

## 027CT—Crete silty clay loam, 3 to 7 percent slopes

### Map Unit Composition

Crete: 83 percent  
Minor components: 17 percent

### Component Descriptions

#### Crete

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.1 inches)  
*Shrink-swell potential:* Very high (About 9.5 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:

Ap—0 to 7 inches; silty clay loam  
BA—7 to 11 inches; silty clay loam  
Bt—11 to 30 inches; silty clay  
BCk—30 to 40 inches; silty clay loam  
C—40 to 60 inches; silty clay loam

### Minor Components

#### Geary

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

#### Holder

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

#### Benfield

*Composition:* About 3 percent  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

#### Hobbs

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

#### 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)

## 027EU—Eudora loam, occasionally flooded

### Map Unit Composition

Eudora: 85 percent  
Minor components: 16 percent

### Component Descriptions

#### Eudora

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.5 inches)  
*Shrink-swell potential:* Low (About 1.4 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:

Ap—0 to 7 inches; loam  
A—7 to 10 inches; loam  
C1—10 to 28 inches; silt loam  
C2—28 to 60 inches; very fine sandy loam

### Minor Components

#### Cass

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy Lowland (pe26-30)

**Sarpy**

*Composition:* About 5 percent  
*Slope:* 0 to 4 percent  
*Drainage class:* Excessively drained  
*Ecological site:* Sandy Lowland (pe25-34)

**Unnamed Hydric Soil (ponding)**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**027HE—Haynie-Sarpy complex,  
occasionally flooded**  
**Map Unit Composition**

Haynie: 65 percent  
 Sarpy: 34 percent  
 Minor components: 1 percent

**Component Descriptions****Haynie**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.9 inches)  
*Shrink-swell potential:* Low (About 2.6 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):* 5w

*Typical Profile:*

A—0 to 6 inches; silt loam  
 C—6 to 60 inches; very fine sandy loam

**Sarpy**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Sandy alluvium  
*Slope:* 0 to 3 percent  
*Drainage class:* Excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 4.9 inches)  
*Shrink-swell potential:* Low (About 0.0 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible

*Ecological site:* Sandy Lowland (pe25-34)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

A—0 to 6 inches; loamy fine sand  
 C1—6 to 26 inches; loamy fine sand  
 C2—26 to 50 inches; fine sand  
 C3—50 to 60 inches; loamy fine sand

**Minor Components****Unnamed Hydric Soil (ponding)**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**027HN—Hobbs silt loam,  
channeled**  
**Map Unit Composition**

Hobbs: 93 percent  
 Minor components: 7 percent

**Component Descriptions****Hobbs**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on meander belt  
*Parent material:* 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 12.5 inches)  
*Shrink-swell potential:* Moderate (About 3.0 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe25-34)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

Ap—0 to 7 inches; silt loam  
 C—7 to 40 inches; silt loam  
 Ab—40 to 60 inches; silt loam

**Minor Components****Muir**

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

**Unnamed Hydric Soil (ponding)**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**Unnamed Hydric Soil (saturation)**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**089ND—Nibson silt loam, 5 to 25 percent slopes**

**Map Unit Composition**

Nibson: 100 percent

**Component Descriptions**

**Nibson**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Hillslope on upland  
*Parent material:* Residuum  
*Slope:* 5 to 25 percent  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Low (About 4.0 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Limy Upland (pe20-26)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 10 inches; silt loam  
 H2—10 to 19 inches; silty clay loam  
 Cr—19 to 19 inches; weathered bedrock

**123AB—Armo loam, 3 to 7 percent slopes**

**Map Unit Composition**

Armo: 100 percent

**Component Descriptions**

**Armo**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Hillslope on upland  
*Parent material:* Calcareous loamy colluvium derived from limestone  
*Slope:* 3 to 7 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:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Limy Upland (pe20-26)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 16 inches; loam  
 H2—16 to 30 inches; loam  
 H3—30 to 60 inches; gravelly clay loam

**123AC—Armo loam, 7 to 15 percent slopes**

**Map Unit Composition**

Armo: 100 percent

**Component Descriptions**

**Armo**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Hillslope on upland  
*Parent material:* Residuum  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.4 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Limy Upland (pe20-26)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

- H1—0 to 10 inches; loam
- H2—10 to 26 inches; loam
- H3—26 to 35 inches; clay loam
- H4—35 to 60 inches; gravelly clay loam

**123HB—Harney silt loam, 1 to 3 percent slopes**

**Map Unit Composition**

Harney: 100 percent

**Component Descriptions**

**Harney**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Plain on tableland  
*Parent material:* Loess  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 11.2 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe20-26)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

- H1—0 to 12 inches; silt loam
- H2—12 to 36 inches; silty clay loam
- H3—36 to 60 inches; silt loam

**123HE—Harney-Mento silty clay loams, 3 to 7 percent slopes, eroded**

**Map Unit Composition**

Harney: 80 percent  
 Mento: 20 percent

**Component Descriptions**

**Harney**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Plain on tableland  
*Parent material:* Loess  
*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:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe20-26)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

- H1—0 to 10 inches; silty clay loam
- H2—10 to 32 inches; silty clay loam
- H3—32 to 60 inches; silt loam

**Mento**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Upland  
*Parent material:* Loess  
*Slope:* 3 to 5 percent  
*Depth to restrictive feature:* More than 60 inches to bedrock  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 8.7 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:* Clay Upland (pe20-26)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

- H1—0 to 5 inches; silty clay loam
- H2—5 to 21 inches; silty clay loam
- H3—21 to 38 inches; silty clay loam
- H4—38 to 52 inches; silty clay loam
- R—52 to 52 inches; unweathered bedrock

## 123LA—Lancaster-Armo loams, 3 to 7 percent slopes

H1—0 to 10 inches; loam  
 H2—10 to 26 inches; loam  
 H3—26 to 35 inches; clay loam  
 H4—35 to 60 inches; gravelly clay loam

### Map Unit Composition

Lancaster: 70 percent  
 Armo: 30 percent

### Component Descriptions

#### Lancaster

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Parent material:* Residuum  
*Slope:* 3 to 5 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 6.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe26-30)  
*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 8 inches; loam  
 H2—8 to 24 inches; clay loam  
 H3—24 to 36 inches; sandy clay loam  
 Cr—36 to 36 inches; weathered bedrock

#### Armo

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Parent material:* Residuum  
*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:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Limy Upland (pe26-30)  
*Land capability (nonirrigated):* 4e

#### Typical Profile:

## 123NA—New Cambria silty clay, rarely flooded

### Map Unit Composition

New Cambria: 100 percent

### Component Descriptions

#### New Cambria

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Stream terrace on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 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:* Medium  
*Ecological site:* Clay Terrace (pe20-26)  
*Land capability (nonirrigated):* 2s

#### Typical Profile:

H1—0 to 12 inches; silty clay  
 H2—12 to 34 inches; silty clay  
 H3—34 to 60 inches; silty clay

### Minor Components

#### Unnamed Hydric Soils

#### Unnamed Hydric Soils

## 123NC—Nibson Soils, 3 to 30 percent slopes

### Map Unit Composition

Nibson: 100 percent

## Component Descriptions

### Nibson

*MLRA:* 73 - Rolling Plains and Breaks

*Landform:* Hillslope on upland

*Parent material:* Residuum

*Slope:* 3 to 30 percent

*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)

*Drainage class:* Somewhat excessively drained

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

*Available water capacity:* Low (About 3.8 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe20-26)

*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 8 inches; silt loam

H2—8 to 18 inches; silty clay loam

Cr—18 to 18 inches; weathered bedrock

## 123RB—Roxbury silt loam, channeled

### Map Unit Composition

Roxbury: 100 percent

## Component Descriptions

### Roxbury

*MLRA:* 73 - Rolling Plains and Breaks

*Landform:* Flood plain on river valley

*Parent material:* Calcareous fine-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 12.5 inches)

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

*Flooding hazard:* Frequent

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

*Runoff class:* Negligible

*Ecological site:* Loamy Lowland (pe20-26)

*Land capability (nonirrigated):* 5w

#### Typical Profile:

H1—0 to 24 inches; silt loam

H2—24 to 42 inches; silt loam

H3—42 to 60 inches; silt loam

### Minor Components

#### Unnamed Hydric Soils

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

#### Unnamed Hydric Soil

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

## 123RC—Roxbury silt loam, occasionally flooded

### Map Unit Composition

Roxbury: 100 percent

## Component Descriptions

### Roxbury

*MLRA:* 73 - Rolling Plains and Breaks

*Landform:* Flood plain on river valley

*Parent material:* Calcareous fine-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 12.5 inches)

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

*Flooding hazard:* Occasional

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

*Runoff class:* Very low

*Ecological site:* Loamy Lowland (pe20-26)

*Land capability (nonirrigated):* 2w

#### Typical Profile:

H1—0 to 22 inches; silt loam

H2—22 to 60 inches; silt loam

## 123WA—Wakeen silt loam, 3 to 7 percent slopes

### Map Unit Composition

Wakeen: 100 percent

### Component Descriptions

#### Wakeen

*MLRA:* 73 - Rolling Plains and Breaks

*Landform:* Hillslope on upland

*Parent material:* Calcareous fine-silty residuum weathered from limestone

*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 5.9 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe20-26)

*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 10 inches; silt loam

H2—10 to 28 inches; silty clay loam

Cr—28 to 28 inches; weathered bedrock

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

*Drainage class:* Well drained

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

*Available water capacity:* Low (About 5.0 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):* 6e

#### Typical Profile:

H1—0 to 10 inches; loam

H2—10 to 14 inches; silty clay loam

H3—14 to 30 inches; silty clay

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:* 5 to 30 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 1.9 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 16 inches; stony loam

R—16 to 16 inches; unweathered bedrock

## 143EE—Edalgo-Hedville complex, 5 to 30 percent slopes

### Map Unit Composition

Edalgo: 60 percent

Hedville: 40 percent

### Component Descriptions

#### Edalgo

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Upland

*Parent material:* Residuum

*Slope:* 5 to 15 percent

## 143GE—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

*Runoff class:* Medium

*Ecological site:* Shallow Sandstone (pe26-30)

*Land capability (nonirrigated):* 7s

#### *Typical Profile:*

H1—0 to 16 inches; stony loam

R—16 to 16 inches; unweathered bedrock

### Rock outcrop

*MLRA:* 74 - Central Kansas Sandstone Hills

*Slope:* 20 to 30 percent

*Flooding hazard:* None

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

*Land capability (nonirrigated):* 8

## 143HP—Hobbs-Geary silt loams, 0 to 15 percent slopes

## Map Unit Composition

Hobbs: 55 percent

Geary: 45 percent

## 143HE—Hedville-Rock outcrop complex, 5 to 30 percent slopes

## Map Unit Composition

Hedville: 70 percent

Rock outcrop: 30 percent

## Component Descriptions

### Hedville

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Loamy residuum weathered from sandstone and shale

*Slope:* 5 to 30 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 1.9 inches)

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

*Flooding hazard:* None

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

## Component Descriptions

### Hobbs

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Flood plain

*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 12.0 inches)

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

*Flooding hazard:* Frequent

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

*Runoff class:* Low

*Ecological site:* Loamy Lowland (pe26-30)

*Land capability (nonirrigated):* 6e

#### *Typical Profile:*

H1—0 to 8 inches; silt loam

H2—8 to 60 inches; silt loam

### Geary

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Upland

*Parent material:* Loess

*Slope:* 2 to 15 percent

*Drainage class:* Well drained



*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.2 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe26-30)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 10 inches; silt loam  
 H2—10 to 38 inches; silty clay loam  
 H3—38 to 60 inches; silty clay loam

## **143LA—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

## **143RO—Roxbury silt loam, channeled**

### **Map Unit Composition**

Roxbury: 100 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 12.2 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Loamy Lowland (pe26-30)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

H1—0 to 14 inches; silt loam  
 H2—14 to 52 inches; silty clay loam  
 H3—52 to 60 inches; silt loam

#### **Minor Components**

#### **Unnamed Hydric Soils**

#### **Unnamed Hydric Soils**

## **157BK—Geary-Hobbs silt loams, 0 to 30 percent slopes**

### **Map Unit Composition**

Geary: 55 percent  
 Hobbs: 29 percent  
 Minor components: 16 percent

### **Component Descriptions**

#### **Geary**

*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillside on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy loess

*Slope:* 5 to 30 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 11.0 inches)  
*Shrink-swell potential:* Moderate (About 5.6 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe25-34)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

A—0 to 12 inches; silt loam  
 BA—12 to 22 inches; silty clay loam  
 Bt—22 to 36 inches; silty clay loam  
 BC—36 to 48 inches; silty clay loam  
 2C—48 to 60 inches; sandy clay loam

**Hobbs**

*MLRA:* 75 - Central Loess Plains  
*Landform:* Flood plain on valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 12.0 inches)  
*Shrink-swell potential:* Moderate (About 4.7 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe25-34)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

A—0 to 7 inches; silt loam  
 C—7 to 60 inches; silty clay loam

**Minor Components**

**Hastings**

*Composition:* About 15 percent  
*Geomorphic Position:* hillside on upland  
*Slope:* 5 to 30 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

**Unnamed Hydric Soils**

*Composition:* About 1 percent

**157CH—Crete silty clay loam, 3 to 7 percent slopes**

**Map Unit Composition**

Crete: 75 percent  
 Minor components: 25 percent

**Component Descriptions**

**Crete**

*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillside on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.6 inches)  
*Shrink-swell potential:* Very high (About 9.2 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):* 3e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

A—0 to 8 inches; silt loam  
 BA—8 to 14 inches; silty clay loam  
 Bt—14 to 30 inches; silty clay  
 BC—30 to 36 inches; silty clay loam  
 C—36 to 60 inches; silty clay loam

**Minor Components**

**Hastings**

*Composition:* About 20 percent  
*Geomorphic Position:* hillside on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

**Geary**

*Composition:* About 5 percent  
*Geomorphic Position:* hillside on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

## 157ED—Eudora loam, 0 to 2 percent slopes, rarely flooded

### Map Unit Composition

Eudora: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Eudora

*MLRA:* 75 - Central Loess Plains  
*Landform:* Terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.1 inches)  
*Shrink-swell potential:* Low (About 1.4 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:

Ap—0 to 6 inches; loam  
A—6 to 10 inches; loam  
AC—10 to 18 inches; loam  
C—18 to 40 inches; very fine sandy loam  
Ab—40 to 60 inches; silt loam

### Minor Components

#### Muir

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe25-34)

## 157KN—Kenesaw silt loam, 5 to 12 percent slopes, eroded

### Map Unit Composition

Kenesaw: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Kenesaw

*MLRA:* 75 - Central Loess Plains

*Landform:* Hillside on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty loess  
*Slope:* 5 to 12 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 12.5 inches)  
*Shrink-swell potential:* Low (About 2.0 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe25-34)  
*Land capability (nonirrigated):* 4e

#### Typical Profile:

Ap—0 to 7 inches; silt loam  
Bw—7 to 19 inches; silt loam  
C—19 to 60 inches; silt loam

### Minor Components

#### Hastings

*Composition:* About 10 percent  
*Geomorphic Position:* hillside on upland  
*Slope:* 5 to 12 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

## 157SD—Inavale loamy sand, 3 to 12 percent slopes

### Map Unit Composition

Inavale: 100 percent

### Component Descriptions

#### Inavale

*MLRA:* 74 - Central Kansas Sandstone Hills, 75 - Central Loess Plains  
*Landform:* Dune on river valley  
*Parent material:* Sandy alluvium  
*Slope:* 3 to 12 percent  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 4.9 inches)  
*Shrink-swell potential:* Low (About 0.1 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy Lowland (pe20-26)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

A—0 to 7 inches; loamy sand  
C1—7 to 20 inches; loamy sand  
C2—20 to 40 inches; stratified loamy sand  
C3—40 to 60 inches; stratified sand

## **201CG—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)

## **201CS—Crete silty clay loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Crete: 95 percent  
Minor components: 5 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 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:* Clay Upland (pe26-30)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 9 inches; silty clay loam  
H2—9 to 32 inches; silty clay  
H3—32 to 60 inches; silt loam

#### **Minor Components**

##### **Hobbs**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe26-30)

## 201SA—Sarpy loamy fine sand, 0 to 5 percent slopes, rarely flooded

### Map Unit Composition

Sarpy: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Sarpy

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Dune on terrace on river valley  
*Parent material:* Sandy alluvium  
*Slope:* 0 to 4 percent  
*Drainage class:* Excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 4.1 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:* Sands (pe26-30)  
*Land capability (nonirrigated):* 4s

#### Typical Profile:

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

### Minor Components

#### Cass

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Ecological site:* Sandy Lowland (pe25-34)

#### Eudora

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

## Aa—Hobbs silt loam, frequently flooded

### Map Unit Composition

Hobbs: 83 percent  
Minor components: 17 percent

### Component Descriptions

#### Hobbs

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on alluvial plain  
*Parent material:* 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 12.3 inches)  
*Shrink-swell potential:* Moderate (About 3.9 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe26-30)  
*Land capability (nonirrigated):* 5w

#### Typical Profile:

A1—0 to 9 inches; silt loam  
A2—9 to 17 inches; silt loam  
C1—17 to 28 inches; stratified silt loam  
C2—28 to 60 inches; stratified silt loam

### Minor Components

#### Tobin

*Composition:* About 15 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe26-30)

### Unnamed Hydric Soil

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

### Unnamed Hydric Soils

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

## Ah—Saltine silty clay loam, frequently flooded

### Map Unit Composition

Saltine: 98 percent  
Minor components: 2 percent

### Component Descriptions

#### Saltine

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on valley  
*Parent material:* Silty and clayey alluvium

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 11.4 inches)  
*Shrink-swell potential:* Moderate (About 4.7 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* About 24 to 36 inches  
*Runoff class:* Low  
*Ecological site:* Saline Lowland (pe26-30)  
*Land capability (irrigated):* 5w  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

A—0 to 7 inches; silty clay loam  
 Bw1—7 to 16 inches; silty clay loam  
 Bw2—16 to 30 inches; silty clay loam  
 Bw3—30 to 50 inches; silty clay loam  
 C—50 to 63 inches; silty clay loam

**Minor Components**

**Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**Unnamed Hydric Soils**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**Ar—Armo silt loam, 2 to 7 percent slopes**

**Map Unit Composition**

Armo: 75 percent  
 Minor components: 25 percent

**Component Descriptions**

**Armo**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope, footslope  
*Parent material:* Calcareous loamy colluvium derived from limestone  
*Slope:* 2 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 12.0 inches)  
*Shrink-swell potential:* Moderate (About 4.7 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Limy Upland (pe26-30)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 10 inches; silt loam  
 Bw—10 to 18 inches; silty clay loam  
 Bk—18 to 40 inches; silty clay loam  
 C—40 to 60 inches; silt loam

**Minor Components**

**Hastings**

*Composition:* About 15 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Wakeen**

*Composition:* About 10 percent  
*Slope:* 3 to 6 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe26-30)

**Ba—Hastings-Hobbs complex, 0 to 25 percent slopes**

**Map Unit Composition**

Hastings: 58 percent  
 Hobbs: 40 percent  
 Minor components: 2 percent

**Component Descriptions**

**Hastings**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 3 to 25 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 11.5 inches)  
*Shrink-swell potential:* High (About 7.4 LEP)

*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe26-30)  
*Land capability (irrigated):* 6e  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

Ap—0 to 8 inches; silt loam  
 BA—8 to 14 inches; silty clay loam  
 Bt—14 to 36 inches; silty clay loam  
 BC—36 to 42 inches; silty clay loam  
 C—42 to 60 inches; silt loam

**Hobbs**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on alluvial plain  
*Parent material:* 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 12.3 inches)  
*Shrink-swell potential:* Moderate (About 3.9 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe26-30)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

A1—0 to 9 inches; silt loam  
 A2—9 to 17 inches; silt loam  
 C1—17 to 28 inches; stratified silt loam  
 C2—28 to 60 inches; stratified silt loam

**Minor Components**

**Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**Unnamed Hydric Soils**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**Br—Bridgeport silt loam, occasionally flooded**

**Map Unit Composition**

Bridgeport: 98 percent

Minor components: 2 percent

**Component Descriptions**

**Bridgeport**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on alluvial plain  
*Parent material:* Calcareous fine-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 12.8 inches)  
*Shrink-swell potential:* Moderate (About 3.7 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe26-30)  
*Land capability (irrigated):* 2w  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 8 inches; silt loam  
 A—8 to 14 inches; silt loam  
 AC—14 to 22 inches; stratified silt loam  
 C—22 to 60 inches; stratified silt loam

**Minor Components**

**Unnamed Hydric Soils**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

**Ca—Cozad-Cass Soils, occasionally flooded**

**Map Unit Composition**

Cozad: 50 percent  
 Cass: 25 percent  
 Minor components: 25 percent

**Component Descriptions**

**Cozad**

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

*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.5 inches)  
*Shrink-swell potential:* Low (About 2.8 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Silty Lowland - Veg. Zone 3  
*Land capability (irrigated):* 2w  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 8 inches; silt loam  
 A—8 to 15 inches; silt loam  
 AC—15 to 19 inches; silt loam  
 C1—19 to 50 inches; very fine sandy loam  
 C2—50 to 60 inches; stratified fine sand

**Cass**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 6.6 inches)  
*Shrink-swell potential:* Low (About 0.9 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy Lowland - Veg. Zone 3  
*Land capability (irrigated):* 2w  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 7 inches; fine sandy loam  
 A—7 to 13 inches; fine sandy loam  
 C1—13 to 25 inches; sandy loam  
 C2—25 to 39 inches; loamy fine sand  
 C3—39 to 61 inches; sand

**Minor Components**

**McCook**

*Composition:* About 14 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Silty Lowland - Veg. Zone 1

**Munjoy**

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy Lowland - Veg. Zone 3

**Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained

**Cb—Cass fine sandy loam, rarely flooded**

**Map Unit Composition**

Cass: 100 percent

**Component Descriptions**

**Cass**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 6.6 inches)  
*Shrink-swell potential:* Low (About 0.9 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy Lowland - Veg. Zone 3  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 7 inches; fine sandy loam  
 A—7 to 13 inches; fine sandy loam  
 C1—13 to 25 inches; sandy loam  
 C2—25 to 39 inches; loamy fine sand  
 C3—39 to 61 inches; sand

**Cf—Munjoy and Inavale Soils, 1 to 4 percent slopes, frequently flooded**

**Map Unit Composition**

Munjoy: 50 percent  
 Inavale: 49 percent  
 Minor components: 1 percent



### Component Descriptions

#### Munjoy

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 4 percent

*Drainage class:* Well drained

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

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

*Shrink-swell potential:* Low (About 0.9 LEP)

*Flooding hazard:* Frequent

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

*Runoff class:* Very low

*Ecological site:* Sandy Lowland - Veg. Zone 3

*Land capability (nonirrigated):* 7w

#### Typical Profile:

A—0 to 6 inches; sandy loam

C1—6 to 18 inches; sandy loam

C2—18 to 34 inches; stratified sandy loam

C3—34 to 60 inches; sand

#### Inavale

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Flood plain on river valley

*Parent material:* Sandy alluvium

*Slope:* 1 to 4 percent

*Drainage class:* Somewhat excessively drained

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

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

*Shrink-swell potential:* Low (About 0.1 LEP)

*Flooding hazard:* Frequent

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

*Runoff class:* Negligible

*Ecological site:* Sandy Lowland (pe20-26)

*Land capability (nonirrigated):* 7w

#### Typical Profile:

A—0 to 7 inches; loamy fine sand

C1—7 to 20 inches; loamy fine sand

C2—20 to 40 inches; stratified loamy sand

C3—40 to 60 inches; stratified sand

#### Minor Components

##### Unnamed Hydric Soil

*Composition:* About 1 percent

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

### CLP—clay Pits

### Cr—Crete silt loam, 0 to 1 percent slopes

#### Map Unit Composition

Crete: 100 percent

### Component Descriptions

#### Crete

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Divide on upland

*Hillslope position:* Summit

*Parent material:* Loess

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

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

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

*Shrink-swell potential:* Very high (About 9.2 LEP)

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Clay Upland (pe25-34)

*Land capability (nonirrigated):* 2s

#### Typical Profile:

Ap—0 to 7 inches; silt loam

BA—7 to 12 inches; silty clay loam

Bt—12 to 36 inches; silty clay

C—36 to 60 inches; silty clay loam

### Cs—Crete silt loam, 1 to 3 percent slopes

#### Map Unit Composition

Crete: 80 percent

Minor components: 20 percent

### Component Descriptions

#### Crete

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Loess

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

*Available water capacity:* High (About 10.1 inches)  
*Shrink-swell potential:* Very high (About 9.2 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe25-34)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 2e

*Typical Profile:*  
 Ap—0 to 8 inches; silt loam  
 BA—8 to 12 inches; silty clay loam  
 Bt—12 to 34 inches; silty clay  
 BC—34 to 40 inches; silty clay loam  
 C—40 to 60 inches; silty clay loam

#### **Minor Components**

##### **Hastings**

*Composition:* About 20 percent  
*Geomorphic Position:* divide on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

### **Ct—Crete silt loam, 3 to 6 percent slopes**

#### **Map Unit Composition**

Crete: 80 percent  
 Minor components: 20 percent

#### **Component Descriptions**

##### **Crete**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loess  
*Slope:* 3 to 6 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.1 inches)  
*Shrink-swell potential:* Very high (About 9.2 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe26-30)  
*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

##### *Typical Profile:*

Ap—0 to 8 inches; silt loam  
 BA—8 to 12 inches; silty clay loam  
 Bt—12 to 34 inches; silty clay  
 BC—34 to 40 inches; silty clay loam  
 C—40 to 60 inches; silty clay loam

#### **Minor Components**

##### **Hastings**

*Composition:* About 20 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

### **Cu—Crete silty clay loam, 2 to 6 percent slopes, eroded**

#### **Map Unit Composition**

Crete: 78 percent  
 Minor components: 22 percent

#### **Component Descriptions**

##### **Crete**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loess  
*Slope:* 2 to 6 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 9.2 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe26-30)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

##### *Typical Profile:*

Ap—0 to 8 inches; silty clay loam  
 Bt—8 to 28 inches; silty clay  
 BC—28 to 34 inches; silty clay loam  
 C—34 to 60 inches; silty clay loam

#### **Minor Components**

##### **Hastings**

*Composition:* About 22 percent

*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 6 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

## **De—Detroit silty clay loam, rarely flooded**

### **Map Unit Composition**

Detroit: 83 percent  
 Minor components: 17 percent

### **Component Descriptions**

#### **Detroit**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Stream terrace 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 11.5 inches)  
*Shrink-swell potential:* High (About 7.7 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Terrace (pe26-30)  
*Land capability (nonirrigated):* 1

#### *Typical Profile:*

Ap—0 to 6 inches; silty clay loam  
 A—6 to 12 inches; silty clay loam  
 Bt—12 to 36 inches; silty clay loam  
 BC—36 to 40 inches; silty clay loam  
 C—40 to 60 inches; silty clay loam

#### **Minor Components**

##### **New Cambria**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Terrace (pe26-30)

##### **Muir**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe25-34)

##### **Unnamed Hydric Soils**

*Composition:* About 2 percent

## **Eu—Eudora silt loam, rarely flooded**

### **Map Unit Composition**

Eudora: 100 percent

### **Component Descriptions**

#### **Eudora**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.9 inches)  
*Shrink-swell potential:* Low (About 1.4 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:*

Ap—0 to 10 inches; silt loam  
 A1—10 to 20 inches; silt loam  
 A2—20 to 30 inches; loam  
 AC—30 to 40 inches; loam  
 C—40 to 60 inches; stratified loam

## **Ge—Geary silt loam, 3 to 7 percent slopes**

### **Map Unit Composition**

Geary: 70 percent  
 Minor components: 30 percent

### **Component Descriptions**

#### **Geary**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.9 inches)  
*Shrink-swell potential:* Moderate (About 5.4 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:*

A—0 to 9 inches; silt loam  
 BA—9 to 15 inches; silt loam  
 Bt—15 to 24 inches; silty clay loam  
 BC—24 to 32 inches; silty clay loam  
 C—32 to 60 inches; clay loam

**Minor Components**

**Hastings**

*Composition:* About 15 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Wells**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Longford**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**GRP—Gravel Pits**

**Gs—Geary silty clay loam, 3 to 7 percent slopes, severely eroded**

**Map Unit Composition**

Geary: 70 percent  
 Minor components: 30 percent

**Component Descriptions**

**Geary**

MLRA: 74 - Central Kansas Sandstone Hills

*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 10.6 inches)  
*Shrink-swell potential:* Moderate (About 5.4 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:*

Ap—0 to 6 inches; silty clay loam  
 Bt—6 to 24 inches; silty clay loam  
 BC—24 to 32 inches; silty clay loam  
 C—32 to 60 inches; clay loam

**Minor Components**

**Hastings**

*Composition:* About 15 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Wells**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Longford**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Hb—Hastings silt loam, 1 to 3 percent slopes**

**Map Unit Composition**

Hastings: 85 percent  
 Minor components: 15 percent

## Component Descriptions

### Hastings

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Divide on upland

*Hillslope position:* Summit

*Parent material:* Silty and clayey loess

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 11.7 inches)

*Shrink-swell potential:* High (About 7.4 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):* 2e

*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 7 inches; silt loam

A—7 to 12 inches; silt loam

BA—12 to 18 inches; silty clay loam

Bt—18 to 38 inches; silty clay loam

BC—38 to 44 inches; silty clay loam

C—44 to 60 inches; silt loam

### Minor Components

#### Crete

*Composition:* About 15 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

*Ecological site:* Clay Upland (pe25-34)

### Hc—Hastings silt loam, 3 to 7 percent slopes

## Map Unit Composition

Hastings: 80 percent

Minor components: 20 percent

## Component Descriptions

### Hastings

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Silty and clayey loess

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 11.5 inches)

*Shrink-swell potential:* High (About 7.4 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe26-30)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 8 inches; silt loam

BA—8 to 14 inches; silty clay loam

Bt—14 to 36 inches; silty clay loam

BC—36 to 42 inches; silty clay loam

C—42 to 60 inches; silt loam

### Minor Components

#### Crete

*Composition:* About 15 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Moderately well drained

*Ecological site:* Clay Upland (pe26-30)

#### Geary

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe25-34)

### Hd—Hastings silty clay loam, 2 to 6 percent slopes, eroded

## Map Unit Composition

Hastings: 85 percent

Minor components: 15 percent

## Component Descriptions

### Hastings

*MLRA:* 74 - Central Kansas Sandstone Hills

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Silty and clayey loess

*Slope:* 2 to 6 percent

*Drainage class:* Well drained

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

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

*Shrink-swell potential:* High (About 7.4 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:*

Ap—0 to 8 inches; silty clay loam  
 Bt—8 to 31 inches; silty clay loam  
 BC—35 to 42 inches; silty clay loam  
 C—42 to 60 inches; silt loam

**Minor Components**

**Crete**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 6 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe26-30)

**Geary**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**He—Hedville stony loam, 5 to 30 percent slopes**

**Map Unit Composition**

Hedville: 75 percent  
 Minor components: 25 percent

**Component Descriptions**

**Hedville**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy residuum  
*Slope:* 5 to 30 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:* Low (About 3.2 inches)  
*Shrink-swell potential:* Low (About 1.6 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium  
*Ecological site:* Shallow Sandstone (pe26-30)  
*Land capability (nonirrigated):* 7e

*Typical Profile:*

A—0 to 16 inches; cobbly loam  
 R—16 to 18 inches; unweathered bedrock

**Minor Components**

**Wells**

*Composition:* About 15 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Lancaster**

*Composition:* About 10 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)

**Ho—Hobbs silt loam, occasionally flooded**

**Map Unit Composition**

Hobbs: 73 percent  
 Minor components: 27 percent

**Component Descriptions**

**Hobbs**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on alluvial plain  
*Parent material:* 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 12.3 inches)  
*Shrink-swell potential:* Moderate (About 3.9 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:*  
 A1—0 to 9 inches; silt loam  
 A2—9 to 17 inches; silt loam

C1—17 to 28 inches; stratified silt loam  
C2—28 to 60 inches; stratified silt loam

### Minor Components

#### Tobin

*Composition:* About 15 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe26-30)

#### Muir

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe25-34)

#### Unnamed Hydric Soil (saturation)

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

#### Unnamed Hydric Soil (ponding)

*Composition:* About 1 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained

## Hr—Hord silt loam, rarely flooded

### Map Unit Composition

Hord: 79 percent  
Minor components: 21 percent

### Component Descriptions

#### Hord

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Terrace on river valley  
*Parent material:* Fine-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 12.1 inches)  
*Shrink-swell potential:* Moderate (About 4.7 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:

Ap—0 to 8 inches; silt loam  
A—8 to 18 inches; silt loam

Bw—18 to 34 inches; silty clay loam  
BC—34 to 43 inches; silty clay loam  
C—43 to 60 inches; silt loam

### Minor Components

#### Detroit

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Terrace (pe26-30)

#### Muir

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe25-34)

#### Unnamed Hydric Soil

*Composition:* About 1 percent

## Hu—Humbarger loam, occasionally flooded

### Map Unit Composition

Humbarger: 74 percent  
Minor components: 26 percent

### Component Descriptions

#### Humbarger

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Calcareous fine-loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 9.8 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe26-30)  
*Land capability (irrigated):* 2w  
*Land capability (nonirrigated):* 2w

#### Typical Profile:

Ap—0 to 10 inches; loam  
A—10 to 22 inches; silt loam  
AC—22 to 28 inches; clay loam  
C1—28 to 48 inches; clay loam  
C2—48 to 60 inches; stratified loamy fine sand

**Minor Components****Cozad**

*Composition:* About 15 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Silty Lowland - Veg. Zone 3

**Cass**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy Lowland - Veg. Zone 3

**McCook**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Silty Lowland - Veg. Zone 1

**Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained

**Kp—Kipson Soils, 5 to 30 percent slopes****Map Unit Composition**

Kipson: 65 percent  
 Minor components: 35 percent

**Component Descriptions****Kipson**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Shoulder  
*Parent material:* Calcareous loamy residuum weathered from shale  
*Slope:* 5 to 30 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:* Very low (About 2.9 inches)  
*Shrink-swell potential:* Moderate (About 4.7 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium

*Ecological site:* Limy Upland (pe26-30)

*Land capability (nonirrigated):* 6e

**Typical Profile:**

A—0 to 10 inches; gravelly silt loam  
 C—10 to 20 inches; channery silty clay loam  
 Cr—20 to 24 inches; weathered bedrock

**Minor Components****Wakeen**

*Composition:* About 15 percent  
*Slope:* 3 to 6 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe26-30)

**Hastings**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Armo**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe26-30)

**Tobin**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe26-30)

**Lh—Lancaster-Hedville complex, 5 to 30 percent slopes****Map Unit Composition**

Lancaster: 55 percent  
 Hedville: 28 percent  
 Minor components: 17 percent

**Component Descriptions****Lancaster**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Fine-loamy residuum weathered from sandstone and shale  
*Slope:* 5 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 5.1 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):* 6e

*Typical Profile:*

A—0 to 9 inches; loam  
 BA—9 to 18 inches; clay loam  
 Bt—18 to 26 inches; sandy clay loam  
 BC—26 to 35 inches; sandy clay loam  
 Cr—35 to 35 inches; weathered bedrock

**Hedville**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy residuum  
*Slope:* 10 to 30 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 2.8 inches)  
*Shrink-swell potential:* Low (About 1.6 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Shallow Sandstone (pe26-30)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

A—0 to 14 inches; cobbly loam  
 R—14 to 16 inches; unweathered bedrock

**Minor Components**

**Edalgo**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 8 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Clay Upland (pe26-30)

**Crete**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe26-30)

**Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Drainage class:* Poorly drained

**Unnamed Hydric Soils**

*Composition:* About 1 percent  
*Drainage class:* Poorly drained

**Lm—Longford silt loam, 1 to 3 percent slopes**

**Map Unit Composition**

Longford: 70 percent  
 Minor components: 30 percent

**Component Descriptions**

**Longford**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.8 inches)  
*Shrink-swell potential:* High (About 7.7 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:*

Ap—0 to 8 inches; silt loam  
 BA—8 to 14 inches; silty clay loam  
 Bt—14 to 38 inches; silty clay loam  
 BC—38 to 45 inches; silty clay loam  
 C—45 to 60 inches; clay loam

**Minor Components**

**Hastings**

*Composition:* About 15 percent  
*Geomorphic Position:* divide on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

**Geary**

*Composition:* About 10 percent

*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

#### **Wells**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

#### **Wells**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

### **Ln—Longford silt loam, 3 to 7 percent slopes**

### **Lo—Longford silty clay loam, 3 to 7 percent slopes, eroded**

#### **Map Unit Composition**

Longford: 65 percent  
 Minor components: 35 percent

#### **Map Unit Composition**

Longford: 65 percent  
 Minor components: 35 percent

#### **Component Descriptions**

##### **Longford**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.8 inches)  
*Shrink-swell potential:* High (About 7.7 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):* 3e

##### *Typical Profile:*

Ap—0 to 8 inches; silt loam  
 BA—8 to 14 inches; silty clay loam  
 Bt—14 to 38 inches; silty clay loam  
 BC—38 to 45 inches; silty clay loam  
 C—45 to 60 inches; clay loam

#### **Minor Components**

##### **Hastings**

*Composition:* About 15 percent  
*Geomorphic Position:* divide on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

##### **Geary**

*Composition:* About 10 percent

#### **Component Descriptions**

##### **Longford**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.6 inches)  
*Shrink-swell potential:* High (About 7.7 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):* 3e

##### *Typical Profile:*

Ap—0 to 8 inches; silty clay loam  
 Bt—8 to 32 inches; silty clay loam  
 BC—32 to 39 inches; silty clay loam  
 C—39 to 60 inches; clay loam

#### **Minor Components**

##### **Hastings**

*Composition:* About 15 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

##### **Geary**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

#### **Wells**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

### **M-W—Miscellaneous Water**

#### **Mc—McCook silt loam, rarely flooded**

##### **Map Unit Composition**

McCook: 98 percent  
 Minor components: 2 percent

##### **Component Descriptions**

###### **McCook**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Stream terrace on river valley  
*Parent material:* Weakly stratified calcareous coarse-silty alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.8 inches)  
*Shrink-swell potential:* Low (About 2.2 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Terrace (pe20-26)  
*Land capability (nonirrigated):* 1

###### *Typical Profile:*

Ap—0 to 6 inches; silt loam  
 A—6 to 16 inches; silt loam  
 AC—16 to 22 inches; silt loam  
 C1—22 to 42 inches; silt loam  
 C2—42 to 60 inches; very fine sandy loam

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

###### **Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained

###### **Unnamed Hydric Soils**

*Composition:* About 1 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained

#### **Mr—Muir silt loam, rarely flooded**

##### **Map Unit Composition**

Muir: 84 percent  
 Minor components: 16 percent

##### **Component Descriptions**

###### **Muir**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 12.3 inches)  
*Shrink-swell potential:* Moderate (About 4.7 LEP)  
*Flooding hazard:* Rare  
*Ponding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Terrace (pe25-34)  
*Land capability (nonirrigated):* 1

###### *Typical Profile:*

Ap—0 to 8 inches; silt loam  
 A—8 to 16 inches; silt loam  
 Bw—16 to 34 inches; silty clay loam  
 BC—34 to 42 inches; silty clay loam  
 C—42 to 60 inches; silt loam

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

###### **Hord**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe26-30)

###### **Detroit**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Terrace (pe26-30)

###### **Unnamed Hydric Soil (ponding)**

*Composition:* About 1 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained

## **Nc—New Cambria silty clay loam, rarely flooded**

### **Map Unit Composition**

New Cambria: 83 percent  
Minor components: 17 percent

### **Component Descriptions**

#### **New Cambria**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Stream terrace on river valley  
*Parent material:* Calcareous clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.3 inches)  
*Shrink-swell potential:* Very high (About 10.2 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Clay Terrace (pe26-30)  
*Land capability (nonirrigated):* 2s

#### *Typical Profile:*

Ap—0 to 6 inches; silty clay loam  
A—6 to 12 inches; silty clay loam  
Bw—12 to 40 inches; silty clay  
C—40 to 60 inches; silty clay loam

#### **Minor Components**

##### **Detroit**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Terrace (pe26-30)

##### **Roxbury**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe26-30)

##### **Unnamed Hydric Soil 1**

*Composition:* About 2 percent  
*Drainage class:* Poorly drained

## **Nu—Nuckolls silt loam, 4 to 12 percent slopes**

### **Map Unit Composition**

Nuckolls: 85 percent  
Minor components: 15 percent

### **Component Descriptions**

#### **Nuckolls**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty loess  
*Slope:* 4 to 12 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 12.5 inches)  
*Shrink-swell potential:* Moderate (About 3.3 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):* 4e  
*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

A—0 to 10 inches; silt loam  
BA—10 to 16 inches; silt loam  
Bw—16 to 38 inches; silt loam  
C—38 to 60 inches; silt loam

#### **Minor Components**

##### **Hastings**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

##### **Hobbs**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe26-30)

## **Nx—Nuckolls silt loam, 4 to 12 percent slopes, eroded**

### **Map Unit Composition**

Nuckolls: 85 percent  
Minor components: 15 percent

### **Component Descriptions**

#### **Nuckolls**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty loess  
*Slope:* 4 to 12 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:* Moderate (About 3.3 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):* 4e  
*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

Ap—0 to 7 inches; silt loam  
Bw—7 to 31 inches; silt loam  
C—31 to 60 inches; silt loam

#### **Minor Components**

##### **Hastings**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 10 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe26-30)

##### **Hobbs**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe26-30)

## **QUA—Quarries**

## **Rx—Roxbury silt loam, rarely flooded**

### **Map Unit Composition**

Roxbury: 78 percent  
Minor components: 22 percent

### **Component Descriptions**

#### **Roxbury**

*MLRA:* 73 - Rolling Plains and Breaks  
*Landform:* Stream terrace 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 12.4 inches)  
*Shrink-swell potential:* Moderate (About 4.5 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:*

Ap—0 to 8 inches; silt loam  
A—8 to 20 inches; silt loam  
Bw—20 to 36 inches; silty clay loam  
C—36 to 60 inches; silt loam

#### **Minor Components**

##### **New Cambria**

*Composition:* About 15 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Terrace (pe26-30)

##### **Detroit**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Terrace (pe26-30)

##### **Unnamed Hydric Soil**

*Composition:* About 2 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained

**Sa—Inavale loamy sand, 0 to 3 percent slopes, occasionally flooded**

**Map Unit Composition**

Inavale: 85 percent  
Minor components: 15 percent

**Component Descriptions**

**Inavale**

*MLRA:* 74 - Central Kansas Sandstone Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Sandy alluvium  
*Slope:* 0 to 3 percent  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 4.9 inches)  
*Shrink-swell potential:* Low (About 0.1 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Sandy Lowland (pe20-26)  
*Land capability (nonirrigated):* 3w

*Typical Profile:*

Ap—0 to 7 inches; loamy sand  
C1—7 to 20 inches; loamy sand  
C2—20 to 40 inches; stratified loamy sand  
C3—40 to 60 inches; stratified sand

**Minor Components**

**Munjor**

*Composition:* About 14 percent  
*Slope:* 0 to 3 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy Lowland - Veg. Zone  
3

**Unnamed Hydric Soil**

*Composition:* About 1 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained

**SAP—sand Pits**

**Sd—Inavale loamy sand, 3 to 12 percent slopes**

**Map Unit Composition**

Inavale: 100 percent

**Component Descriptions**

**Inavale**

*MLRA:* 74 - Central Kansas Sandstone Hills, 75 - Central Loess Plains  
*Landform:* Dune on river valley  
*Parent material:* Sandy alluvium  
*Slope:* 3 to 12 percent  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 4.9 inches)  
*Shrink-swell potential:* Low (About 0.1 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy Lowland (pe20-26)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

A—0 to 7 inches; loamy sand  
C1—7 to 20 inches; loamy sand  
C2—20 to 40 inches; stratified loamy sand  
C3—40 to 60 inches; stratified sand

**St—Sutphen silty clay, rarely flooded**

**Map Unit Composition**

Sutphen: 85 percent  
Minor components: 15 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 8.8 inches)

*Shrink-swell potential:* Very high (About 9.9 LEP)

*Flooding hazard:* Rare

*Ponding hazard:* Occasional

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

*Runoff class:* High

*Ecological site:* Clay Lowland (pe26-30)

*Land capability (nonirrigated):* 2w

**Typical Profile:**

Ap—0 to 8 inches; silty clay

A—8 to 26 inches; silty clay

AC—26 to 32 inches; silty clay

C—32 to 60 inches; silty clay loam

**Minor Components**

**Detroit**

*Composition:* About 14 percent

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Terrace (pe26-30)

**Unnamed Hydric Soil**

*Composition:* About 1 percent

*Slope:* 0 to 0 percent

*Drainage class:* Poorly drained

*Land capability (nonirrigated):* 2w

**Typical Profile:**

A—0 to 24 inches; silt loam

AC—24 to 44 inches; silty clay loam

C—44 to 60 inches; silty clay loam

**Minor Components**

**Hobbs**

*Composition:* About 15 percent

*Slope:* 0 to 2 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Lowland (pe26-30)

**Muir**

*Composition:* About 5 percent

*Slope:* 0 to 2 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Terrace (pe25-34)

**Unnamed Hydric Soil (saturation)**

*Composition:* About 2 percent

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

**W—Water**

**To—Tobin silt loam, occasionally flooded**

**Map Unit Composition**

Tobin: 78 percent

Minor components: 22 percent

**Component Descriptions**

**Tobin**

*MLRA:* 73 - Rolling Plains and Breaks

*Landform:* Flood plain on alluvial plain

*Parent material:* 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 12.5 inches)

*Shrink-swell potential:* Moderate (About 4.3 LEP)

*Flooding hazard:* Occasional

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

*Runoff class:* Low

*Ecological site:* Loamy Lowland (pe26-30)

**Wa—Wakeen silty clay loam, 3 to 6 percent slopes**

**Map Unit Composition**

Wakeen: 70 percent

Minor components: 30 percent

**Component Descriptions**

**Wakeen**

*MLRA:* 73 - Rolling Plains and Breaks

*Landform:* Hillslope on upland

*Parent material:* Calcareous fine-silty residuum weathered from limestone

*Slope:* 3 to 6 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 5.7 inches)

*Shrink-swell potential:* Moderate (About 5.1 LEP)

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe26-30)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

Ap—0 to 8 inches; silty clay loam

Bw—8 to 22 inches; silty clay loam

C—22 to 28 inches; channery silty clay loam

Cr—28 to 60 inches; weathered bedrock

**Minor Components**

**Armo**

*Composition:* About 15 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Ecological site:* Limy Upland (pe26-30)

**Kipson**

*Composition:* About 10 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 5 to 30 percent

*Depth to restrictive feature:* 7 to 20 inches to bedrock (paralithic)

*Drainage class:* Somewhat excessively drained

*Ecological site:* Limy Upland (pe26-30)

**Hastings**

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe26-30)