams, 2 To 12 Percent Slopes

Benfield soils make up 60 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 strongly sloping backslope hillslope on upland with a very high runoff class. The parent material consists of calcareous clayey shale. The depth to bedrock is 20 to 40 inches to bedrock (paralithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Labette soils make 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 strongly sloping shoulder, summit hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone-shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class .

Br Brewer Silty Clay Loam, Rarely Flooded

Brewer soils make 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 flood plain on river valley with a medium runoff class. The parent material consists of clayey alluvium. It is moderately well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is rare flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Terrace (pe25-34) range site. It is in the nonirrigated land capability class 1.

Nontechnical Soil Descriptions--Continued
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Cs Clime-Sogn Complex, 3 To 15 Percent Slopes

Clime soils make up 67 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 backslope hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from shale, calcareous. The depth to bedrock is 20 to 40 inches to bedrock (paralithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Limy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Sogn soils make up 30 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 summit hillslope on upland with a medium runoff class. The parent material consists of loamy residuum weathered from limestone, unspecified. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability class .

Dt Dwight Silt Loam, 0 To 2 Percent Slopes

Dwight soils make 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 summit divide on hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from limestone, cherty. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is moderately well drained. The slowest permeability is very slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil contains a very slightly saline horizon. This soil has a horizon that is moderately sodic. This soil is in the Clay Pan (pe30-36) range site. It is in the nonirrigated land capability class 4s.

Dw Dwight Soils, 1 To 2 Percent Slopes, Eroded

Dwight, eroded, soils make up 85 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from limestone, cherty. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is moderately well drained. The slowest permeability is very slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil contains a very slightly saline horizon. This soil has a horizon that is moderately sodic. This soil is in the Clay Pan (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Fc Florence Cherty Silt Loam, 5 To 10 Percent Slopes

Florence soils make up 85 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 strongly sloping backslope hillslope on upland with a high runoff class. The parent material consists of clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone. The depth to bedrock is 40 to 60 inches to bedrock (lithic). It is well drained. The slowest permeability is moderately slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

FLL Florence-Labette Complex, 2 To 12 Percent Slopes

Florence soils make up 60 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 strongly sloping hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from cherty limestone. The depth to bedrock is 40 to 60 inches to bedrock (lithic). It is well drained. The slowest permeability is moderately slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Labette soils make up 25 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 strongly sloping hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from limestone and shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 4e.

Go Goessel Silty Clay, 0 To 1 Percent Slopes

Goessel soils make 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 nearly level summit divide on upland with a high runoff class. The parent material consists of old clayey alluvium. It is moderately well drained. The slowest permeability is very slow. This soil has a 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 30 inches. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 2s.

Nontechnical Soil Descriptions--Continued
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Gs Goessel Silty Clay, 1 To 3 Percent Slopes

Goessel soils make 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 shoulder hillslope on upland with a very high runoff class. The parent material consists of old clayey alluvium. It is moderately well drained. The slowest permeability is very slow. This soil has a 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 30 inches. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 3e.

Ic Irwin Silty Clay Loam, 0 To 1 Percent Slopes

Irwin soils make 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 summit hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from shale, clayey. It is moderately well drained. The slowest permeability is very slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 2s.

Id Irwin Silty Clay Loam, 1 To 3 Percent Slopes

Irwin soils make 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 shoulder hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from clayey shale. It is moderately well drained. The slowest permeability is very slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 3e.

Ie Irwin Silty Clay Loam, 3 To 5 Percent Slopes

Irwin soils make 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 backslope hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from shale, clayey. It is moderately well drained. The slowest permeability is very slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 4e.

If Irwin Silty Clay Loam, 2 To 5 Percent Slopes, Eroded

Irwin, eroded, soils make 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 backslope hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from shale, clayey. It is moderately well drained. The slowest permeability is very slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 4e.

INT Aquolls

Aquolls soils make up 100 percent of the map unit. This map unit is in the This soil occurs on a nearly level depression on terrace on river valley with a negligible runoff class. The parent material consists of alluvium. It is very poorly drained. This soil 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 class 5w.

IVC Ivan Silt Loam, Channeled

Ivan soils make 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 channel on flood plain on river valley with a negligible runoff class. The parent material consists of silty alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is frequently flooded and is not ponded. The water table depth is greater than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability class 5w.

IVF Ivan Silt Loam, Occasionally Flooded

Ivan soils make 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 with a negligible runoff class. The parent material consists of silty alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The water table depth is greater than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability class 2w.

Nontechnical Soil Descriptions--Continued
Butler County, Kansas

La Labette Silty Clay Loam, 1 To 3 Percent Slopes

Labette soils make 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 hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone-shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 2e.

Lb Labette Silty Clay Loam, 1 To 3 Percent Slopes, Eroded

Labette, eroded, soils make up 85 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone-shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 3e.

Lc Labette Silty Clay Loam, 3 To 5 Percent Slopes

Labette soils make 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 with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone-shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 3e.

Ld Labette-Dwight Complex, 1 To 3 Percent Slopes

Labette soils make up 50 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone-shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 3e.

Dwight soils make up 40 percent of the map unit. This map unit is in the Bluestem Hills Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland with a very high runoff class. The parent material consists of silty and clayey residuum weathered from limestone, cherty. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is moderately well drained. The slowest permeability is very slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil contains a very slightly saline horizon. This soil has a horizon that is moderately sodic. This soil is in the Clay Pan (pe30-36) range site. It is in the nonirrigated land capability class .

Le Labette-Sogn Complex, 2 To 8 Percent Slopes

Labette soils make up 50 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 strongly sloping hillslope on upland with a high runoff class. The parent material consists of silty and clayey residuum weathered from limestone-shale. The depth to bedrock is 20 to 40 inches to bedrock (lithic). It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Sogn soils make up 45 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 strongly sloping upland, hillslope with a low runoff class. The parent material consists of loamy residuum weathered from limestone, unconsolidated. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability class .

Ls Ladysmith Silty Clay Loam, 0 To 2 Percent Slopes

Ladysmith soils make 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 paleoterrace on upland with a high runoff class. The parent material consists of clayey alluvium. It is somewhat poorly drained. The slowest permeability is very slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 3e.

Nontechnical Soil Descriptions--Continued
Butler County, Kansas

No Norge Silt Loam, 0 To 1 Percent Slopes

Norge soils make 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 summit hillslope on upland with a low runoff class. The parent material consists of fine-silty alluvium and/or fine-silty loess. It is well drained. The slowest permeability is moderately slow. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 1.

Nr Norge Silt Loam, 1 To 3 Percent Slopes

Norge soils make 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 hillslope on upland with a medium runoff class. The parent material consists of fine-silty alluvium and/or fine-silty loess. It is well drained. The slowest permeability is moderately slow. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 2e.

Ns Norge Silt Loam, 3 To 5 Percent Slopes

Norge soils make 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 hillslope on upland with a medium runoff class. The parent material consists of fine-silty alluvium and/or fine-silty loess. It is well drained. The slowest permeability is moderately slow. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 3e.

Nt Norge Silty Clay Loam, 3 To 5 Percent Slopes, Eroded

Norge, eroded, soils make 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 hillslope on upland with a medium runoff class. The parent material consists of fine-silty alluvium and/or fine-silty loess. It is well drained. The slowest permeability is moderately slow. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 3e.

On Olpe-Norge Complex, 2 To 7 Percent Slopes

Olpe soils make up 50 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 paleoterrace on upland with a very high runoff class. The parent material consists of clayey alluvium. It is well drained. The slowest permeability is slow. This soil has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 6e.

Norge soils make up 30 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 terrace on upland with a medium runoff class. The parent material consists of fine-silty alluvium and/or fine-silty loess. It is well drained. The slowest permeability is moderately slow. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 4e.

Os Osage Silty Clay, Occasionally Flooded

Osage soils make 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 with a high runoff class. The parent material consists of clayey alluvium. It is poorly drained. The slowest permeability is very slow. This soil has a very low available water capacity and a very high shrink swell potential. This soil is occasionally flooded and is occasional ponded. The top of the seasonal high water table is at 6 inches. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Lowland (pe25-34) range site. It is in the nonirrigated land capability class 3w.

Ro Rosehill Silty Clay, 1 To 3 Percent Slopes

Rosehill soils make 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 backslope hillslope on upland with a very high runoff class. The parent material consists of clayey residuum weathered from clayey shale. The depth to bedrock is 20 to 40 inches to bedrock (paralithic). It is well drained. The slowest permeability is very slow. This soil has a very low available water capacity and a very high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability class 3e.

Nontechnical Soil Descriptions--Continued
Butler County, Kansas

So Sogn Soils, 0 To 8 Percent Slopes

Sogn soils make 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 strongly sloping hillslope on upland with a low runoff class. The parent material consists of loamy residuum weathered from limestone, unspecified. The depth to bedrock is 4 to 20 inches to bedrock (lithic). It is somewhat excessively drained. The slowest permeability is moderate. This soil has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Shallow Limy (pe30-36) range site. It is in the nonirrigated land capability class 7s.

Ts Tully Silty Clay Loam, 1 To 4 Percent Slopes

Tully soils make 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 with a high runoff class. The parent material consists of clayey colluvium. It is well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 2e.

Tt Tully Silty Clay Loam, 3 To 6 Percent Slopes, Eroded

Tully, eroded, soils make up 85 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 with a high runoff class. The parent material consists of clayey colluvium. It is well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 4e.

Tu Tully Silty Clay Loam, 4 To 7 Percent Slopes

Tully soils make 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 with a very high runoff class. The parent material consists of clayey colluvium. It is well drained. The slowest permeability is slow. This soil has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil is in the Loamy Upland (pe30-36) range site. It is in the nonirrigated land capability class 3e.

Va Vanoss Silt Loam, 0 To 1 Percent Slopes

Vanoss soils make 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 hillslope on upland with a negligible runoff class. The parent material consists of silty alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 1.

Vb Vanoss Silt Loam, 1 To 3 Percent Slopes

Vanoss soils make 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 hillslope on upland with a low runoff class. The parent material consists of silty alluvium. It is well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability class 2e.

Vd Verdigris Silt Loam, Occasionally Flooded

Verdigris soils make up 90 percent of the map unit. This map unit is in the Bluestem Hills Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley with a low runoff class. The parent material consists of silty alluvium. It is moderately well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability class 2w.

Ve Verdigris Soils, Frequently Flooded

Verdigris soils make up 85 percent of the map unit. This map unit is in the Bluestem Hills Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley with a low runoff class. The parent material consists of silty alluvium. It is moderately well drained. The slowest permeability is moderate. This soil has a low available water capacity and a moderate shrink swell potential. This soil is frequently flooded and is not ponded. The water table depth is greater than 6 feet. This soil does not have a salinity problem. This soil does not have a sodium problem. This soil is in the Loamy Lowland (pe30-36) range site. It is in the nonirrigated land capability class 5w.

