

061BE—Benfield-Florence complex, 5 to 30 percent slopes

Map Unit Composition

Benfield: 42 percent
 Florence: 28 percent
 Minor components: 30 percent

Component Descriptions

Benfield

MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Clayey pedis sediment derived from limestone and shale over clayey residuum weathered from calcareous shale
Slope: 5 to 30 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 5.7 inches)
Shrink-swell potential: High (About 8.9 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Loamy Upland (pe30-36)
Land capability (nonirrigated): 6e

Typical Profile:

A1—0 to 5 inches; silty clay loam
 A2—5 to 10 inches; silty clay loam
 Bt1—10 to 19 inches; gravelly silty clay
 Bt2—19 to 34 inches; silty clay
 2Btk—34 to 38 inches; silty clay
 2Cr—38 to 56 inches; weathered bedrock

Florence

MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Gravelly residuum weathered from cherty limestone
Slope: 5 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Low (About 4.6 inches)
Shrink-swell potential: Very high (About 9.2 LEP)
Flooding hazard: None

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Loamy Upland (pe30-36)

Land capability (nonirrigated): 6e

Typical Profile:

A1—0 to 5 inches; gravelly silt loam
 A2—5 to 14 inches; very gravelly silty clay
 Bt—14 to 48 inches; very cobbly clay
 Btk—48 to 56 inches; extremely cobbly silty clay
 R—56 to 60 inches; unweathered bedrock

Minor Components

Clime

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 20 to 40 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Konza

Composition: About 10 percent
Geomorphic Position: ridge on upland
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Labette

Composition: About 3 percent
Slope: 0 to 4 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Irwin

Composition: About 2 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Tully

Composition: About 2 percent
Geomorphic Position: hillslope on upland
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Kahola

Composition: About 1 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Calcareous, Fine-Loamy, Cumulic Hapludolls

Composition: About 1 percent

Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Rock outcrop

Composition: About 1 percent

**061KA—Kahola silt loam,
channeled****Map Unit Composition**

Kahola: 75 percent
 Minor components: 25 percent

Component Descriptions**Kahola**

MLRA: 75 - Central Loess Plains
Landform: Flood plain on meander belt
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 12.9 inches)
Shrink-swell potential: Moderate (About 4.0 LEP)
Flooding hazard: Frequent
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 5w

Typical Profile:

A1—0 to 24 inches; silt loam
 A2—24 to 36 inches; silt loam
 AC—36 to 44 inches; silt loam
 C—44 to 60 inches; silt loam

Minor Components**Tully**

Composition: About 13 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Calcareous, Fine-Loamy, Cumulic Hapludolls

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

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

**061KB—Kahola silt loam,
occasionally flooded****Map Unit Composition**

Kahola: 75 percent
 Minor components: 25 percent

Component Descriptions**Kahola**

MLRA: 75 - Central Loess Plains
Landform: Flood plain on valley
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 12.9 inches)
Shrink-swell potential: Moderate (About 4.0 LEP)
Flooding hazard: Occasional
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 2w

Typical Profile:

A1—0 to 24 inches; silt loam
 A2—24 to 36 inches; silt loam
 AC—36 to 44 inches; silt loam
 C—44 to 60 inches; silt loam

Minor Components**Calcareous, Fine-Loamy, Cumulic Hapludolls**

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Tully

Composition: About 8 percent

Geomorphic Position: hillslope on upland
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Reading

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

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

061KO—Konza silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Konza: 85 percent
 Minor components: 15 percent

Component Descriptions

Konza

MLRA: 75 - Central Loess Plains
Landform: Ridge on upland
Hillslope position: Shoulder, summit
Parent material: Silty and clayey loess over silty and clayey pedisegment over clayey residuum
 weathered from limestone and shale
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: Very high (About 10.0 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Clay Pan (pe30-36)
Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 6 inches; silty clay loam
 Bt1—6 to 28 inches; silty clay
 Bt2—28 to 42 inches; silty clay
 Bt3—42 to 50 inches; silty clay loam
 2Bt4—50 to 70 inches; silty clay loam
 3Bt5—70 to 89 inches; clay

Minor Components

Irwin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Ladysmith

Composition: About 3 percent
Geomorphic Position: ridge on upland
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

Labette

Composition: About 3 percent
Slope: 0 to 4 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 2 percent
Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Florence

Composition: About 2 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 10 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

061TO—Tully silty clay loam, 3 to 8 percent slopes

Map Unit Composition

Tully: 85 percent
 Minor components: 15 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills, 75 - Central Loess Plains

Landform: Hillslope on upland

Hillslope position: Footslope

Parent material: Clayey colluvium

Slope: 3 to 8 percent

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.1 inches)

Shrink-swell potential: High (About 8.0 LEP)

Flooding hazard: None

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Loamy Upland (pe30-36)

Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 12 inches; silty clay loam

BA—12 to 21 inches; silty clay loam

Bt1—21 to 31 inches; silty clay

Bt2—31 to 40 inches; silty clay

Bt3—40 to 52 inches; silty clay

BC—52 to 60 inches; silty clay

Minor Components

Kahola

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

Reading

Composition: About 3 percent

Slope: 0 to 2 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

Benfield

Composition: About 2 percent

Geomorphic Position: hillslope on upland

Slope: 5 to 15 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-36)

Florence

Composition: About 2 percent

Geomorphic Position: hillslope on upland

Slope: 5 to 15 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 2 percent

Slope: 3 to 8 percent

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

Drainage class: Well drained

Ecological site: Limy Upland (pe30-36)

Calcareous, Fine-Loamy, Cumulic Hapludolls

Composition: About 1 percent

Slope: 0 to 2 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

111CD—Clime-Sogn complex, 5 to 20 percent slopes

Map Unit Composition

Clime: 75 percent

Sogn: 25 percent

Component Descriptions

Clime

MLRA: 112 - Cherokee Prairies

Landform: Hillslope on upland

Hillslope position: Backslope

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

Slope: 5 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 (pe30-36)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; silty clay

H2—8 to 19 inches; silty clay

H3—19 to 34 inches; silty clay

Cr—34 to 59 inches; unweathered bedrock

Sogn

MLRA: 112 - Cherokee Prairies

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Loamy residuum weathered from limestone, unspecified

Slope: 0 to 9 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 1.8 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: Shallow Limy (pe30-36)
Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 9 inches; silty clay loam
 R—9 to 9 inches; unweathered bedrock

111EA—Elmont silt loam, 1 to 4 percent slopes

Map Unit Composition

Elmont: 100 percent

Component Descriptions

Elmont

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey residuum weathered from shale-siltstone
Slope: 1 to 4 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Upland (pe35-42)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 12 inches; silt loam
 H2—12 to 32 inches; silty clay loam
 H3—32 to 48 inches; silty clay loam
 Cr—48 to 59 inches; unweathered bedrock

111IB—Ivan silt loam, channeled

Map Unit Composition

Ivan: 100 percent

Component Descriptions

Ivan

MLRA: 112 - Cherokee Prairies
Landform: Flood plain on 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 13.1 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe35-42)
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 35 inches; silt loam
 H2—35 to 60 inches; loam

111KA—Kenoma silt loam, 1 to 3 percent slopes

Map Unit Composition

Kenoma: 92 percent
 Minor components: 8 percent

Component Descriptions

Kenoma

MLRA: 112 - Cherokee Prairies
Landform: Ridge on upland
Hillslope position: Summit, shoulder
Parent material: Loess over ancient clayey alluvium and/or residuum weathered from limestone and

shale
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: High (About 9.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 6 to 18 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; silt loam
 H2—10 to 40 inches; silty clay
 H3—40 to 60 inches; silty clay

Minor Components

Ladysmith

Composition: About 8 percent
Geomorphic Position: divide on upland
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe25-34)

111KB—Kenoma silty clay loam, 1 to 3 percent slopes, eroded

Map Unit Composition

Kenoma: 100 percent

Component Descriptions

Kenoma

MLRA: 112 - Cherokee Prairies
Landform: Ridge on upland
Hillslope position: Summit, shoulder
Parent material: Loess over ancient clayey alluvium and/or residuum weathered from limestone and

shale
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: High (About 9.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 6 to 18 inches

Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 6 inches; silty clay loam
 H2—6 to 38 inches; silty clay
 H3—38 to 60 inches; silty clay

111KC—Kenoma silt loam, 3 to 6 percent slopes

Map Unit Composition

Kenoma: 100 percent

Component Descriptions

Kenoma

MLRA: 112 - Cherokee Prairies
Landform: Terrace on river valley, divide on upland
Parent material: Silty and clayey residuum weathered from limestone-shale
Slope: 3 to 6 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: High (About 9.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 6 to 18 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 10 inches; silt loam
 H2—10 to 40 inches; silty clay
 H3—40 to 60 inches; silty clay

111KD—Kenoma silty clay loam, 3 to 6 percent slopes, eroded

Map Unit Composition

Kenoma: 100 percent

Component Descriptions

Kenoma*MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*Hillslope position:* Backslope*Parent material:* Loess over ancient clayey alluvium and/or residuum weathered from limestone and

shale

Slope: 3 to 6 percent*Drainage class:* Moderately well drained*Slowest permeability:* Very slow (About 0.00 in/hr)*Available water capacity:* High (About 9.5 inches)*Shrink-swell potential:* High (About 7.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* About 6 to 18 inches*Runoff class:* Very high*Ecological site:* Clay Upland (pe35-42)*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 6 inches; silty clay loam

H2—6 to 38 inches; silty clay

H3—38 to 60 inches; silty clay

111LA—Labette silty clay loam, 1 to 3 percent slopes**Map Unit Composition**

Labette: 100 percent

Component Descriptions**Labette***MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*Parent material:* Silty and clayey residuum weathered from limestone-shale*Slope:* 1 to 3 percent*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)*Drainage class:* Well drained*Slowest permeability:* Slow (About 0.06 in/hr)*Available water capacity:* Moderate (About 6.4 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:* Loamy Upland (pe30-36)*Land capability (nonirrigated):* 2e*Typical Profile:*

H1—0 to 8 inches; silty clay loam

H2—8 to 38 inches; silty clay

R—38 to 38 inches; unweathered bedrock

111MB—Martin silty clay loam, 4 to 7 percent slopes**Map Unit Composition**

Martin: 100 percent

Component Descriptions**Martin***MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*Parent material:* Silty and clayey colluvium derived from limestone-shale over silty and clayey

residuum weathered from limestone-shale

Slope: 4 to 7 percent*Drainage class:* Moderately well drained*Slowest permeability:* Slow (About 0.06 in/hr)*Available water capacity:* High (About 9.7 inches)*Shrink-swell potential:* High (About 7.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* About 24 to 36 inches*Runoff class:* Very high*Ecological site:* Loamy Upland (pe35-42)*Land capability (nonirrigated):* 3e*Typical Profile:*

H1—0 to 12 inches; silty clay loam

H2—12 to 60 inches; silty clay

111MC—Martin silty clay, 3 to 7 percent slopes, eroded**Map Unit Composition**

Martin: 100 percent

Component Descriptions

Martin*MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*Hillslope position:* Backslope*Parent material:* Silty and clayey colluvium
derived from limestone-shale over silty and
clayey

residuum weathered from limestone-shale

Slope: 3 to 7 percent*Drainage class:* Moderately well drained*Slowest permeability:* Slow (About 0.06 in/hr)*Available water capacity:* Moderate (About 8.9
inches)*Shrink-swell potential:* High (About 7.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* About 24 to
36 inches*Runoff class:* High*Ecological site:* Loamy Upland (pe35-42)*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 12 inches; silty clay

H2—12 to 60 inches; silty clay

**111RA—Reading silt loam, 0 to 2
percent slopes, rarely flooded****Map Unit Composition**

Reading: 100 percent

Component Descriptions**Reading***MLRA:* 112 - Cherokee Prairies*Landform:* Stream terrace on valley*Parent material:* Silty alluvium*Slope:* 0 to 2 percent*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About
0.20 in/hr)*Available water capacity:* High (About 11.6
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 Lowland (pe30-36)*Land capability (nonirrigated):* 1*Typical Profile:*

H1—0 to 17 inches; silt loam

H2—17 to 45 inches; silty clay loam

H3—45 to 60 inches; silty clay loam

**111TA—Tully silty clay loam, 2 to
7 percent slopes****Map Unit Composition**

Tully: 100 percent

Component Descriptions**Tully***MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*Hillslope position:* Footslope*Parent material:* Clayey colluvium*Slope:* 2 to 7 percent*Drainage class:* Well drained*Slowest permeability:* Slow (About 0.06 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:* High*Ecological site:* Loamy Upland (pe30-36)*Land capability (nonirrigated):* 3e*Typical Profile:*

H1—0 to 17 inches; silty clay loam

H2—17 to 48 inches; silty clay

H3—48 to 60 inches; silty clay

**111TB—Tully silty clay loam, 3 to
7 percent slopes, eroded****Map Unit Composition**

Tully: 100 percent

Component Descriptions**Tully***MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*Hillslope position:* Footslope

Parent material: Clayey colluvium
Slope: 3 to 7 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 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: High
Ecological site: Loamy Upland (pe30-36)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 17 inches; silty clay loam
 H2—17 to 48 inches; silty clay
 H3—48 to 60 inches; silty clay

1271E—Irwin silty clay loam, 3 to 5 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: Clayey residuum weathered from shale
Slope: 3 to 5 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.1 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 10 inches; silty clay loam
 H2—10 to 60 inches; silty clay

Minor Components

Tully

Composition: About 5 percent
Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Labette

Composition: About 5 percent
Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

127RD—Reading silt loam, 1 to 3 percent slopes, rarely flooded

Map Unit Composition

Reading: 90 percent
 Minor components: 10 percent

Component Descriptions

Reading

MLRA: 75 - Central Loess Plains
Landform: Stream terrace on valley
Parent material: Silty alluvium
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: Moderate (About 4.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 15 inches; silt loam
 H2—15 to 54 inches; silty clay loam
 H3—54 to 60 inches; silty clay

Minor Components

Tully

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

127TS—Tully silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Tully: 90 percent
Minor components: 10 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Footslope
Parent material: Clayey colluvium
Slope: 3 to 7 percent
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: Loamy Upland (pe30-36)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 17 inches; silty clay loam
H2—17 to 44 inches; silty clay
H3—44 to 60 inches; silty clay

Minor Components

Smolan

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

Reading

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

139CS—Clime-Sogn complex, 3 to 15 percent slopes

Map Unit Composition

Clime: 65 percent
Sogn: 20 percent
Minor components: 15 percent

Component Descriptions

Clime

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey residuum weathered from calcareous shale
Slope: 3 to 15 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Low (About 5.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Limy Upland (pe35-42)
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 7 inches; silty clay
Bw—7 to 15 inches; silty clay
C—15 to 32 inches; silty clay loam
Cr—32 to 36 inches; unweathered bedrock

Sogn

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loamy residuum weathered from limestone
Slope: 3 to 15 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 1.6 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: Shallow Limy (pe35-42)
Land capability (nonirrigated): 6s

Typical Profile:

A—0 to 8 inches; silty clay loam
R—8 to 12 inches; unweathered bedrock

Minor Components

Rock outcrop

Composition: About 10 percent

Lula

Composition: About 4 percent

Slope: 1 to 3 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Drainage class: Well drained

Ecological site: Loamy Upland (pe35-42)

Summit

Composition: About 1 percent

Geomorphic Position: hillslope

upland

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

139EN—Eram silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Eram: 85 percent

Minor components: 15 percent

Component Descriptions

Eram

MLRA: 112 - Cherokee Prairies

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Silty and clayey residuum weathered from shale

Slope: 3 to 7 percent

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

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Low (About 4.3 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 9 to 14 inches

Runoff class: High

Ecological site: Clay Upland (pe35-42)

Land capability (nonirrigated): 4e

Typical Profile:

Ap—0 to 9 inches; silty clay loam

Bt—9 to 28 inches; silty clay, silty clay loam

Cr—28 to 40 inches; weathered bedrock

Minor Components

Clareson

Composition: About 7 percent

Slope: 3 to 15 percent

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

Drainage class: Well drained

Ecological site: Shallow Flats (pe35-42)

Dennis

Composition: About 5 percent

Slope: 2 to 6 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Elmont

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

Ecological site: Loamy Upland (pe35-42)

139KE—Kenoma silt loam, 1 to 4 percent slopes

Map Unit Composition

Kenoma: 85 percent

Minor components: 15 percent

Component Descriptions

Kenoma

MLRA: 112 - Cherokee Prairies

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Silty and clayey residuum weathered from limestone and shale

Slope: 1 to 4 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Moderately well 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: None

Depth to seasonal water saturation: About 9 to 14 inches

Runoff class: Very high

Ecological site: Clay Upland (pe35-42)

Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 8 inches; silt loam

Bt—8 to 53 inches; silty clay

Cr—53 to 60 inches; unweathered bedrock

Minor Components

Lula

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Olpe

Composition: About 5 percent
Slope: 1 to 5 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

139LS—Lebo-Summit silty clay loams, 7 to 12 percent slopes

Map Unit Composition

Lebo: 55 percent
 Summit: 35 percent
 Minor components: 10 percent

Component Descriptions

Lebo

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Residuum weathered from clayey shale
Slope: 8 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 4.8 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: Loamy Upland (pe35-42)
Land capability (nonirrigated): 6e

Typical Profile:

Ap—0 to 6 inches; silty clay loam
 Bw—6 to 22 inches; silty clay loam
 C—22 to 30 inches; very channery clay loam
 Cr—30 to 34 inches; weathered bedrock

Summit

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey residuum weathered from calcareous shale
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 8.6 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: High
Ecological site: Loamy Upland (pe35-42)
Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 8 inches; silty clay loam
 AB—8 to 13 inches; silty clay loam
 Bt—13 to 60 inches; silty clay

Minor Components

Clareson

Composition: About 5 percent
Slope: 3 to 15 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Shallow Flats (pe35-42)

Rock outcrop

Composition: About 5 percent

139MB—Mason silt loam, rarely flooded

Map Unit Composition

Mason: 85 percent
 Minor components: 15 percent

Component Descriptions

Mason

MLRA: 112 - Cherokee Prairies
Landform: Stream terrace on valley
Parent material: Silty alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)

Available water capacity: High (About 10.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Lowland (pe35-42)
Land capability (nonirrigated): 1

Typical Profile:
 Ap—0 to 7 inches; silt loam
 A—7 to 15 inches; silty clay loam
 Bt—15 to 42 inches; silty clay loam
 BC—42 to 60 inches; silty clay loam

Minor Components

Osage

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe35-42)

Dennis

Composition: About 5 percent
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

139SO—Summit silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Summit: 90 percent
 Minor components: 10 percent

Component Descriptions

Summit

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey residuum weathered from calcareous shale
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 8.6 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: High
Ecological site: Loamy Upland (pe35-42)

Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 8 inches; silty clay loam
 AB—8 to 13 inches; silty clay loam
 Bt—13 to 60 inches; silty clay

Minor Components

Clareson

Composition: About 5 percent
Slope: 3 to 15 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Shallow Flats (pe35-42)

Lebo

Composition: About 3 percent
Geomorphic Position: hillslope on upland
Slope: 8 to 12 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Lula

Composition: About 2 percent
Slope: 3 to 5 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

139VB—Verdigris silt loam, occasionally flooded

Map Unit Composition

Verdigris: 90 percent
 Minor components: 10 percent

Component Descriptions

Verdigris

MLRA: 112 - Cherokee Prairies
Landform: Flood plain on valley
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: Low

Ecological site: Loamy Lowland (pe35-42)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 14 inches; silt loam

H2—14 to 60 inches; silt loam

Minor Components

Osage

Composition: About 10 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Clay Lowland (pe35-42)

139VC—Verdigris silt loam, channeled

Map Unit Composition

Verdigris: 88 percent

Minor components: 12 percent

Component Descriptions

Verdigris

MLRA: 112 - Cherokee Prairies

Landform: Flood plain on valley

Parent material: Silty alluvium

Slope: 0 to 2 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 4.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Loamy Lowland (pe35-42)

Land capability (nonirrigated): 5w

Typical Profile:

A—0 to 7 inches; silt loam

Bw—7 to 60 inches; silt loam

Minor Components

Bates

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 (pe35-42)

Eram

Composition: About 3 percent

Geomorphic Position: hillside on upland

Slope: 3 to 7 percent

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

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe35-42)

Osage

Composition: About 3 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Clay Lowland (pe35-42)

Rock outcrop

Composition: About 3 percent

Slope: 20 to 40 percent

Depth to restrictive feature: 0 inches to bedrock (lithic)

149HS—Haynie-Sarpy complex, occasionally flooded

Map Unit Composition

Haynie: 60 percent

Sarpy: 25 percent

Minor components: 15 percent

Component Descriptions

Haynie

MLRA: 76 - Bluestem Hills

Landform: Flood-plain step on river valley

Parent material: Coarse-silty alluvium

Slope: 0 to 1 percent

Drainage class: Moderately well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.4 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 (pe30-37)

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 9 inches; very fine sandy loam

H2—9 to 60 inches; silt loam

Sarpy*MLRA:* 76 - Bluestem 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 4.1 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 (pe30-37)*Land capability (nonirrigated):* 3w*Typical Profile:*

H1—0 to 6 inches; fine sand

H2—6 to 60 inches; sand

Minor Components**Eudora***Composition:* About 7 percent*Slope:* 0 to 1 percent*Drainage class:* Well drained*Ecological site:* Loamy Lowland (pe30-37)**Kimo***Composition:* About 7 percent*Slope:* 0 to 1 percent*Drainage class:* Somewhat poorly drained*Ecological site:* Clay Lowland (pe30-37)**Unnamed Hydric Soil***Composition:* About 1 percent*Drainage class:* Poorly drained**149SF—Sarpy sand, frequently flooded****Map Unit Composition**

Sarpy: 90 percent

Minor components: 10 percent

Component Descriptions**Sarpy***MLRA:* 76 - Bluestem Hills*Landform:* Flood plain on river valley*Parent material:* Sandy alluvium*Slope:* 0 to 2 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:* Frequent*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Negligible*Ecological site:* Sandy Lowland (pe30-37)*Land capability (nonirrigated):* 4s*Typical Profile:*

H1—0 to 6 inches; sand

H2—6 to 60 inches; sand

Minor Components**Eudora***Composition:* About 4 percent*Slope:* 0 to 2 percent*Drainage class:* Well drained*Ecological site:* Loamy Lowland (pe30-37)**Haynie***Composition:* About 3 percent*Slope:* 0 to 1 percent*Drainage class:* Moderately well drained*Ecological site:* Loamy Lowland (pe30-37)**Kimo***Composition:* About 3 percent*Slope:* 0 to 1 percent*Drainage class:* Somewhat poorly drained*Ecological site:* Clay Lowland (pe30-37)**161EM—Elmont silt loam, 3 to 8 percent slopes****Map Unit Composition**

Elmont: 70 percent

Minor components: 30 percent

Component Descriptions**Elmont***MLRA:* 76 - Bluestem Hills*Landform:* Hillslope on upland*Parent material:* Silty and clayey residuum weathered from shale-siltstone*Slope:* 3 to 8 percent*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About 0.20 in/hr)*Available water capacity:* Moderate (About 8.6 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 (pe30-36)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; silt loam

H2—10 to 33 inches; silty clay loam

H3—33 to 44 inches; clay loam

Cr—44 to 48 inches; weathered bedrock

Minor Components

Unnamed Soil

Composition: About 25 percent

Slope: 3 to 8 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-36)

Rock outcrop

Composition: About 5 percent

Typical Profile:

H1—0 to 11 inches; silty clay loam

H2—11 to 55 inches; silty clay

Cr—55 to 59 inches; unweathered bedrock

Minor Components

Clime

Composition: About 5 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 (pe30-36)

Rock outcrop

Composition: About 5 percent

Wymore

Composition: About 5 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 6 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe25-34)

161IC—Irwin silty clay loam, 4 to 8 percent slopes

Map Unit Composition

Irwin: 85 percent

Minor components: 15 percent

Component Descriptions

Irwin

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Parent material: Clayey pedis sediment derived from shale

Slope: 4 to 8 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Moderately well drained

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

Available water capacity: Moderate (About 8.0 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 (pe25-34)

Land capability (nonirrigated): 4e

161TT—Tully silty clay loam, 1 to 4 percent slopes, eroded

Map Unit Composition

Tully: 85 percent

Minor components: 15 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Hillslope position: Footslope

Parent material: Clayey colluvium

Slope: 1 to 4 percent

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 8.1 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 (pe25-34)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 7 inches; silty clay loam

H2—7 to 51 inches; silty clay

H3—51 to 60 inches; silty clay

Minor Components

Irwin

Phase: Eroded
Composition: About 5 percent
Slope: 1 to 4 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe25-34)

Wymore

Phase: Eroded
Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe25-34)

Reading

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

161TU—Tully silty clay loam, 4 to 8 percent slopes

Map Unit Composition

Tully: 85 percent
 Minor components: 15 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Footslope
Parent material: Clayey colluvium
Slope: 4 to 8 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 8.3 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: Loamy Upland (pe25-34)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; silty clay loam
 H2—10 to 51 inches; silty clay

H3—51 to 60 inches; silty clay

Minor Components

Irwin

Composition: About 8 percent
Slope: 1 to 4 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe25-34)

Wymore

Composition: About 6 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe25-34)

Unnamed Hydric Soil

Composition: About 1 percent
Drainage class: Poorly drained

177AN—Kennebec silt loam, channeled

Map Unit Composition

Kennebec: 90 percent
 Minor components: 10 percent

Component Descriptions

Kennebec

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on valley
Parent material: Silty alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 13.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 40 to 44 inches
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 48 inches; silt loam
 H2—48 to 80 inches; silty clay loam

Minor Components**Wabash**

Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

177BK—Martin-Kennebec complex, 0 to 12 percent slopes

Map Unit Composition

Martin: 54 percent
 Kennebec: 43 percent
 Minor components: 3 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Silty and clayey colluvium derived from limestone and shale over silty and

clayey residuum weathered from limestone and shale

Slope: 3 to 12 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.9 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 21 to 26 inches

Runoff class: Very high

Ecological site: Loamy Upland (pe30-37)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 12 inches; silty clay loam
 H2—12 to 17 inches; silty clay loam
 H3—17 to 72 inches; silty clay

Kennebec

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on valley

Parent material: Silty alluvium

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 13.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 40 to 44 inches

Runoff class: Low

Ecological site: Loamy Lowland (pe30-37)

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 48 inches; silt loam
 H2—48 to 80 inches; silt loam

Minor Components**Wabash**

Composition: About 3 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Clay Lowland (pe30-37)

177GM—Gymer silt loam, 3 to 8 percent slopes

Map Unit Composition

Gymer: 88 percent
 Minor components: 12 percent

Component Descriptions

Gymer

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Terrace on river valley

Hillslope position: Backslope

Parent material: Fine-silty alluvium

Slope: 3 to 8 percent

Drainage class: Well drained

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

Available water capacity: High (About 11.3 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Loamy Upland (pe30-37)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 15 inches; silt loam

H2—15 to 34 inches; silty clay loam
H3—34 to 68 inches; silty clay loam

Minor Components

Morrill

Composition: About 3 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 3 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Thurman

Composition: About 3 percent
Geomorphic Position: hillslope on upland
Slope: 4 to 10 percent
Drainage class: Somewhat excessively drained
Ecological site: Savannah (pe30-37)

Sharpsburg

Composition: About 3 percent
Geomorphic Position: hillslope on upland
Slope: 4 to 10 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-37)

177KB—Kennebec silt loam, occasionally flooded

Map Unit Composition

Kennebec: 95 percent
Minor components: 5 percent

Component Descriptions

Kennebec

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on valley
Parent material: Fine-silty alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 13.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional

Depth to seasonal water saturation: About 40 to 44 inches

Runoff class: Low

Ecological site: Loamy Lowland (pe35-42)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 48 inches; silt loam
H2—48 to 60 inches; silt loam

Minor Components

Wabash

Composition: About 4 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Unnamed Hydric Soil

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

177LD—Ladysmith silty clay loam, 0 to 1 percent slopes

Map Unit Composition

Ladysmith: 90 percent
Minor components: 10 percent

Component Descriptions

Ladysmith

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Paleoterrace on upland
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: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (nonirrigated): 2s

Typical Profile:
H1—0 to 10 inches; silty clay loam
H2—10 to 48 inches; silty clay
H3—48 to 60 inches; silty clay

Minor Components**Martin**

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Labette

Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Labette

Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Pawnee

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

177LM—Ladysmith silty clay loam, 1 to 3 percent slopes**Map Unit Composition**

Ladysmith: 85 percent
 Minor components: 15 percent

Component Descriptions**Ladysmith**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Paleoterrace on upland
Parent material: Clayey alluvium
Slope: 1 to 3 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Impermeable (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: About 22 to 26 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; silty clay loam
 H2—10 to 48 inches; silty clay
 H3—48 to 60 inches; silty clay

Minor Components**Martin**

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

177MB—Martin silty clay loam, 1 to 3 percent slopes**Map Unit Composition**

Martin: 90 percent
 Minor components: 10 percent

Component Descriptions**Martin**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 9.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: High
Ecological site: Loamy Upland (pe35-42)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 12 inches; silty clay loam
 H2—12 to 17 inches; silty clay loam
 H3—17 to 60 inches; silty clay

Minor Components**Labette**

Composition: About 5 percent
Slope: 1 to 3 percent

Depth to restrictive feature: 20 to 40 inches
to bedrock (lithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Ladysmith

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe35-42)

177MH—Martin silty clay loam, 7 to 11 percent slopes, eroded

Map Unit Composition

Martin: 85 percent
Minor components: 15 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Silty and clayey colluvium derived from limestone and shale over silty and

clayey residuum weathered from limestone and shale

Slope: 7 to 11 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.4 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 21 to 26 inches

Runoff class: Very high

Ecological site: Loamy Upland (pe35-42)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; silty clay loam

H2—7 to 60 inches; silty clay

Minor Components**Vinland**

Composition: About 5 percent

Slope: 4 to 10 percent

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

Drainage class: Somewhat excessively drained

Ecological site: Limy Upland (pe35-42)

Elmont

Composition: About 5 percent

Slope: 7 to 11 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 5 percent

Slope: 7 to 11 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

177PA—Pawnee clay loam, 0 to 3 percent slopes

Map Unit Composition

Pawnee: 100 percent

Component Descriptions

Pawnee

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Clayey drift

Slope: 0 to 3 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 7.4 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 9 to 14 inches

Runoff class: High

Ecological site: Clay Upland (pe30-37)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 19 inches; clay loam

H2—19 to 79 inches; clay

177SE—Sarpy-Eudora complex, Overwash, occasionally flooded

Map Unit Composition

Sarpy: 55 percent

Eudora: 45 percent

Component Descriptions**Sarpy**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on river valley

Parent material: Sandy alluvium

Slope: 0 to 1 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: Occasional

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy Lowland (pe30-37)

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 12 inches; loamy fine sand

H2—12 to 60 inches; fine sand

Eudora

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on river valley

Parent material: 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 11.6 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 (pe30-37)

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 8 inches; fine sandy loam

H2—8 to 60 inches; silt loam

177SV—Sogn-Vinland complex, 3 to 25 percent slopes**Map Unit Composition**

Sogn: 55 percent

Vinland: 25 percent

Minor components: 20 percent

Component Descriptions**Sogn**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Loamy residuum weathered from limestone

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 2.0 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: Shallow Limy (pe35-42)

Land capability (nonirrigated): 7s

Typical Profile:

H1—0 to 10 inches; silty clay loam

R—10 to 14 inches; unweathered bedrock

Vinland

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Sandy and silty residuum weathered from shale

Slope: 3 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 3.1 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: Limy Upland (pe35-42)

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 6 inches; silty clay loam

H2—6 to 15 inches; channery silty clay loam

Cr—15 to 19 inches; weathered bedrock

Minor Components

Elmont

Composition: About 5 percent
Slope: 7 to 12 percent
Depth to restrictive feature: 40 to 60 inches
 to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 5 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Rock outcrop

Composition: About 5 percent

Labette

Composition: About 5 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches
 to bedrock (lithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Parent material: Silty and clayey alluvium

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.7 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: About 22 to 26 inches

Runoff class: High

Ecological site: Loamy Lowland (pe30-36)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 12 inches; silty clay loam

H2—12 to 56 inches; silty clay

H3—56 to 60 inches; silty clay

Minor Components**Ivan**

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

Reading

Composition: About 5 percent

Slope: 0 to 1 percent

Drainage class: Moderately well drained

Ecological site: Loamy Lowland (pe30-36)

Wabash

Composition: About 4 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Clay Lowland (pe30-37)

Unnamed Hydric Soil (saturation)

Composition: About 1 percent

Slope: 0 to 2 percent

Drainage class: Poorly drained

Cm—Clime silty clay loam, 3 to 7 percent slopes**Map Unit Composition**

Clime: 85 percent

Minor components: 15 percent

Component Descriptions**Clime**

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Hillslope position: Backslope

AED—Arents, Earthen Dam**Map Unit Composition**

Arents, Earthen Dam: 100 percent

Component Descriptions**Arents, Earthen Dam**

MLRA: 112 - Cherokee Prairies

Depth to seasonal water saturation: More than 6 feet

Land capability (nonirrigated): 8

Ce—Chase silty clay loam, rarely flooded**Map Unit Composition**

Chase: 85 percent

Minor components: 15 percent

Component Descriptions**Chase**

MLRA: 112 - Cherokee Prairies

Landform: Stream terrace on river valley

Parent material: Silty and clayey residuum weathered from calcareous shale
Slope: 3 to 7 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 4.7 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: Limy Upland (pe30-36)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 5 inches; silty clay loam
 H2—5 to 18 inches; silty clay
 H3—18 to 32 inches; silty clay
 Cr—32 to 36 inches; weathered bedrock

Minor Components

Sogn

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-36)

Wamego

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Cr—Clime silty clay loam, 20 to 40 percent slopes, stony

Map Unit Composition

Clime: 85 percent
 Minor components: 15 percent

Component Descriptions

Clime

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey residuum weathered from calcareous shale
Slope: 20 to 40 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.01 in/hr)
Available water capacity: Low (About 5.7 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: Limy Upland (pe30-36)
Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 9 inches; silty clay loam
 H2—9 to 27 inches; silty clay
 H3—27 to 33 inches; silty clay loam
 Cr—33 to 37 inches; silty clay loam

Minor Components

Sogn

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-36)

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Rock outcrop

Composition: About 5 percent
Geomorphic Position: hillslope on upland

Cs—Clime-Sogn silty clay loams, 5 to 20 percent slopes

Map Unit Composition

Clime: 60 percent
 Sogn: 20 percent
 Minor components: 20 percent

Component Descriptions

Clime

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Silty and clayey residuum weathered from calcareous shale

Slope: 5 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: Moderate (About 6.2 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: Limy Upland (pe30-36)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 13 inches; silty clay loam

H2—13 to 30 inches; silty clay

H3—30 to 37 inches; silty clay loam

Cr—37 to 41 inches; weathered bedrock

Sogn

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Loamy residuum weathered from limestone

Slope: 5 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: Low (About 3.4 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: Shallow Limy (pe30-36)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 13 inches; silty clay loam

H2—13 to 17 inches; channery silty clay loam

R—17 to 21 inches; unweathered bedrock

Minor Components

Labette

Composition: About 5 percent

Geomorphic Position: ridge on upland

Slope: 2 to 5 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-36)

Ivan

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

Martin

Composition: About 5 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Rock outcrop

Composition: About 5 percent

Geomorphic Position: hillslope on upland

Eo—Elmont silt loam, 3 to 7 percent slopes

Map Unit Composition

Elmont: 80 percent

Minor components: 20 percent

Component Descriptions

Elmont

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Silty and clayey residuum weathered from shale and siltstone

Slope: 3 to 7 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

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

Available water capacity: High (About 11.6 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 (pe30-37)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 19 inches; silt loam
 H2—19 to 57 inches; silty clay loam
 Cr—57 to 61 inches; weathered bedrock

Minor Components

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Clime

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Wamego

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Rock outcrop

Composition: About 5 percent
Geomorphic Position: hillslope on upland

Eu—Eudora silt loam, rarely flooded

Map Unit Composition

Eudora: 95 percent
 Minor components: 5 percent

Component Descriptions

Eudora

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood-plain step on river valley
Parent material: Coarse-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: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 15 inches; silt loam
 H2—15 to 60 inches; silt loam

Minor Components

Kimo

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Lowland (pe30-36)

Ex—Eudora-Kimo complex, rarely flooded

Map Unit Composition

Eudora: 70 percent
 Kimo: 25 percent

Component Descriptions

Eudora

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood-plain step 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: Very high (About 12.1 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 Lowland (pe30-36)
Land capability (nonirrigated): 2w

Typical Profile:
 H1—0 to 17 inches; silt loam
 H2—17 to 60 inches; silt loam

Kimo

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood-plain step on river valley

Parent material: Silty and clayey alluvium

Slope: 0 to 1 percent

Drainage class: Somewhat poorly 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: About 24 to 72 inches

Runoff class: High

Ecological site: Clay Lowland (pe30-36)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 24 inches; silty clay loam

H2—24 to 35 inches; silty clay loam

H3—35 to 60 inches; very fine sandy loam, silt loam

Minor Components**Unnamed Hydric Soil****FI—Florence-Labette complex, 3 to 15 percent slopes****Map Unit Composition**

Florence: 40 percent

Labette: 30 percent

Minor components: 30 percent

Component Descriptions**Florence**

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Clayey residuum weathered from cherty limestone

Slope: 3 to 15 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Drainage class: Well drained

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

Available water capacity: Low (About 5.3 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: Loamy Upland (pe30-36)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 14 inches; gravelly silt loam

H2—14 to 18 inches; gravelly silty clay loam

H3—18 to 56 inches; very gravelly clay

R—56 to 60 inches; unweathered bedrock

Labette

MLRA: 76 - Bluestem Hills

Landform: Ridge on upland

Hillslope position: Shoulder

Parent material: Silty and clayey residuum weathered from limestone and shale

Slope: 3 to 5 percent

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

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 6.1 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 (pe30-36)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; silt loam

H2—7 to 35 inches; silty clay

R—35 to 39 inches; unweathered bedrock

Minor Components**Clime**

Composition: About 10 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

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

Drainage class: Well drained

Ecological site: Limy Upland (pe30-36)

Martin

Composition: About 10 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Sogn

Composition: About 5 percent

Geomorphic Position: hillslope on upland

Slope: 5 to 20 percent

Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-36)

Irwin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

FLL—Florence-Labette complex, 2 to 12 percent slopes**Map Unit Composition**

Florence: 60 percent
 Labette: 40 percent

Component Descriptions**Florence**

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Clayey residuum weathered from cherty limestone
Slope: 6 to 12 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Low (About 4.3 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: Loamy Upland (pe30-36)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 13 inches; gravelly silt loam
 H2—13 to 18 inches; gravelly silty clay loam
 H3—18 to 46 inches; extremely gravelly clay
 R—46 to 50 inches; unweathered bedrock

Labette

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from limestone-shale

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 6.5 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 (pe30-36)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; silty clay loam
 H2—10 to 38 inches; silty clay
 R—38 to 38 inches; unweathered bedrock

Gy—Gymer silty clay loam, 3 to 8 percent slopes**Map Unit Composition**

Gymer: 85 percent
 Minor components: 15 percent

Component Descriptions**Gymer**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Fine-silty loess
Slope: 3 to 8 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: High
Ecological site: Loamy Upland (pe30-37)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 11 inches; silty clay loam
 H2—11 to 30 inches; silty clay loam
 H3—30 to 60 inches; silty clay loam

Minor Components**Morrill**

Composition: About 8 percent
Geomorphic Position: hillslope on upland
Slope: 4 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Wymore

Composition: About 7 percent
Geomorphic Position: hillslope on upland
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

He—Haynie very fine sandy loam, occasionally flooded**Map Unit Composition**

Haynie: 85 percent
 Minor components: 15 percent

Component Descriptions**Haynie**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood-plain step on river valley
Parent material: Coarse-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 12.4 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 (pe30-37)
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 9 inches; very fine sandy loam
 H2—9 to 60 inches; silt loam

Minor Components**Kimo**

Composition: About 8 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Lowland (pe30-36)

Sarpy

Composition: About 7 percent
Slope: 0 to 2 percent
Drainage class: Excessively drained
Ecological site: Sandy Lowland (pe30-36)

Unnamed Hydric Soil

Drainage class: Poorly drained

Ib—Irwin silty clay loam, 1 to 3 percent slopes**Map Unit Composition**

Irwin: 80 percent
 Minor components: 20 percent

Component Descriptions**Irwin**

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Shoulder
Parent material: Silty and clayey residuum weathered from clayey shale
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.6 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 (pe30-36)
Land capability (nonirrigated): 3e

Typical Profile:

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

Minor Components**Ladysmith**

Composition: About 10 percent
Geomorphic Position: divide on upland
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

Dwight

Composition: About 10 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe35-42)

Id—Irwin silty clay loam, 3 to 7 percent slopes**Map Unit Composition**

Irwin: 90 percent
 Minor components: 10 percent

Component Descriptions**Irwin**

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey residuum weathered from clayey shale
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.6 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Clay Upland (pe30-36)
Land capability (nonirrigated): 4e

Typical Profile:

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

Minor Components**Martin**

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Labette

Composition: About 5 percent
Geomorphic Position: ridge on upland
Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Iv—Ivan silt loam, occasionally flooded**Map Unit Composition**

Ivan: 90 percent
 Minor components: 10 percent

Component Descriptions**Ivan**

MLRA: 76 - Bluestem Hills
Landform: Flood plain on 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 13.1 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 (pe30-36)
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 36 inches; silt loam
 H2—36 to 60 inches; silt loam

Minor Components**Chase**

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Loamy Lowland (pe35-42)

Reading

Composition: About 4 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-36)

Unnamed Hydric Soil (saturation)

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

Ix—Ivan silty clay loam, channeled**Map Unit Composition**

Ivan: 80 percent
 Minor components: 20 percent

Component Descriptions**Ivan**

MLRA: 76 - Bluestem Hills
Landform: Flood plain on 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 12.8 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 5w

Typical Profile:

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

Minor Components**Martin**

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Reading

Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-36)

Unnamed Hydric Soil

Slope: 0 to 2 percent
Drainage class: Poorly drained

La—Labette silty clay loam, 2 to 5 percent slopes**Map Unit Composition**

Labette: 75 percent
 Minor components: 25 percent

Component Descriptions**Labette**

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Shoulder
Parent material: Silty and clayey residuum weathered from limestone and shale
Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 6.2 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 (pe30-36)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; silty clay loam
 H2—8 to 37 inches; silty clay
 R—37 to 41 inches; unweathered bedrock

Minor Components**Irwin**

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Florence

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Sogn

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)

Drainage class: Somewhat excessively drained

Ecological site: Shallow Limy (pe30-36)

LBB—Labette silty clay loam, 3 to 6 percent slopes

Map Unit Composition

Labette: 85 percent

Minor components: 15 percent

Component Descriptions

Labette

MLRA: 112 - Cherokee Prairies

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from limestone and shale

Slope: 3 to 6 percent

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

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 6.6 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: Limy Upland (pe35-42)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; silty clay loam

H2—13 to 38 inches; silty clay

R—38 to 42 inches; unweathered bedrock

Minor Components

Vinland

Composition: About 5 percent

Slope: 4 to 10 percent

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

Drainage class: Somewhat excessively drained

Ecological site: Limy Upland (pe35-42)

Sogn

Composition: About 5 percent

Slope: 3 to 20 percent

Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)

Drainage class: Somewhat excessively drained

Ecological site: Shallow Limy (pe30-37)

Martin

Composition: About 5 percent

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Lm—Ladysmith silty clay loam, 0 to 2 percent slopes

Map Unit Composition

Ladysmith: 90 percent

Minor components: 10 percent

Component Descriptions

Ladysmith

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Hillslope position: Summit

Parent material: Clayey alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

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

Available water capacity: Moderate (About 8.9 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 (pe30-36)

Land capability (nonirrigated): 2s

Typical Profile:

H1—0 to 8 inches; silty clay loam

H2—8 to 31 inches; silty clay

H3—31 to 60 inches; silty clay

Minor Components

Irwin

Composition: About 10 percent

Geomorphic Position: hillslope on upland

Slope: 1 to 3 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-36)

M-W—Miscellaneous Water

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Mb—Martin silty clay loam, 3 to 7 percent slopes**Rock outcrop**

Composition: About 3 percent
Geomorphic Position: hillslope on upland

Map Unit Composition

Martin: 80 percent
 Minor components: 20 percent

Component Descriptions**Martin**

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Silty and clayey colluvium derived from limestone-shale over silty and clayey residuum weathered from limestone-shale
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 9.9 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 (pe30-36)
Land capability (nonirrigated): 3e

Typical Profile:

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

Minor Components**Clime**

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Ivan

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Wamego

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent

Elmont

Composition: About 2 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Mc—Martin silty clay loam, 3 to 7 percent slopes, eroded**Map Unit Composition**

Martin: 85 percent
 Minor components: 15 percent

Component Descriptions**Martin**

MLRA: 112 - Cherokee Prairies
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale
Slope: 3 to 7 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: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-36)
Land capability (nonirrigated): 4e

Typical Profile:
 H1—0 to 6 inches; silty clay loam
 H2—6 to 60 inches; silty clay

Minor Components**Clime**

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches
 to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Rock outcrop

Composition: About 5 percent
Geomorphic Position: hillslope on upland

Mr—Morrill loam, 4 to 7 percent slopes**Map Unit Composition**

Morrill: 75 percent
 Minor components: 25 percent

Component Descriptions**Morrill**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Fine-loamy glaciofluvial deposits

Slope: 4 to 7 percent

Drainage class: Well drained

Slowest permeability: Moderately slow (About 0.20 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: High

Ecological site: Loamy Upland (pe30-37)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; loam

H2—8 to 37 inches; clay loam

H3—37 to 60 inches; clay loam

Minor Components**Pawnee**

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Sogn

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-36)

Wymore

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Ms—Morrill loam, 5 to 12 percent slopes, very stony**Map Unit Composition**

Morrill: 75 percent
 Minor components: 25 percent

Component Descriptions**Morrill**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Loamy drift

Slope: 5 to 12 percent

Drainage class: Well drained

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

Available water capacity: High (About 9.7 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 (pe30-37)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 10 inches; loam
 H2—10 to 15 inches; loam
 H3—15 to 42 inches; clay loam
 H4—42 to 60 inches; gravelly sandy clay loam

Minor Components**Clime**

Composition: About 15 percent
Geomorphic Position: hillslope on upland
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)

Pawnee

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Pa—Pawnee clay loam, 1 to 3 percent slopes**Map Unit Composition**

Pawnee: 85 percent
 Minor components: 15 percent

Component Descriptions**Pawnee**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Clayey till
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: High
Ecological site: Clay Upland (pe30-37)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 17 inches; clay loam
 H2—17 to 48 inches; clay
 H3—48 to 60 inches; clay loam

Minor Components**Morrill**

Composition: About 15 percent
Geomorphic Position: hillslope on upland
Slope: 4 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Pn—Pawnee clay loam, 3 to 7 percent slopes**Map Unit Composition**

Pawnee: 90 percent
 Minor components: 10 percent

Component Descriptions**Pawnee**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Clayey till
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: High
Ecological site: Clay Upland (pe30-37)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 17 inches; clay loam
 H2—17 to 48 inches; clay
 H3—48 to 60 inches; clay loam

Minor Components**Morrill**

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 4 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Po—Pawnee clay loam, 3 to 7 percent slopes, eroded

Map Unit Composition

Pawnee: 90 percent
Minor components: 10 percent

Component Descriptions

Pawnee

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Clayey till

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 7.1 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 12 to 36 inches

Runoff class: High

Ecological site: Clay Upland (pe30-37)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 6 inches; clay loam

H2—6 to 44 inches; clay

H3—44 to 60 inches; clay loam

Minor Components

Morrill

Composition: About 10 percent

Geomorphic Position: hillslope on upland

Slope: 4 to 7 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Px—Paxico silt loam, frequently flooded

Map Unit Composition

Paxico: 90 percent
Minor components: 10 percent

Component Descriptions

Paxico

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on river valley

Parent material: Silty alluvium over sandy alluvium

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 18 to 36 inches

Runoff class: Low

Ecological site: Subirrigated (pe 30-37)

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 8 inches; silt loam

H2—8 to 40 inches; silt loam

H3—40 to 60 inches; fine sandy loam

Minor Components

Sarpy

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Excessively drained

Ecological site: Sandy Lowland (pe30-36)

Haynie

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

Rb—Reading silt loam, 0 to 2 percent slopes, rarely flooded

Map Unit Composition

Reading: 90 percent
Minor components: 10 percent

Component Descriptions

Reading

MLRA: 112 - Cherokee Prairies

Landform: Terrace on valley

Parent material: Fine-silty alluvium

Slope: 0 to 1 percent

Drainage class: Moderately well drained

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

Available water capacity: High (About 11.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 42 to 72 inches
Runoff class: Medium
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 15 inches; silt loam
 H2—15 to 36 inches; silty clay loam
 H3—36 to 60 inches; silty clay loam, silty clay

Minor Components

Eudora

Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Re—Reading silty clay loam, 0 to 2 percent slopes, rarely flooded

Map Unit Composition

Reading: 90 percent
 Minor components: 10 percent

Component Descriptions

Reading

MLRA: 112 - Cherokee Prairies
Landform: Stream terrace on valley
Parent material: Fine-silty alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 13 inches; silty clay loam
 H2—13 to 45 inches; silty clay loam
 H3—45 to 60 inches; silty clay loam

Minor Components

Chase

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Loamy Lowland (pe35-42)

Ivan

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Sa—Sarpy loamy sand, frequently flooded

Map Unit Composition

Sarpy: 85 percent
 Minor components: 15 percent

Component Descriptions

Sarpy

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain 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: Frequent
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy Lowland (pe30-36)
Land capability (nonirrigated): 4s

Typical Profile:

H1—0 to 5 inches; loamy sand
 H2—5 to 60 inches; sand

Minor Components

Haynie

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Paxico

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained

Eudora

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 7 inches; fine sandy loam
 H2—7 to 60 inches; silt loam

Minor Components**Eudora**

Composition: About 15 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Kimo

Composition: About 9 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Lowland (pe30-36)

Unnamed Hydric Soil

Composition: About 1 percent
Drainage class: Poorly drained

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

Sarpy: 45 percent
 Haynie: 30 percent
 Minor components: 25 percent

Component Descriptions**Sarpy**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on river valley

Parent material: Sandy alluvium

Slope: 0 to 2 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: Occasional

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy Lowland (pe30-36)

Land capability (nonirrigated): 3w

Typical Profile:

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

Haynie

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood-plain step 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: Very high (About 12.4 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

**Tz—Tuttle channery silty clay
loam, 20 to 60 percent slopes,
stony****Map Unit Composition**

Tuttle: 85 percent
 Minor components: 15 percent

Component Descriptions**Tuttle**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Clayey colluvium and/or clayey residuum

Slope: 20 to 60 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Somewhat excessively drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 6.9 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 10 inches; channery silty clay loam
H2—10 to 22 inches; channery silty clay loam, channery silty clay
H3—22 to 54 inches; channery silty clay loam
Cr—54 to 58 inches; weathered bedrock

Minor Components

Clime

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Sogn

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-36)

Rock outcrop

Composition: About 5 percent

Shrink-swell potential: Very high (About 17.0 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: About 2 to 9 inches

Runoff class: Very high

Ecological site: Clay Lowland (pe30-37)

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 22 inches; silty clay
H2—22 to 60 inches; silty clay

Minor Components

Ivan

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Chase

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Loamy Lowland (pe35-42)

Reading

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-36)

W—Water

Wb—Wabash silty clay, occasionally flooded

Map Unit Composition

Wabash: 85 percent
Minor components: 15 percent

Component Descriptions

Wabash

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on valley

Parent material: Clayey alluvium

Slope: 0 to 1 percent

Drainage class: Poorly drained

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

Available water capacity: Moderate (About 6.6 inches)

We—Wamego silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Wamego: 75 percent
Minor components: 25 percent

Component Descriptions

Wamego

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Sandy and silty residuum weathered from shale

Slope: 3 to 7 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 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: High
Ecological site: Loamy Upland (pe30-37)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 10 inches; silt loam
 H2—10 to 27 inches; silty clay loam
 Cr—27 to 31 inches; weathered bedrock

Minor Components

Clime

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)

Elmont

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Rock outcrop

Composition: About 5 percent

Wf—Wamego silty clay loam, 7 to 15 percent slopes

Map Unit Composition

Wamego: 75 percent
 Minor components: 25 percent

Component Descriptions

Wamego

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Sandy and silty residuum weathered from shale

Slope: 7 to 15 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 4.8 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: Loamy Upland (pe30-37)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 11 inches; silty clay loam
 H2—11 to 25 inches; silty clay loam
 Cr—25 to 29 inches; weathered bedrock

Minor Components

Sogn

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 5 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-36)

Elmont

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Rock outcrop

Composition: About 5 percent
Geomorphic Position: hillslope on upland

Wy—Wymore silty clay loam, 2 to 6 percent slopes**Map Unit Composition**

Wymore: 100 percent

Component Descriptions**Wymore**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope, shoulder

Parent material: Silty and clayey loess

Slope: 2 to 6 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.5 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 9 to 14 inches

Runoff class: High

Ecological site: Clay Upland (pe30-37)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; silty clay loam

H2—8 to 40 inches; silty clay

H3—40 to 60 inches; silty clay loam