

041CE—Crete silty clay loam, 0 to 1 percent slopes

Map Unit Composition

Crete: 90 percent

Component Descriptions

Crete

MLRA: 75 - Central Loess Plains

Landform: Ridge on upland

Hillslope position: Summit, shoulder

Parent material: Silty and clayey loess

Slope: 0 to 1 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 10.3 inches)

Shrink-swell potential: Very high (About 9.5 LEP)

Flooding hazard: None

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Ecological site: Clay Upland (pe25-34)

Land capability (nonirrigated): 2s

Typical Profile:

Ap—0 to 6 inches; silty clay loam

BA—6 to 14 inches; silty clay loam

Bt—14 to 30 inches; silty clay

Btk—30 to 42 inches; silty clay loam

BC—42 to 60 inches; silty clay loam

Available water capacity: High (About 11.3 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Clay Upland (pe25-34)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; silty clay loam

H2—8 to 11 inches; silty clay loam

H3—11 to 30 inches; silty clay

H4—30 to 60 inches; silty clay loam

041HA—Hobbs silt loam, occasionally flooded

Map Unit Composition

Hobbs: 100 percent

Component Descriptions

Hobbs

MLRA: 75 - Central Loess Plains

Landform: Flood plain on valley

Parent material: Fine-silty alluvium

Slope: 0 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 11.7 inches)

Shrink-swell potential: Moderate (About 3.0 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Loamy Lowland (pe25-34)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 8 inches; silt loam

H2—8 to 46 inches; stratified silt loam

H3—46 to 60 inches; silt loam

041CG—Crete silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Crete: 100 percent

Component Descriptions

Crete

MLRA: 75 - Central Loess Plains

Landform: Hillslope on upland

Parent material: Silty and clayey loess

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Minor Components

Unnamed Hydric Soils

Slope: 0 to 2 percent

Drainage class: Poorly drained

Unnamed Hydric Soil*Slope:* 0 to 2 percent*Drainage class:* Poorly drained*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Ecological site:* Shallow Sandstone (pe25-34)*Land capability (nonirrigated):* 6e**041LA—Lancaster-Hedville loams,
3 to 15 percent slopes***Typical Profile:*

H1—0 to 16 inches; loam

R—16 to 16 inches; unweathered bedrock

Map Unit Composition

Lancaster: 70 percent

Hedville: 30 percent

Component Descriptions**Lancaster***MLRA:* 74 - Central Kansas Sandstone Hills*Landform:* Hillslope on upland*Parent material:* Loamy residuum weathered from sandstone and shale*Slope:* 3 to 12 percent*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 6.4 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Ecological site:* Loamy Upland (pe25-34)*Land capability (nonirrigated):* 6e*Typical Profile:*

H1—0 to 11 inches; loam

H2—11 to 24 inches; clay loam

H3—24 to 36 inches; sandy clay loam

Cr—36 to 36 inches; weathered bedrock

Hedville*MLRA:* 74 - Central Kansas Sandstone Hills*Landform:* Hillslope on upland*Hillslope position:* Backslope*Parent material:* Loamy residuum weathered from sandstone and shale*Slope:* 7 to 15 percent*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Low (About 3.1 inches)**041MA—McCook silt loam,
occasionally flooded****Map Unit Composition**

McCook: 100 percent

Component Descriptions**McCook***MLRA:* 74 - Central Kansas Sandstone Hills*Slope:* 0 to 2 percent*Drainage class:* Somewhat excessively drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* High (About 11.7 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* Occasional*Depth to seasonal water saturation:* More than 6 feet*Ecological site:* Loamy Lowland (pe25-34)*Land capability (nonirrigated):* 2w*Typical Profile:*

H1—0 to 17 inches; silt loam

H2—17 to 60 inches; very fine sandy loam

Minor Components**Solomon****041MB—Muir silt loam, rarely
flooded****Map Unit Composition**

Muir: 80 percent

Component Descriptions

Muir

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Flood plain on alluvial plain

Slope: 0 to 2 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Ecological site: Loamy Terrace (pe25-34)

Land capability (nonirrigated): 1

Typical Profile:

Ap—0 to 4 inches; silt loam

A—4 to 16 inches; silt loam

Bw1—16 to 24 inches; silt loam

Bw2—24 to 44 inches; silt loam

C—44 to 60 inches; silt loam

Minor Components

Unnamed Hydric Soil (ponding)

Slope: 0 to 1 percent

Drainage class: Poorly drained

113BR—Bridgeport silt loam, rarely flooded

Map Unit Composition

Bridgeport: 100 percent

Component Descriptions

Bridgeport

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Flood plain on alluvial plain

Parent material: Silty alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 13.0 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Loamy Terrace (pe26-30)

Land capability (irrigated): 1

Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 14 inches; silt loam

H2—14 to 60 inches; silt loam

113CM—Clime silty clay, 3 to 6 percent slopes

Map Unit Composition

Clime: 100 percent

Component Descriptions

Clime

MLRA: 75 - Central Loess Plains

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from shale, calcareous

Slope: 3 to 6 percent

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Low (About 3.9 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Limy Upland (pe26-30)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 9 inches; silty clay

H2—9 to 27 inches; silty clay

Cr—27 to 27 inches; unweathered bedrock

113CS—Crete silt loam, 1 to 3 percent slopes

Map Unit Composition

Crete: 100 percent

Component Descriptions

Crete

MLRA: 75 - Central Loess Plains

Landform: Hillslope on upland

Parent material: Silty and clayey loess

Slope: 1 to 3 percent

Drainage class: Moderately well drained

Slowest permeability: Impermeable (About 0.00 in/hr)

Available water capacity: High (About 10.9 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Clay Upland (pe25-34)

Land capability (irrigated): 2e

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 6 inches; silt loam

H2—6 to 13 inches; silty clay loam

H3—13 to 43 inches; silty clay

H4—43 to 60 inches; silty clay loam

Minor Components

Unnamed Wet Soils

Phase: Clayey, Drainageway

113LN—Longford silty clay loam, 3 to 6 percent slopes

Map Unit Composition

Longford: 100 percent

Component Descriptions

Longford

MLRA: 75 - Central Loess Plains

Landform: Hillslope on upland

Parent material: Silty alluvium or loess

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 11.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Loamy Upland (pe26-30)

Land capability (irrigated): 3e

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 15 inches; silty clay loam

H2—15 to 29 inches; silty clay

H4—29 to 47 inches; silty clay loam

H3—47 to 60 inches; silty clay loam

Minor Components

Unnamed Wet Soils

Phase: Clayey, Drainageway

113LO—Longford silty clay loam, 2 to 6 percent slopes, eroded

Map Unit Composition

Longford: 100 percent

Component Descriptions

Longford

MLRA: 75 - Central Loess Plains

Landform: Hillslope on upland

Parent material: Silty alluvium or loess

Slope: 2 to 6 percent

Drainage class: Well drained

Slowest permeability: Impermeable (About 0.00 in/hr)

Available water capacity: High (About 10.5 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Loamy Upland (pe26-30)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 6 inches; silty clay loam

H2—6 to 15 inches; silty clay loam

H3—15 to 47 inches; silty clay

H4—47 to 60 inches; silty clay loam

Minor Components

Unnamed Wet Soils

Phase: Clayey, Drainageway

113SM—Smolan silty clay loam, 1 to 3 percent slopes**Map Unit Composition**

Smolan: 90 percent
 Minor components: 10 percent

Component Descriptions**Smolan**

MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Hillslope position: Foothills
Parent material: Silty and clayey loess
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.7 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe25-34)
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 8 inches; silty clay loam
 H2—8 to 15 inches; silty clay loam
 H3—15 to 40 inches; silty clay
 H4—40 to 60 inches; silty clay loam

Minor Components**Norge**

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe24-32)

Labette

Composition: About 5 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

115LM—Ladysmith silty clay loam, 0 to 2 percent slopes**Map Unit Composition**

Ladysmith: 90 percent

Component Descriptions**Ladysmith**

MLRA: 75 - Central Loess Plains
Landform: Ridge on upland
Hillslope position: Summit, shoulder
Parent material: Clayey alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Impermeable (About 0.00 in/hr)
Available water capacity: Moderate (About 8.7 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: About 0 to 0 inches
Runoff class: High
Ecological site: Clay Upland (pe30-36)
Land capability (nonirrigated): 2s

Typical Profile:

A—0 to 7 inches; silty clay loam
 Bt1—7 to 15 inches; silty clay
 Bt2—15 to 30 inches; clay
 BCk—30 to 38 inches; clay
 C—38 to 60 inches; silty clay

143MD—McCook Soils, occasionally flooded**Map Unit Composition**

McCook: 100 percent

Component Descriptions**McCook**

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe26-30)
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 16 inches; silt loam
H2—16 to 60 inches; silt loam

Minor Components
Unnamed Hydric Soils

Unnamed Hydric Soils

**Ba—Bavaria-Detroit complex,
rarely flooded**

Map Unit Composition

Bavaria: 60 percent
Detroit: 40 percent

Component Descriptions

Bavaria

MLRA: 74 - Central Kansas Sandstone Hills
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 8.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Saline Lowland (pe26-30)
Land capability (nonirrigated): 3s

Typical Profile:

H1—0 to 6 inches; silt loam
H2—6 to 13 inches; silty clay loam
H3—13 to 35 inches; silty clay
H4—35 to 45 inches; silty clay loam
H5—45 to 60 inches; silty clay loam

Detroit

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Loamy Terrace (pe26-30)
Land capability (nonirrigated): 3s

Typical Profile:

Ap—0 to 7 inches; silt loam
H2—7 to 38 inches; silty clay
H3—38 to 60 inches; silty clay loam

**Cd—Cass fine sandy loam,
occasionally flooded**

Map Unit Composition

Cass: 89 percent
Minor components: 11 percent

Component Descriptions

Cass

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy Lowland (pe26-30)
Land capability (nonirrigated): 2w

Typical Profile:

A—0 to 7 inches; fine sandy loam
AC—7 to 28 inches; fine sandy loam
C—28 to 60 inches; fine sand

Minor Components**Eudora**

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe25-34)

Muir

Composition: About 3 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Terrace (pe25-34)

Sarpy

Composition: About 2 percent
Slope: 0 to 3 percent
Drainage class: Excessively drained
Ecological site: Sandy Lowland (pe25-34)

Haynie

Composition: About 1 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe25-34)

Ce—Clime silty clay loam, 2 to 6 percent slopes**Map Unit Composition**

Clime: 100 percent

Component Descriptions**Clime**

MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from shale, calcareous
Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Low (About 4.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland (pe25-34)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 8 inches; silty clay loam
H2—8 to 20 inches; silty clay
H3—20 to 28 inches; silty clay
Cr—28 to 28 inches; weathered bedrock

Co—Cozad silt loam, 0 to 2 percent slopes, rarely flooded
Map Unit Composition

Cozad: 100 percent

Component Descriptions**Cozad**

MLRA: 75 - Central Loess Plains
Landform: Terrace on river valley
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Terrace (pe25-34)
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 14 inches; silt loam
H2—14 to 36 inches; silt loam
H3—36 to 60 inches; very fine sandy loam

Cr—Crete silt loam, 0 to 2 percent slopes**Map Unit Composition**

Crete: 100 percent

Component Descriptions**Crete**

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Upland
Parent material: Silty and clayey loess
Slope: 0 to 2 percent
Drainage class: Moderately well drained

Slowest permeability: Impermeable (About 0.00 in/hr)

Available water capacity: High (About 11.4 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Clay Upland (pe26-30)

Land capability (nonirrigated): 2s

Typical Profile:

H1—0 to 7 inches; silt loam

H2—7 to 14 inches; silty clay loam

H3—14 to 34 inches; silty clay

H4—34 to 60 inches; silty clay loam

Minor Components

Unnamed Hydric Soils

Cs—Crete silt loam, 2 to 5 percent slopes

Map Unit Composition

Crete: 100 percent

Component Descriptions

Crete

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Upland

Parent material: Silty and clayey loess

Slope: 2 to 5 percent

Drainage class: Moderately well drained

Slowest permeability: Impermeable (About 0.00 in/hr)

Available water capacity: High (About 11.6 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Clay Upland (pe26-30)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 15 inches; silt loam

H2—15 to 19 inches; silty clay loam

H3—19 to 38 inches; silty clay

H4—38 to 60 inches; silty clay loam

Cx—Crete-Wells complex, 2 to 7 percent slopes

Map Unit Composition

Crete: 60 percent

Wells: 40 percent

Component Descriptions

Crete

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope on upland

Parent material: Silty and clayey loess

Slope: 2 to 7 percent

Drainage class: Moderately well drained

Slowest permeability: Impermeable (About 0.00 in/hr)

Available water capacity: High (About 11.1 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Clay Upland (pe26-30)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; silt loam

H2—10 to 16 inches; silty clay loam

H3—16 to 44 inches; silty clay

H4—44 to 60 inches; silt loam

Wells

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Fine-loamy residuum

Slope: 2 to 7 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.1 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Loamy Upland (pe26-30)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; loam
 H2—13 to 38 inches; clay loam
 H3—38 to 60 inches; loam

De—Detroit silty clay loam, rarely flooded**Map Unit Composition**

Detroit: 100 percent

Component Descriptions**Detroit**

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Flood plain on river valley

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 11.1 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Loamy Terrace (pe26-30)

Land capability (nonirrigated): 1

Typical Profile:

Ap—0 to 16 inches; silty clay loam
 H2—16 to 37 inches; silty clay loam
 H3—37 to 60 inches; silt loam

Minor Components**Unnamed Hydric Soils****Ed—Edalgo clay loam, 3 to 7 percent slopes****Map Unit Composition**

Edalgo: 100 percent

Component Descriptions**Edalgo**

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope on upland

Parent material: Residuum

Slope: 3 to 7 percent

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)

Drainage class: Well drained

Slowest permeability: Impermeable (About 0.00 in/hr)

Available water capacity: Low (About 4.8 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Clay Upland (pe26-30)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 9 inches; clay loam
 H2—9 to 13 inches; clay loam
 H3—13 to 28 inches; silty clay
 Cr—28 to 28 inches; weathered bedrock

Minor Components**Sidehill Seep****Ge—Geary silt loam, 1 to 3 percent slopes****Map Unit Composition**

Geary: 100 percent

Component Descriptions**Geary**

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope, upland

Parent material: Loess

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 11.0 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Loamy Upland (pe25-34)

Land capability (irrigated): 2e

Land capability (nonirrigated): 2e

Typical Profile:

- H1—0 to 7 inches; silt loam
- H2—7 to 32 inches; silty clay loam
- H3—32 to 60 inches; silty clay loam

Gf—Geary silt loam, 3 to 7 percent slopes**Map Unit Composition**

Geary: 100 percent

Component Descriptions**Geary**

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope, upland

Parent material: Loess

Slope: 3 to 7 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 11.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Loamy Upland (pe25-34)

Land capability (irrigated): 3e

Land capability (nonirrigated): 3e

Typical Profile:

- H1—0 to 12 inches; silt loam
- H2—12 to 42 inches; silty clay loam
- H3—42 to 60 inches; clay loam

Ho—Hord silt loam, rarely flooded**Map Unit Composition**

Hord: 100 percent

Component Descriptions**Hord**

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Upland

Parent material: Loess

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.2 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Loamy Terrace (pe26-30)

Land capability (nonirrigated): 1

Typical Profile:

- H1—0 to 18 inches; silt loam
- H2—18 to 43 inches; loam, silty clay loam, silt loam
- H3—43 to 60 inches; silt loam, silty clay loam, very fine sandy loam

Minor Components**Unnamed Hydric Soil****Ir—Irwin silty clay loam, 1 to 3 percent slopes****Map Unit Composition**

Irwin: 90 percent

Minor components: 10 percent

Component Descriptions**Irwin**

MLRA: 75 - Central Loess Plains

Landform: Hillslope on upland

Parent material: Old clayey alluvium

Slope: 1 to 3 percent

Drainage class: Moderately well drained

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

Available water capacity: Moderate (About 8.8 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Clay Upland (pe25-34)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; silty clay loam
 H2—13 to 40 inches; silty clay
 H3—40 to 60 inches; silty clay

Minor Components

Clime

Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe25-34)

Dwight

Composition: About 5 percent
Slope: 0 to 2 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Is—Irwin silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Irwin: 100 percent

Component Descriptions

Irwin

MLRA: 75 - Central Loess Plains
Landform: Paleoterrace on upland
Parent material: Residuum
Slope: 3 to 7 percent
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Clay Upland (pe25-34)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 11 inches; silty clay loam
 H2—11 to 43 inches; clay
 H3—43 to 60 inches; silty clay

Kc—Kipson-Clime complex, 6 to 20 percent slopes

Map Unit Composition

Kipson: 60 percent
 Clime: 40 percent

Component Descriptions

Kipson

MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Calcareous loamy residuum weathered from shale
Slope: 6 to 20 percent
Depth to restrictive feature: 7 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Limy Upland (pe25-34)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; silt loam
 H2—7 to 18 inches; silty clay loam
 Cr—18 to 18 inches; weathered bedrock

Clime

MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from shale, calcareous
Slope: 6 to 20 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Low (About 4.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Limy Upland (pe25-34)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; silty clay loam
 H2—8 to 20 inches; silty clay
 H3—20 to 28 inches; silty clay
 Cr—28 to 28 inches; weathered bedrock

Lf—Lancaster loam, 3 to 7 percent slopes**Map Unit Composition**

Lancaster: 100 percent

Component Descriptions**Lancaster**

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Hillslope on upland
Parent material: Residuum
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 5.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Upland (pe26-30)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 9 inches; loam
 H2—9 to 24 inches; clay loam
 H3—24 to 30 inches; sandy clay loam
 Cr—30 to 30 inches; weathered bedrock

Lh—Lancaster-Hedville complex, 3 to 20 percent slopes**Map Unit Composition**

Lancaster: 60 percent
 Hedville: 40 percent

Component Descriptions**Lancaster**

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Hillslope on upland
Parent material: Residuum
Slope: 3 to 12 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 5.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Loamy Upland (pe26-30)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 9 inches; loam
 H2—9 to 24 inches; clay loam
 H3—24 to 30 inches; sandy clay loam
 Cr—30 to 30 inches; weathered bedrock

Hedville

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loamy residuum weathered from sandstone and shale
Slope: 3 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very low (About 2.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Shallow Sandstone (pe26-30)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; loam
 H2—8 to 17 inches; gravelly loam
 R—17 to 17 inches; unweathered bedrock

Minor Components
Sidehill Seep

Lm—Longford silt loam, 1 to 3 percent slopes

Map Unit Composition

Longford: 100 percent

Component Descriptions

Longford

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope on upland

Parent material: Silty alluvium or loess

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 11.1 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Loamy Upland (pe26-30)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 11 inches; silt loam

H2—11 to 17 inches; silty clay loam

H3—17 to 38 inches; silty clay

H4—38 to 60 inches; silty clay loam

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Loamy Upland (pe26-30)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 11 inches; silt loam

H2—11 to 18 inches; silty clay loam

H3—18 to 39 inches; silty clay loam

H4—39 to 60 inches; clay loam

Minor Components

Crete

Composition: About 5 percent

Slope: 0 to 1 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe26-30)

Wells

Composition: About 5 percent

Slope: 3 to 7 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe25-34)

Hobbs

Composition: About 3 percent

Slope: 0 to 2 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe26-30)

Lancaster

Composition: About 2 percent

Slope: 5 to 12 percent

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)

Drainage class: Well drained

Ecological site: Loamy Upland (pe26-30)

Lo—Longford silt loam, 3 to 7 percent slopes

Map Unit Composition

Longford: 85 percent

Minor components: 15 percent

Component Descriptions

Longford

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope on upland

Parent material: Silty and clayey loess over loamy pedisegment

Slope: 3 to 7 percent

Drainage class: Well drained

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

Available water capacity: High (About 11.1 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

M-W—Miscellaneous Water

Mc—McCook silt loam, rarely flooded

Map Unit Composition

McCook: 100 percent

Component Descriptions

McCook

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Flood plain on river valley

Parent material: Alluvium

Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.6 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Terrace (pe26-30)
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 11 inches; silt loam
H2—11 to 60 inches; silt loam

Ne—New Cambria silty clay, rarely flooded

Map Unit Composition

New Cambria: 100 percent

Component Descriptions

New Cambria

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Stream terrace on river valley
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Impermeable (About 0.00 in/hr)
Available water capacity: Moderate (About 8.6 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Clay Terrace (pe26-30)
Land capability (nonirrigated): 2s

Typical Profile:

H1—0 to 14 inches; silty clay
H2—14 to 40 inches; silty clay
H3—40 to 60 inches; silty clay loam

Minor Components **Solomon**

Ot—Ortello fine sandy loam, 2 to 6 percent slopes

Map Unit Composition

Ortello: 100 percent

Component Descriptions

Ortello

MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Loamy alluvium and/or loamy eolian deposits
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy (pe25-34)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 14 inches; fine sandy loam
H2—14 to 31 inches; fine sandy loam
H3—31 to 60 inches; loamy fine sand

Ov—Orthents, Clayey

Map Unit Composition

Orthents: 100 percent

Component Descriptions

Orthents

MLRA: 74 - Central Kansas Sandstone Hills
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 6.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Typical Profile:

H1—0 to 10 inches; silty clay loam

H2—10 to 40 inches;

H3—40 to 60 inches;

Ro—Roxbury silt loam, rarely flooded

Map Unit Composition

Roxbury: 99 percent

Minor components: 1 percent

Component Descriptions

Roxbury

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Flood plain on river valley

Parent material: Calcareous fine-silty alluvium

Slope: 0 to 2 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.6 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Loamy Terrace (pe26-30)

Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 26 inches; silt loam

H2—26 to 60 inches; silt loam

Minor Components

Unnamed Hydric Soil

Composition: About 1 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Sm—Smolan silt loam, 0 to 2 percent slopes

Map Unit Composition

Smolan: 100 percent

Component Descriptions

Smolan

MLRA: 75 - Central Loess Plains

Landform: Hillslope on upland

Parent material: Loess

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 10.8 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Loamy Upland (pe25-34)

Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 6 inches; silt loam

H2—6 to 18 inches; silty clay loam

H3—18 to 46 inches; silty clay

H4—46 to 60 inches; silty clay loam

So—Solomon silty clay, occasionally flooded

Map Unit Composition

Solomon: 100 percent

Component Descriptions

Solomon

MLRA: 75 - Central Loess Plains

Landform: Flood plain

Parent material: Clayey alluvium

Slope: 0 to 2 percent

Drainage class: Poorly drained

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

Available water capacity: Moderate (About 6.4 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: About 0 to 24 inches

Runoff class: Very high

Ecological site: Clay Lowland (pe25-34)

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 16 inches; silty clay
H2—16 to 60 inches;

St—Sutphen silty clay, occasionally flooded

Map Unit Composition

Sutphen: 100 percent

Component Descriptions

Sutphen

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Flood plain on river valley

Parent material: Clayey alluvium

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

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

Available water capacity: Moderate (About 7.7 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Clay Lowland (pe26-30)

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 8 inches; silty clay

H2—8 to 32 inches; silty clay

H3—32 to 60 inches; silty clay loam

Minor Components

Unnamed Hydric Soils

Unnamed Hydric Soil

To—Tobin silt loam, occasionally flooded

Map Unit Composition

Tobin: 100 percent

Component Descriptions

Tobin

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Flood plain on upland

Parent material: Silty alluvium

Slope: 0 to 2 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.1 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Loamy Lowland (pe26-30)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 20 inches; silt loam

H2—20 to 32 inches; silt loam

H3—32 to 60 inches; silt loam

Minor Components

Unnamed Hydric Soils

Slope: 0 to 2 percent

Drainage class: Poorly drained

Unnamed Hydric Soil

Slope: 0 to 2 percent

Drainage class: Poorly drained

Unnamed Wet Soils

Phase: Loamy, Depression

Unnamed Wet Soils

Phase: Loamy, Drainageway

W—Water

Wr—Wells loam, 1 to 3 percent slopes

Map Unit Composition

Wells: 90 percent

Minor components: 10 percent

Component Descriptions

Wells

MLRA: 74 - Central Kansas Sandstone Hills

Landform: Hillslope on upland

Parent material: Fine-loamy residuum weathered from sandstone

Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.2 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Upland (pe25-34)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 15 inches; loam
 H2—15 to 36 inches; sandy clay loam
 H3—36 to 60 inches; sandy loam

Minor Components

Clime

Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe25-34)

Irwin

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe25-34)

Ws—Wells loam, 3 to 7 percent slopes

Map Unit Composition

Wells: 100 percent

Component Descriptions

Wells

MLRA: 74 - Central Kansas Sandstone Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Fine-loamy residuum
Slope: 3 to 7 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.1 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Upland (pe26-30)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; loam
 H2—10 to 16 inches; clay loam
 H3—16 to 40 inches; clay loam
 H4—40 to 60 inches; clay loam

Minor Components

Unnamed Hydric Soil

Drainage class: Poorly drained