

## 015CS—Clime-Sogn complex, 3 to 15 percent slopes

### Map Unit Composition

Clime: 67 percent  
Sogn: 30 percent  
Minor components: 3 percent

### Component Descriptions

#### Clime

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, calcareous  
*Slope:* 3 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:* High  
*Ecological site:* Limy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 9 inches; silty clay  
H2—9 to 33 inches; silty clay  
Cr—33 to 37 inches; unweathered bedrock

#### Sogn

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Summit  
*Parent material:* Loamy residuum weathered from limestone, unspecified  
*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 1.4 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)

#### Typical Profile:

H1—0 to 7 inches; silty clay loam  
R—7 to 11 inches; unweathered bedrock

### Minor Components

#### Rock outcrop

*Composition:* About 3 percent

## 015FC—Florence Cherty silt loam, 5 to 10 percent slopes

### Map Unit Composition

Florence: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Florence

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone  
*Slope:* 5 to 10 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 4.2 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):* 6e

#### Typical Profile:

H1—0 to 14 inches; gravelly silt loam  
H2—14 to 22 inches; very gravelly silty clay  
H3—22 to 45 inches; very gravelly clay  
R—45 to 49 inches; unweathered bedrock

### Minor Components

#### Dwight

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**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:* Loamy Upland (pe30-36)

**Tully**

*Composition:* About 5 percent  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

**Tully**

*Composition:* About 5 percent  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

## **015LC—Labette silty clay loam, 3 to 5 percent slopes**

### **Map Unit Composition**

Labette: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

**Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone-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 6.6 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:* Loamy Upland (pe30-36)  
*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****Irwin**

*Composition:* About 5 percent  
*Geomorphic Position:* hillside on upland  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe25-34)

## **015LS—Ladysmith silty clay loam, 0 to 2 percent slopes**

### **Map Unit Composition**

Ladysmith: 90 percent

### **Component Descriptions**

**Ladysmith**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Ridge on upland  
*Hillslope position:* Shoulder, summit  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Impermeable (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.7 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* None  
*Depth to seasonal water saturation:* About 0 to 0 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe30-36)  
*Land capability (nonirrigated):* 2s

*Typical Profile:*

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

## **015NS—Norge silt loam, 3 to 5 percent slopes**

### **Map Unit Composition**

Norge: 85 percent  
 Minor components: 15 percent

## Component Descriptions

### Norge

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Hillslope on upland

*Parent material:* Fine-silty alluvium and/or fine-silty loess

*Slope:* 3 to 5 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:* Medium

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

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 9 inches; silt loam

H2—9 to 72 inches; silty clay loam

### Minor Components

#### Olpe

*Composition:* About 8 percent

*Slope:* 2 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

#### Tully

*Composition:* About 7 percent

*Slope:* 4 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

## 015NT—Norge silty clay loam, 3 to 5 percent slopes, eroded

### Map Unit Composition

Norge: 85 percent

## Component Descriptions

### Norge

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Hillslope on upland

*Parent material:* Fine-silty alluvium and/or fine-silty loess

*Slope:* 3 to 5 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 11.2 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Medium

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

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 5 inches; silty clay loam

H2—5 to 72 inches; silty clay loam

## 015ON—Olpe-Norge complex, 2 to 7 percent slopes

### Map Unit Composition

Olpe: 50 percent

Norge: 30 percent

## Component Descriptions

### Olpe

*MLRA:* 76 - Bluestem Hills

*Landform:* Paleoterrace on upland

*Parent material:* Clayey alluvium

*Slope:* 2 to 7 percent

*Drainage class:* Well drained

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

*Available water capacity:* Very low (About 1.5 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* Very high

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 10 inches; gravelly silty clay loam

H2—10 to 14 inches; gravelly silty clay loam

H3—14 to 60 inches; extremely gravelly silty clay

### Norge

*MLRA:* 76 - Bluestem Hills

*Landform:* Terrace on upland

*Parent material:* Fine-silty alluvium and/or fine-silty loess  
*Slope:* 2 to 7 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:* Medium  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*  
 H1—0 to 9 inches; silt loam  
 H2—9 to 72 inches; silty clay loam

## **015VE—Verdigris Soils, frequently flooded**

### **Map Unit Composition**

Verdigris: 85 percent  
 Minor components: 10 percent

### **Component Descriptions**

**Verdigris**  
*MLRA:* 76 - Bluestem Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.6 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 8 inches; silt loam  
 H2—8 to 57 inches; silty clay loam

### **Minor Components**

### **Tully**

*Composition:* About 10 percent  
*Slope:* 4 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

## **019MB—Martin silty clay loam, 1 to 4 percent slopes**

### **Map Unit Composition**

Martin: 85 percent  
 Minor components: 15 percent

### **Component Descriptions**

**Martin**  
*MLRA:* 76 - Bluestem 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 4 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.2 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 (pe30-36)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*  
 H1—0 to 12 inches; silty clay loam  
 H2—12 to 18 inches; silty clay loam  
 H3—18 to 54 inches; silty clay  
 Cr—54 to 58 inches; unweathered bedrock

### **Minor Components**

**Osage**  
*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-38)

### **Dwight**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Claypan (pe35-38)

## 049FM—Florence-Martin complex, 2 to 12 percent slopes

### Map Unit Composition

Florence: 60 percent  
Martin: 30 percent  
Minor components: 10 percent

### Component Descriptions

#### Florence

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Summit, backslope  
*Parent material:* Limestone, cherty  
*Slope:* 2 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 4.2 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):* 6e

#### Typical Profile:

H1—0 to 6 inches; gravelly silt loam  
H2—6 to 12 inches; gravelly silt loam  
H3—12 to 32 inches; extremely gravelly silty clay  
H4—32 to 49 inches; extremely cobbly clay  
R—49 to 53 inches; unweathered bedrock

#### Martin

*MLRA:* 76 - Bluestem 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:* 2 to 11 percent  
*Drainage class:* 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:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

#### Typical Profile:

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

### Minor Components

#### Clime

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

#### Dwight

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

## 049IV—Ivan silt loam, channeled

### Map Unit Composition

Ivan: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Ivan

*MLRA:* 76 - Bluestem Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Calcareous 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:* Negligible  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

H1—0 to 33 inches; silt loam  
H2—33 to 60 inches; silt loam

**Minor Components****Dennis**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 4 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe24-32)

**Martin**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe30-36)

**Osage**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-38)

**191MB—Milan loam, 1 to 3 percent slopes****Map Unit Composition**

Milan: 100 percent

**Component Descriptions****Milan**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.9 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe24-32)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 10 inches; loam  
H2—10 to 70 inches; clay loam

**191MC—Milan loam, 3 to 6 percent slopes****Map Unit Composition**

Milan: 100 percent

**Component Descriptions****Milan**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Paleoterrace on river valley  
*Parent material:* Alluvium  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.9 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe24-32)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 10 inches; loam  
H2—10 to 70 inches; clay loam

**191PX—Pratt loamy fine sand, 3 to 8 percent slopes****Map Unit Composition**

Pratt: 100 percent

**Component Descriptions****Pratt**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 3 to 8 percent

*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.4 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe24-32)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 12 inches; loamy fine sand  
 H2—12 to 40 inches; loamy fine sand  
 H3—40 to 60 inches; fine sand

**Minor Components**  
**Carwile**

**Unnamed Wet Soils**  
*Phase:* Sandy, Depression

**191RO—Rosehill clay loam, 1 to 3 percent slopes**

**Map Unit Composition**

Rosehill: 100 percent

**Component Descriptions**

**Rosehill**  
*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillslope on upland  
*Parent material:* Residuum  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 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:* Low  
*Ecological site:* Clay Upland (pe24-32)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 9 inches; clay loam

H2—9 to 36 inches; clay  
 H3—36 to 40 inches; unweathered bedrock

**191RS—Rosehill clay loam, 3 to 6 percent slopes**

**Map Unit Composition**

Rosehill: 100 percent

**Component Descriptions**

**Rosehill**  
*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillslope on upland  
*Parent material:* Residuum  
*Slope:* 3 to 6 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 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:* Medium  
*Ecological site:* Clay Upland (pe24-32)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 9 inches; clay loam  
 H2—9 to 36 inches; clay  
 H3—36 to 40 inches; unweathered bedrock

**191TV—Tivoli fine sand, 8 to 20 percent slopes**

**Map Unit Composition**

Tivoli: 100 percent

**Component Descriptions**

**Tivoli**  
*MLRA:* 76 - Bluestem Hills  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 5 to 30 percent

*Drainage class:* Excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Very low (About 3.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Choppy Sands (pe24-32)  
*Land capability (nonirrigated):* 7e

*Typical Profile:*

H1—0 to 7 inches; fine sand  
 H2—7 to 60 inches; fine sand

## 191US—Ustifluvents, channeled

### Map Unit Composition

Ustifluvents: 100 percent

### Component Descriptions

#### Ustifluvents

*MLRA:* 76 - Bluestem Hills  
*Slope:* 0 to 30 percent  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high

*Typical Profile:*

#### Minor Components

##### Unnamed Wet Soils

*Phase:* Sandy, Drainageway

## Aa—Attica loamy fine sand, 3 to 6 percent slopes

### Map Unit Composition

Attica: 85 percent  
 Minor components: 15 percent

### Component Descriptions

#### Attica

*MLRA:* 76 - Bluestem Hills  
*Landform:* Divide on upland

*Hillslope position:* Summit  
*Parent material:* Loamy eolian deposits  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 7.4 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy (pe24-32)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 9 inches; loamy fine sand  
 H2—9 to 20 inches; fine sandy loam  
 H3—20 to 60 inches; fine sandy loam

#### Minor Components

##### Milan

*Composition:* About 15 percent  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24-32)

## Ab—Attica-Tivoli loamy fine sands, 3 to 15 percent slopes

### Map Unit Composition

Attica: 70 percent  
 Tivoli: 25 percent

### Component Descriptions

#### Attica

*MLRA:* 76 - Bluestem Hills  
*Landform:* Divide on upland  
*Hillslope position:* Footslope, toeslope  
*Parent material:* Loamy eolian deposits  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 7.4 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy (pe24-32)  
*Land capability (nonirrigated):* 6e



*Typical Profile:*

H1—0 to 9 inches; loamy fine sand  
 H2—9 to 20 inches; fine sandy loam  
 H3—20 to 60 inches; fine sandy loam

**Tivoli**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Eolian sands

*Slope:* 5 to 15 percent

*Drainage class:* Excessively drained

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

*Available water capacity:* Low (About 3.2 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Very low

*Ecological site:* Sands (pe24-32)

*Land capability (nonirrigated):* 7e

*Typical Profile:*

H1—0 to 7 inches; loamy fine sand  
 H2—7 to 60 inches; fine sand

**AED—Arents, Earthen Dam****Ba—Bethany silt loam, 0 to 1 percent slopes****Map Unit Composition**

Bethany: 100 percent

**Component Descriptions****Bethany**

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Ridge on upland

*Hillslope position:* Summit

*Parent material:* Clayey loess over old clayey alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 10.0 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 1

*Typical Profile:*

H1—0 to 9 inches; silt loam  
 H2—9 to 16 inches; silty clay loam  
 H3—16 to 60 inches; silty clay

**Bb—Bethany silt loam, 1 to 3 percent slopes****Map Unit Composition**

Bethany: 95 percent

Minor components: 5 percent

**Component Descriptions****Bethany**

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Hillslope on upland

*Parent material:* Clayey loess over old clayey alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 10.0 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 (pe24-32)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 9 inches; silt loam  
 H2—9 to 16 inches; silty clay loam  
 H3—16 to 60 inches; silty clay

**Minor Components****Vanoss**

*Composition:* About 5 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

## **Bc—Brewer silty clay loam, rarely flooded**

### **Map Unit Composition**

Brewer: 90 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Brewer**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Flood plain on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Terrace (pe24-32)  
*Land capability (nonirrigated):* 1

#### *Typical Profile:*

H1—0 to 15 inches; silty clay loam  
H2—15 to 42 inches; silty clay  
H3—42 to 60 inches; silty clay loam

#### **Minor Components**

##### **Verdigris**

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

##### **Osage**

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

## **Ca—Canadian fine sandy loam, rarely flooded**

### **Map Unit Composition**

Canadian: 90 percent  
Minor components: 10 percent

## **Component Descriptions**

#### **Canadian**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Flood plain on river valley  
*Parent material:* Coarse-loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 1.98 in/hr)  
*Available water capacity:* Moderate (About 8.1 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Sandy Terrace (pe24-32)  
*Land capability (nonirrigated):* 2s

#### *Typical Profile:*

H1—0 to 28 inches; fine sandy loam  
H2—28 to 36 inches; fine sandy loam  
H3—36 to 60 inches; fine sandy loam

#### **Minor Components**

##### **Lesho**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* inches to strongly contrasting textural stratification  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe24-32)

##### **Dale**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe24-32)

## **Cb—Clime-Rock outcrop complex, 15 to 35 percent slopes**

### **Map Unit Composition**

Clime: 55 percent  
Rock outcrop: 25 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 shale, calcareous  
*Slope:* 15 to 25 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 4.7 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):* 7e

*Typical Profile:*

H1—0 to 8 inches; silty clay  
 H2—8 to 20 inches; silty clay  
 H3—20 to 36 inches; silty clay  
 Cr—36 to 40 inches; unweathered bedrock

**Rock outcrop**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Drainage class:* Moderately well drained  
*Depth to seasonal water saturation:* More than 6 feet  
*Land capability (nonirrigated):* 8

**Minor Components**

**Sogn**

*Composition:* About 20 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 15 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Ecological site:* Shallow Limy (pe30-36)

**Cc—Clime-Sogn complex, 2 to 15 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 shale, calcareous  
*Slope:* 2 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 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):* 6e

*Typical Profile:*

H1—0 to 8 inches; silty clay  
 H2—8 to 20 inches; silty clay  
 H3—20 to 36 inches; silty clay  
 Cr—36 to 40 inches; unweathered bedrock

**Sogn**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy residuum weathered from limestone, unspecified  
*Slope:* 2 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 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 (pe30-36)  
*Land capability (nonirrigated):* 7s

*Typical Profile:*

H1—0 to 10 inches; silty clay loam  
 R—10 to 14 inches; unweathered bedrock

**Minor Components**

**Rock outcrop**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Drainage class:* Moderately well drained

**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)

## **Db—Dwight silt loam, 0 to 2 percent slopes**

### **Map Unit Composition**

Dwight: 90 percent  
 Minor components: 10 percent

## **Da—Dale silt loam, rarely flooded**

### **Map Unit Composition**

Dale: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Dale**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Stream terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.8 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Loamy Terrace (pe24-32)  
*Land capability (nonirrigated):* 1

#### *Typical Profile:*

H1—0 to 42 inches; silt loam  
 H2—42 to 60 inches; loam

#### **Minor Components**

##### **Canadian**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy Terrace (pe24-32)

##### **Lesho**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* inches to strongly contrasting textural stratification  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe24-32)

### **Component Descriptions**

#### **Dwight**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone, cherty  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.3 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:* Clay Pan (pe30-36)  
*Land capability (nonirrigated):* 4s

#### *Typical Profile:*

H1—0 to 5 inches; silt loam  
 H2—5 to 28 inches; silty clay  
 H3—28 to 54 inches; silty clay  
 R—54 to 58 inches; unweathered bedrock

#### **Minor Components**

##### **Irwin**

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

##### **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:* Loamy Upland (pe30-36)

## Fa—Florence Cherty silt loam, 5 to 15 percent slopes

### Map Unit Composition

Florence: 85 percent  
 Florence: 85 percent  
 Minor components: 15 percent

### Component Descriptions

#### Florence

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope, summit  
*Parent material:* Clayey residuum weathered from clayey shale and/or clayey 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 4.3 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 17 inches; very gravelly silty clay loam  
 H3—17 to 45 inches; extremely cobbly clay  
 R—45 to 49 inches; unweathered bedrock

#### Florence

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone  
*Slope:* 5 to 10 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 4.2 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):* 6e

#### Typical Profile:

H1—0 to 14 inches; gravelly silt loam  
 H2—14 to 22 inches; very gravelly silty clay  
 H3—22 to 45 inches; very gravelly clay  
 R—45 to 49 inches; unweathered 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 (pe30-36)

#### Dwight

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

#### 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:* Loamy Upland (pe30-36)

## Ia—Irwin silty clay loam, 1 to 3 percent slopes

### Map Unit Composition

Irwin: 85 percent  
 Minor components: 15 percent

### Component Descriptions

#### Irwin

*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from shale, clayey  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.8 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe25-34)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

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

**Minor Components**

**Rosehill**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Clay Upland (pe25-34)

**Dwight**

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

**Smolan**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe25-34)

**Ib—Ivan silt loam, occasionally flooded**

**Map Unit Composition**

Ivan: 85 percent  
 Minor components: 15 percent

**Component Descriptions**

**Ivan**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Calcareous 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 13.0 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 28 inches; silt loam  
 H2—28 to 60 inches; silt loam

**Minor Components**

**Verdigris**

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

**Brewer**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe24-32)

**Reading**

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

**INT—Aquolls**

**Map Unit Composition**

Aquolls: 100 percent

**Component Descriptions**

**Aquolls**

*MLRA:* -  
*Landform:* Depression on terrace on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Very poorly drained  
*Flooding hazard:* None  
*Ponding hazard:* Occasional  
*Depth to seasonal water saturation:* About 0 to 0 inches  
*Runoff class:* Negligible

*Land capability (nonirrigated):* 5w

*Typical Profile:*

H1—0 to 72 inches; variable

*General Considerations:* This map unit was formerly labeled as an Intermittent Water spot symbol. These depressional areas contain soils that are occasionally ponded for long duration.

## **La—Labette silty clay loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Labette: 85 percent

Minor components: 15 percent

### **Component Descriptions**

#### **Labette**

*MLRA:* 76 - Bluestem Hills

*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 6.0 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 (pe30-36)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 7 inches; silty clay loam

H2—7 to 36 inches; silty clay

R—36 to 40 inches; unweathered bedrock

#### **Minor Components**

##### **Dwight**

*Composition:* About 8 percent

*Slope:* 0 to 2 percent

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

*Drainage class:* Moderately well drained

*Ecological site:* Clay Pan (pe30-36)

##### **Irwin**

*Composition:* About 7 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

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

## **Lb—Labette silty clay loam, 3 to 7 percent slopes**

### **Map Unit Composition**

Labette: 90 percent

Minor components: 10 percent

### **Component Descriptions**

#### **Labette**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

*Slope:* 3 to 7 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:* Low (About 6.0 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 (pe30-36)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 6 inches; silty clay loam

H2—6 to 36 inches; silty clay

R—36 to 40 inches; unweathered 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 (pe30-36)

##### **Sogn**

*Composition:* About 5 percent

*Slope:* 0 to 10 percent

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

*Drainage class:* Somewhat excessively drained

*Ecological site:* Shallow Limy (pe30-36)

## **Lc—Labette silty clay loam, 2 to 7 percent slopes, eroded**

### **Map Unit Composition**

Labette: 85 percent  
Minor components: 15 percent

### **Component Descriptions**

#### **Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone-shale  
*Slope:* 2 to 7 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 6.0 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 (pe30-36)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

H1—0 to 7 inches; silty clay loam  
H2—7 to 36 inches; silty clay  
R—36 to 40 inches; unweathered bedrock

#### **Minor Components**

##### **Unnamed Soil**

*Phase:* Sev. Er.  
*Composition:* About 10 percent  
*Slope:* 2 to 7 percent  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (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 (pe30-36)

## **Ld—Labette-Dwight complex, 1 to 3 percent slopes**

### **Map Unit Composition**

Labette: 55 percent  
Dwight: 35 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Labette**

*MLRA:* 76 - Bluestem Hills  
*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 6.0 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 (pe30-36)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

H1—0 to 7 inches; silty clay loam  
H2—7 to 36 inches; silty clay  
R—36 to 40 inches; unweathered bedrock

#### **Dwight**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone, cherty  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.3 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:* Clay Pan (pe30-36)  
*Land capability (nonirrigated):* 4s



*Typical Profile:*

H1—0 to 5 inches; silt loam  
 H2—5 to 28 inches; silty clay  
 H3—28 to 54 inches; silty clay  
 R—54 to 58 inches; unweathered bedrock

**Minor Components****Irwin**

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

**Rock outcrop**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Drainage class:* Moderately well drained

**Le—Labette-Sogn silty clay loams,  
2 to 8 percent slopes****Map Unit Composition**

Labette: 60 percent  
 Sogn: 30 percent  
 Minor components: 10 percent

**Component Descriptions****Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone-shale  
*Slope:* 2 to 8 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 6.0 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 (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 7 inches; silty clay loam  
 H2—7 to 36 inches; silty clay  
 R—36 to 40 inches; unweathered bedrock

**Sogn***MLRA:* 76 - Bluestem Hills*Landform:* Hillslope on upland*Parent material:* Loamy residuum weathered from limestone, unspecified*Slope:* 2 to 8 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:* Low*Ecological site:* Shallow Limy (pe30-36)*Land capability (nonirrigated):* 7s*Typical Profile:*

H1—0 to 10 inches; silty clay loam  
 R—10 to 14 inches; unweathered bedrock

**Minor Components****Rock outcrop**

*Composition:* About 10 percent  
*Drainage class:* Moderately well drained

**Lf—Lesho clay loam, occasionally  
flooded****Map Unit Composition**

Lesho: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Lesho**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy and sandy alluvium  
*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* inches to strongly contrasting textural stratification  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Very low (About 1.7 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Low

*Ecological site:* Subirrigated (pe24-32)

*Land capability (nonirrigated):* 3w

*Typical Profile:*

H1—0 to 17 inches; clay loam

H2—17 to 24 inches; loam

H3—24 to 60 inches; fine sand

### Minor Components

#### Canadian

*Composition:* About 5 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Sandy Terrace (pe24-32)

#### Dale

*Composition:* About 5 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Terrace (pe24-32)

## Lg—Lincoln-Tivoli complex, 0 to 10 percent slopes

### Map Unit Composition

Lincoln: 55 percent

Tivoli: 30 percent

Minor components: 15 percent

### Component Descriptions

#### Lincoln

*MLRA:* 80A - Central Rolling Red Prairies

*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 3.7 inches)

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

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 60 to 72 inches

*Runoff class:* Negligible

*Ecological site:* Sandy Lowland (pe24-32)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 9 inches; fine sandy loam

H2—9 to 60 inches; stratified fine sand to clay loam

#### Tivoli

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Hillslope on upland

*Parent material:* Eolian sands

*Slope:* 5 to 10 percent

*Drainage class:* Excessively drained

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

*Available water capacity:* Low (About 3.2 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Very low

*Ecological site:* Sands (pe24-32)

*Land capability (nonirrigated):* 7e

*Typical Profile:*

H1—0 to 7 inches; loamy fine sand

H2—7 to 60 inches; fine sand

### Minor Components

#### Canadian

*Composition:* About 8 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Sandy Terrace (pe24-32)

#### Attica

*Composition:* About 7 percent

*Geomorphic Position:* divide on upland

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe24-32)

## M-W—Miscellaneous Water

## Ma—Martin silty clay loam, 1 to 3 percent slopes

### Map Unit Composition

Martin: 90 percent

Minor components: 10 percent

### Component Descriptions

#### Martin

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Hillslope position:* Footslope, backslope

*Parent material:* Silty and clayey colluvium

derived from limestone-shale over silty and clayey

residuum weathered from limestone-shale

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.7 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):* 2e

*Typical Profile:*

H1—0 to 9 inches; silty clay loam  
 H2—9 to 15 inches; silty clay loam  
 H3—15 to 60 inches; silty clay

**Minor Components**

**Tabler**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe24-32)

**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:* Loamy Upland (pe30-36)

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

**Map Unit Composition**

Martin: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Martin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope, footslope  
*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 9.7 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 8 inches; silty clay loam  
 H2—8 to 15 inches; silty clay loam  
 H3—15 to 60 inches; silty clay

**Minor Components**

**Clime**

*Composition:* About 5 percent  
*Slope:* 5 to 9 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Limy Upland (pe30-36)

**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:* Loamy Upland (pe30-36)

**Mc—Martin silty clay loam, 2 to 7 percent slopes, eroded**

**Map Unit Composition**

Martin: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Martin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey colluvium derived from limestone-shale over silty and clayey residuum weathered from limestone-shale  
*Slope:* 2 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:* More than 6 feet  
*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

**Typical Profile:**

H1—0 to 9 inches; silty clay loam  
 H2—9 to 15 inches; silty clay loam  
 H3—15 to 60 inches; silty clay

**Minor Components**

**Clime**

*Composition:* About 5 percent  
*Slope:* 5 to 9 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Limy Upland (pe30-36)

**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:* Loamy Upland (pe30-36)

**MCC—Martin silty clay loam, 4 to 7 percent slopes**

**Map Unit Composition**

Martin: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Martin**

*MLRA:* 76 - Bluestem Hills  
*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:* 4 to 7 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:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

**Typical Profile:**

H1—0 to 9 inches; silty clay loam  
 H2—9 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:* Moderately well drained  
*Ecological site:* Limy Upland (pe30-36)

**Md—Martin-Florence complex, 2 to 12 percent slopes**

**Map Unit Composition**

Florence: 85 percent  
 Martin: 55 percent  
 Florence: 30 percent  
 Minor components: 15 percent

**Component Descriptions**

**Florence**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone  
*Slope:* 5 to 10 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 4.2 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):* 6e

**Typical Profile:**

H1—0 to 14 inches; gravelly silt loam  
 H2—14 to 22 inches; very gravelly silty clay  
 H3—22 to 45 inches; very gravelly clay  
 R—45 to 49 inches; unweathered bedrock

**Martin**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

residuum weathered from limestone-shale

*Slope:* 2 to 11 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:* More than 6  
feet

*Runoff class:* Very high

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 9 inches; silty clay loam

H2—9 to 15 inches; silty clay loam

H3—15 to 60 inches; silty clay

### **Florence**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Clayey residuum weathered  
from clayey shale and/or clayey residuum  
weathered

from cherty limestone

*Slope:* 2 to 11 percent

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

*Drainage class:* Moderately 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 14 inches; gravelly silt loam

H2—14 to 17 inches; gravelly silty clay loam

H3—17 to 45 inches; very gravelly clay

R—45 to 49 inches;

### **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:* Loamy Upland (pe30-36)

### **Rock outcrop**

*Composition:* About 5 percent

*Drainage class:* Moderately well drained

### **Dwight**

*Composition:* About 5 percent

*Slope:* 0 to 2 percent

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

*Drainage class:* Moderately well drained

*Ecological site:* Clay Pan (pe30-36)

## **Me—Milan fine sandy loam, 1 to 5 percent slopes**

### **Map Unit Composition**

Milan: 90 percent

Minor components: 10 percent

### **Component Descriptions**

#### **Milan**

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Hillslope on upland

*Parent material:* Loamy alluvium

*Slope:* 1 to 5 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 10.5  
inches)

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

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 9 inches; fine sandy loam

H2—9 to 60 inches; sandy clay loam

### **Minor Components**

#### **Norge**

*Composition:* About 5 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

#### **Minco**

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24-32)

## **Mf—Minco silt loam, 3 to 7 percent slopes**

### **Map Unit Composition**

Minco: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Minco**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy eolian deposits  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.1 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe24-32)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*  
 H1—0 to 42 inches; silt loam  
 H2—42 to 60 inches; silt loam

#### **Minor Components**

##### **Vanoss**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24-32)

## **Mg—Minco silt loam, 7 to 15 percent slopes**

### **Map Unit Composition**

Minco: 85 percent  
 Minor components: 15 percent

### **Component Descriptions**

#### **Minco**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy eolian deposits  
*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.1 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe24-32)  
*Land capability (nonirrigated):* 6e

#### *Typical Profile:*

H1—0 to 42 inches; silt loam  
 H2—42 to 60 inches; silt loam

#### **Minor Components**

##### **Vanoss**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24-32)

##### **Attica**

*Composition:* About 5 percent  
*Geomorphic Position:* divide on upland  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe24-32)

##### **Rock outcrop**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Drainage class:* Moderately well drained

## **Na—Norge silt loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Norge: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Norge**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland

*Parent material:* Fine-silty alluvium and/or fine-silty loess

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 11.4 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 8 inches; silt loam

H2—8 to 18 inches; silty clay loam

H3—18 to 60 inches; silty clay loam

### Minor Components

#### Minco

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

#### Smolan

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

*Available water capacity:* High (About 11.4 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 7 inches; silt loam

H2—7 to 18 inches; silty clay loam

H3—18 to 60 inches; silty clay loam

### Minor Components

#### Minco

*Composition:* About 8 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

#### Smolan

*Composition:* About 7 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

## Nc—Norge silty clay loam, 3 to 7 percent slopes, eroded

### Map Unit Composition

Norge: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Norge

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Hillslope on upland

*Parent material:* Fine-silty alluvium and/or fine-silty loess

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 11.3 inches)

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

*Flooding hazard:* None

## Nb—Norge silt loam, 3 to 7 percent slopes

### Map Unit Composition

Norge: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Norge

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Hillslope on upland

*Parent material:* Fine-silty alluvium and/or fine-silty loess

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

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

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

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 6 inches; silty clay loam

H2—6 to 18 inches; silty clay loam

H3—18 to 60 inches; silty clay loam

### Minor Components

#### Minco

*Composition:* About 8 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

#### Smolan

*Composition:* About 7 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

## Oa—Olpe gravelly silt loam, 2 to 12 percent slopes

### Map Unit Composition

Olpe: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Olpe

*MLRA:* 76 - Bluestem Hills

*Landform:* Paleoterrace on upland

*Parent material:* Clayey alluvium

*Slope:* 2 to 12 percent

*Drainage class:* Well drained

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

*Available water capacity:* Very low (About 1.6 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:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 10 inches; gravelly silt loam

H2—10 to 22 inches; very gravelly silty clay loam

H3—22 to 60 inches; extremely gravelly silty clay

### Minor Components

#### Norge

*Composition:* About 8 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

#### Smolan

*Composition:* About 7 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

## Ob—Osage silty clay, occasionally flooded

### Map Unit Composition

Osage: 90 percent

Minor components: 10 percent

### Component Descriptions

#### Osage

*MLRA:* 76 - Bluestem Hills

*Landform:* Flood plain on river 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 6.4 inches)

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

*Flooding hazard:* Occasional

*Ponding hazard:* Occasional

*Depth to seasonal water saturation:* About 0 to 12 inches

*Runoff class:* Very high

*Ecological site:* Clay Lowland (pe30-36)

*Land capability (nonirrigated):* 3w

*Typical Profile:*

H1—0 to 18 inches; silty clay

H2—18 to 60 inches; silty clay

### Minor Components

#### Verdigris

*Composition:* About 5 percent



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

**Brewer**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe24-32)

## **Ra—Reading silt loam, 0 to 2 percent slopes, rarely flooded**

### **Map Unit Composition**

Reading: 85 percent  
 Minor components: 15 percent

### **Component Descriptions**

**Reading**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Terrace on river 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 14 inches; silt loam  
 H2—14 to 50 inches; silty clay loam  
 H3—50 to 60 inches; silty clay loam

**Minor Components****Brewer**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Terrace (pe24-32)

**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)

**Ivan**

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

## **Rb—Rosehill silty clay, 1 to 3 percent slopes**

### **Map Unit Composition**

Rosehill: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

**Rosehill**

*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillslope on upland  
*Hillslope position:* Summit  
*Parent material:* Clayey residuum weathered from clayey shale  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 4.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe25-34)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

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

**Minor Components****Irwin**

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

**Tabler**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe24-32)

**Rc—Rosehill silty clay, 3 to 6 percent slopes****Map Unit Composition**

Rosehill: 90 percent  
Minor components: 10 percent

**Component Descriptions****Rosehill**

*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Clayey residuum weathered from clayey shale  
*Slope:* 3 to 6 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 4.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe25-34)  
*Land capability (nonirrigated):* 4e

**Typical Profile:**

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

**Minor Components****Irwin**

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

**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:* Loamy Upland (pe30-36)

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

Smolan: 90 percent  
Minor components: 10 percent

**Component Descriptions****Smolan**

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

**Typical Profile:**

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

**Minor Components****Norge**

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

**Labette**

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

## **Sb—Smolan silty clay loam, 3 to 7 percent slopes**

### **Map Unit Composition**

Smolan: 90 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Smolan**

*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.7 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe25-34)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

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

#### **Minor Components**

##### **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)

##### **Norge**

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

## **Sc—Smolan silty clay loam, 3 to 7 percent slopes, eroded**

### **Map Unit Composition**

Smolan: 90 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Smolan**

*MLRA:* 75 - Central Loess Plains  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.7 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe25-34)  
*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

H1—0 to 6 inches; silty clay loam  
H2—6 to 15 inches; silty clay loam  
H3—15 to 40 inches; silty clay  
H4—40 to 60 inches; silty clay loam

#### **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 (pe30-36)

##### **Norge**

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

## **Sd—Sogn silty clay loam, 0 to 10 percent slopes**

### **Map Unit Composition**

Sogn: 90 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Sogn**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Loamy residuum weathered from limestone, unspecified

*Slope:* 0 to 10 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 (pe30-36)  
*Land capability (nonirrigated):* 7s

*Typical Profile:*  
 H1—0 to 10 inches; silty clay loam  
 R—10 to 14 inches; unweathered bedrock

#### Minor Components

##### Clime

*Composition:* About 5 percent  
*Slope:* 7 to 15 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Limy Upland (pe30-36)

##### 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:* Loamy Upland (pe30-36)

### Ta—Tabler silty clay loam, 0 to 1 percent slopes

#### Map Unit Composition

Tabler: 95 percent  
 Minor components: 5 percent

#### Component Descriptions

##### Tabler

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Calcareous clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 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 30 to 42 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe24-32)  
*Land capability (nonirrigated):* 2s

##### Typical Profile:

H1—0 to 8 inches; silty clay loam  
 H2—8 to 48 inches; silty clay  
 H3—48 to 60 inches; silty clay

#### Minor Components

##### Vanoss

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24-32)

### Tb—Tabler silty clay loam, 1 to 3 percent slopes

#### Map Unit Composition

Tabler: 100 percent

#### Component Descriptions

##### Tabler

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Calcareous clayey alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.4 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 30 to 42 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe24-32)  
*Land capability (nonirrigated):* 3e

##### Typical Profile:

H1—0 to 8 inches; silty clay loam  
 H2—8 to 48 inches; silty clay  
 H3—48 to 60 inches; silty clay

## **Va—Vanoss silt loam, 0 to 1 percent slopes**

### **Map Unit Composition**

Vanoss: 95 percent  
Minor components: 5 percent

### **Component Descriptions**

#### **Vanoss**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.5 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Negligible  
*Ecological site:* Loamy Upland (pe24-32)  
*Land capability (nonirrigated):* 1

#### *Typical Profile:*

H1—0 to 12 inches; silt loam  
H2—12 to 38 inches; silty clay loam  
H3—38 to 60 inches; silt loam

#### **Minor Components**

##### **Tabler**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe24-32)

## **Vb—Vanoss silt loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Vanoss: 95 percent  
Minor components: 5 percent

### **Component Descriptions**

#### **Vanoss**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.5 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe24-32)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*  
H1—0 to 12 inches; silt loam  
H2—12 to 38 inches; silty clay loam  
H3—38 to 60 inches; silt loam

#### **Minor Components**

##### **Minco**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24-32)

## **Vc—Vanoss silt loam, 3 to 7 percent slopes**

### **Map Unit Composition**

Vanoss: 90 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Vanoss**

*MLRA:* 80A - Central Rolling Red Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty alluvium  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.5 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe24-32)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 12 inches; silt loam

H2—12 to 38 inches; silty clay loam

H3—38 to 60 inches; silt loam

### Minor Components

#### Minco

*Composition:* About 10 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24-32)

## Vd—Verdigris silt loam, occasionally flooded

### Map Unit Composition

Verdigris: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Verdigris

*MLRA:* 76 - Bluestem Hills

*Landform:* Flood plain on river 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 12.6 inches)

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

*Flooding hazard:* Occasional

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

*Runoff class:* Negligible

*Ecological site:* Loamy Lowland (pe30-36)

*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 38 inches; silt loam

H2—38 to 60 inches; silty clay loam

### Minor Components

#### Brewer

*Composition:* About 15 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Terrace (pe24-32)

## W—Water

## Wa—Waurika silt loam, 0 to 1 percent slopes

### Map Unit Composition

Waurika: 100 percent

### Component Descriptions

#### Waurika

*MLRA:* 80A - Central Rolling Red Prairies

*Landform:* Depression on divide on upland

*Hillslope position:* Summit

*Parent material:* Old clayey alluvium and/or clayey loess

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

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

*Available water capacity:* Moderate (About 9.0 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 6 to 12 inches

*Runoff class:* High

*Ecological site:* Clay Upland (pe24-32)

*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 12 inches; silt loam

H2—12 to 37 inches; silty clay

H3—37 to 60 inches; silty clay loam

H4—60 to 64 inches; silty clay loam