

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)

015TU—Tully silty clay loam, 4 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
Parent material: Clayey colluvium
Slope: 4 to 7 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 8.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: 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 10 inches; silty clay loam
 H2—10 to 64 inches; silty clay

Minor Components**Irwin**

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

Norge

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

073LD—Labette-Dwight complex, 0 to 3 percent slopes

Map Unit Composition

Labette: 65 percent
 Dwight: 30 percent
 Minor components: 5 percent

Component Descriptions

Labette

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from limestone and shale
Slope: 0 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 6.1 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): 3e

Typical Profile:

H1—0 to 9 inches; silty clay loam
 H2—9 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 cherty limestone
Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)

Available water capacity: Low (About 5.9 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 Pan (pe30-36)
Land capability (nonirrigated): 4s

Typical Profile:

H1—0 to 4 inches; silt loam
 H2—4 to 23 inches; clay
 H3—23 to 44 inches; silty clay
 R—44 to 48 inches; unweathered bedrock

Minor Components

Zaar

Composition: About 5 percent
Landform: hillslope on upland
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

073LS—Labette-Sogn silty clay loams, 0 to 8 percent slopes

Map Unit Composition

Labette: 50 percent
 Sogn: 35 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 and shale
Slope: 1 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: 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: High
Ecological site: Loamy Upland (pe30-36)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 9 inches; silty clay loam
 H2—9 to 26 inches; silty clay
 R—26 to 30 inches; unweathered bedrock

Sogn

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Loamy residuum weathered from limestone
Slope: 0 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 3.0 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 15 inches; silty clay loam
 R—15 to 19 inches; unweathered bedrock

Minor Components

Clime

Composition: About 10 percent
Landform: hillside 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)

Rock outcrop

Composition: About 5 percent

111LD—Labette-Dwight complex, 0 to 2 percent slopes

Map Unit Composition

Labette: 60 percent
 Dwight: 40 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 2 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

Dwight

MLRA: 76 - Bluestem Hills

Landform: Divide on upland, 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 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: Very high

Ecological site: Clay Pan (pe25-34)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 4 inches; silt loam

H2—4 to 20 inches; silty clay

H3—20 to 49 inches; silty clay

R—49 to 49 inches; unweathered bedrock

1110A—Olpe-Kenoma complex, 3 to 15 percent slopes

Map Unit Composition

Olpe: 70 percent

Kenoma: 30 percent

Component Descriptions

Olpe

MLRA: 76 - Bluestem Hills

Landform: Paleoterrace on upland

Parent material: Clayey alluvium

Slope: 3 to 15 percent

Drainage class: Well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Very low (About 1.7 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Loamy Upland (pe35-42)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 15 inches; gravelly silt loam

H2—15 to 25 inches; very gravelly silty clay loam

H3—25 to 60 inches; extremely gravelly silty clay

Kenoma

MLRA: 76 - Bluestem Hills

Landform: Divide on upland

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

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Slowest permeability: Very slow (About 0.00 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 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 38 inches; silty clay
 H3—38 to 60 inches; silty clay

111TA—Tully silty clay loam, 2 to 7 percent slopes

Map Unit Composition

Tully: 100 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
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

111ZA—Zaar silty clay, 2 to 5 percent slopes

Map Unit Composition

Zaar: 100 percent

Component Descriptions

Zaar

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Ancient alluvium and/or clayey colluvium and/or residuum weathered from shale

Slope: 2 to 5 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 12 to 24 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (nonirrigated): 4e

Typical Profile:

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

115CR—Clime stony silty clay loam, 15 to 30 percent slopes

Map Unit Composition

Clime: 80 percent
 Minor components: 20 percent

Component Descriptions

Clime

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from calcareous shale
Slope: 15 to 30 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 4.2 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Limy Upland (pe25-34)
Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 7 inches; stony silty clay loam
 H2—7 to 15 inches; silty clay
 H3—15 to 23 inches; silty clay

Cr—23 to 27 inches; silty clay

Minor Components

Sogn

Composition: About 10 percent
Slope: 0 to 15 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe25-34)

Tully

Composition: About 10 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe25-34)

115FC—Florence silt loam, 2 to 15 percent slopes

Map Unit Composition

Florence: 85 percent
 Minor components: 15 percent

Component Descriptions

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 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 5.2 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 13 inches; silt loam
 H2—13 to 16 inches; gravelly silty clay loam
 H3—16 to 45 inches; extremely 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: 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 4 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe25-34)

Tully

Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe25-34)

115IC—Irwin silty clay loam, 3 to 6 percent slopes

Map Unit Composition

Irwin: 90 percent
 Minor components: 10 percent

Component Descriptions

Irwin

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Old clayey alluvium
Slope: 3 to 6 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Clay Upland (pe25-34)
Land capability (nonirrigated): 4e

Typical Profile:

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

H3—40 to 60 inches; silty clay

Minor Components

Clime

Composition: About 5 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe25-34)

Labette

Composition: About 5 percent
Slope: 1 to 4 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe25-34)

115LG—Labette-Sogn silty clay loams, 2 to 15 percent slopes

Map Unit Composition

Labette: 65 percent
 Sogn: 25 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 and 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 (pe25-34)
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

Slope: 8 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 (pe25-34)

Land capability (nonirrigated): 6s

Typical Profile:

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

Rock outcrop

Composition: About 2 percent

115TU—Tully silty clay loam, 2 to 6 percent slopes

Map Unit Composition

Tully: 90 percent
 Minor components: 10 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Clayey colluvium
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.0 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 (pe25-34)
Land capability (nonirrigated): 3e

Typical Profile:

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

Minor Components

Clime

Composition: About 5 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe25-34)

Labette

Composition: About 5 percent
Slope: 1 to 4 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe25-34)

127FC—Florence Cherty silt loam, 5 to 15 percent slopes

Map Unit Composition

Florence: 90 percent
 Minor components: 10 percent

Component Descriptions

Florence

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Clayey residuum weathered from cherty limestone and/or clayey residuum weathered from clayey shale
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 4.0 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 4 inches; gravelly silt loam
 H2—4 to 11 inches; extremely gravelly silty clay loam
 H3—11 to 15 inches; extremely gravelly silty clay loam
 H4—15 to 44 inches; extremely cobbly clay
 R—44 to 48 inches; unweathered bedrock

Minor Components

Dwight

Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Tully

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

127LB—Labette silty clay loam, 2 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 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: 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: High

Ecological site: Loamy Upland (pe30-36)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; silty clay loam

H2—8 to 26 inches; silty clay

R—26 to 30 inches; unweathered bedrock

Minor Components

Dwight

Composition: About 5 percent

Slope: 1 to 3 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 5 percent

Slope: 0 to 1 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe25-34)

Runoff class: Low

Ecological site: Loamy Lowland (pe30-36)

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 32 inches; silty clay loam

H2—32 to 60 inches; silty clay loam

Minor Components

Reading

Composition: About 20 percent

Slope: 0 to 1 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

BOP—Borrow Pits

General Considerations: An open excavation from which soil and underlying material have been removed usually for construction purposes.

Ch—Chase silty clay loam, occasionally flooded

AED—Arents, Earthen Dam

Ar—Ivan silt loam, channeled

Map Unit Composition

Ivan: 80 percent

Minor components: 20 percent

Component Descriptions

Ivan

MLRA: 76 - Bluestem Hills

Landform: Flood plain on river valley

Parent material: Calcareous fine-silty alluvium

Slope: 0 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.7 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: More than 6 feet

Map Unit Composition

Chase: 90 percent

Minor components: 10 percent

Component Descriptions

Chase

MLRA: 76 - Bluestem Hills

Landform: Flood plain on river valley

Parent material: Silty and clayey alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly 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: Occasional

Depth to seasonal water saturation: About 24 to 48 inches

Runoff class: High

Ecological site: Loamy Lowland (pe30-36)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 14 inches; silty clay loam

H2—14 to 46 inches; silty clay

H3—46 to 60 inches; silty clay

Minor Components**Osage**

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

Reading

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

Cs—Clime-Sogn complex, 3 to 25 percent slopes**Map Unit Composition**

Clime: 47 percent
 Sogn: 20 percent
 Minor components: 33 percent

Component Descriptions**Clime**

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from calcareous shale
Slope: 3 to 25 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 4.1 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 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

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 1.2 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: Shallow Limy (pe30-36)
Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 6 inches; silty clay loam
 R—6 to 10 inches; unweathered bedrock

Minor Components**Labette**

Composition: About 13 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)

Dwight

Composition: About 10 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Zaar

Composition: About 10 percent
Landform: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

CSS—Clime-Sogn complex, 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: Low (About 4.4 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 11 inches; silty clay

H2—11 to 23 inches; silty clay

H3—23 to 33 inches; silty clay

Cr—33 to 37 inches; unweathered 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: 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: Very high

Ecological site: Shallow Limy (pe30-36)

Land capability (nonirrigated): 7s

Typical Profile:

H1—0 to 7 inches; silty clay loam

R—7 to 11 inches; unweathered bedrock

Minor Components

Martin-X

Composition: About 5 percent

Landform: hillslope on upland

Slope: 4 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe30-36)

Dwight

Composition: About 5 percent

Landform: divide on hillslope on upland

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

Landform: hillslope on upland

Slope: 1 to 4 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

DT—Dwight silt loam, 0 to 2 percent slopes

Map Unit Composition

Dwight: 90 percent

Minor components: 10 percent

Component Descriptions

Dwight

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from cherty limestone

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 7.4 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 6 inches; silt loam
H2—6 to 56 inches; silty clay
R—56 to 60 inches; unweathered bedrock

Minor Components

Labette

Composition: About 10 percent
Slope: 1 to 4 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe25-34)

Dw—Dwight silt loam, 1 to 3 percent slopes

Map Unit Composition

Dwight: 85 percent
Minor components: 15 percent

Component Descriptions

Dwight

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from cherty limestone
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: Low (About 5.8 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 Pan (pe30-36)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 5 inches; silt loam
H2—5 to 21 inches; silty clay
H3—21 to 42 inches; silty clay
R—42 to 46 inches; unweathered bedrock

Minor Components

Labette

Composition: About 8 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)

Irwin

Composition: About 7 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Fa—Florence-Labette complex, 2 to 12 percent slopes

Map Unit Composition

Florence: 47 percent
Labette: 34 percent

Component Descriptions

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 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 3.9 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): 6e

Typical Profile:

H1—0 to 13 inches; gravelly silt loam
H2—13 to 20 inches; extremely gravelly silty clay loam
H3—20 to 42 inches; extremely cobbly clay
R—42 to 46 inches; unweathered bedrock

Labette

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from limestone and 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 6.5 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): 4

Typical Profile:
 H1—0 to 10 inches; silty clay loam
 H2—10 to 38 inches; silty clay
 R—38 to 42 inches; unweathered bedrock

Fm—Florence-Matfield Cherty silt loams, 1 to 15 percent slopes

Map Unit Composition

Florence: 70 percent
 Matfield: 25 percent
 Minor components: 5 percent

Component Descriptions

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 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 3.9 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): 6e

Typical Profile:

H1—0 to 13 inches;
 H2—13 to 20 inches; extremely gravelly silty clay loam
 H3—20 to 42 inches; extremely cobbly clay
 R—42 to 46 inches; unweathered bedrock

Matfield

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Clayey residuum weathered from cherty limestone
Slope: 1 to 5 percent
Depth to restrictive feature: inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Low (About 4.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Flint Ridge (pe30-36)
Land capability (nonirrigated): 6

Typical Profile:

H1—0 to 22 inches;
 H2—22 to 46 inches;
 H3—46 to 60 inches;
 R—60 to 64 inches; unweathered bedrock

Minor Components

Labette

Composition: About 3 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)

Dwight

Composition: About 2 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

GRP—Gravel Pits

Ic—Irwin silty clay loam, 1 to 3 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: 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 8.3 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 Upland (pe30-36)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 11 inches; silty clay loam
H2—11 to 53 inches; silty clay
H3—53 to 60 inches; silty clay

Minor Components

Dwight

Composition: About 5 percent
Slope: 1 to 3 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)

Ladysmith

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

In—Irwin silty clay loam, 1 to 3 percent slopes, eroded

Map Unit Composition

Irwin: 95 percent
Minor components: 5 percent

Component Descriptions

Irwin

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
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 7.6 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 4 inches; silty clay loam
H2—4 to 53 inches; silty clay
H3—53 to 60 inches; silty clay

Minor Components

Dwight

Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

INT—Aquolls

Map Unit Composition

Aquolls: 100 percent

Component Descriptions

Aquolls

MLRA: 76 - Bluestem Hills

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.

Ir—Irwin silty clay loam, 3 to 5 percent slopes

Map Unit Composition

Irwin: 90 percent

Minor components: 10 percent

Component Descriptions

Irwin

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from clayey 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 8.3 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 Upland (pe30-36)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 11 inches; silty clay loam

H2—11 to 53 inches; silty clay

H3—53 to 60 inches; silty clay

Minor Components

Tully

Composition: About 10 percent

Slope: 3 to 7 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-36)

Is—Irwin silty clay loam, 3 to 5 percent slopes, eroded

Map Unit Composition

Irwin: 90 percent

Minor components: 10 percent

Component Descriptions

Irwin

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from clayey 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 7.6 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 4 inches; silty clay loam

H2—4 to 53 inches; silty clay

H3—53 to 60 inches; silty clay

Minor Components

Tully

Composition: About 10 percent

Slope: 3 to 7 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-36)

Iv—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 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 13.0 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 32 inches; silt loam
 H2—32 to 60 inches; silt loam

Minor Components**Kahola**

Composition: About 8 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Reading

Composition: About 7 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Ka—Kahola silt loam, rarely flooded**Map Unit Composition**

Kahola: 85 percent
 Minor components: 15 percent

Component Descriptions**Kahola**

MLRA: 76 - Bluestem Hills
Landform: Flood plain on river valley
Parent material: Fine-silty alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.6 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 25 inches; silt loam
 H2—25 to 60 inches; loam

Minor Components**Ivan**

Composition: About 8 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Reading

Composition: About 7 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

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 and 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 6.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Upland (pe30-36)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 10 inches; silty clay loam
 H2—10 to 38 inches; silty clay
 R—38 to 42 inches; unweathered bedrock

Minor Components**Dwight**

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

Ladysmith

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

LAA—Labette silty clay loam, 1 to 4 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 and shale
Slope: 1 to 4 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 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): 2e

Typical Profile:

H1—0 to 9 inches; silty clay loam
 H2—9 to 31 inches; silty clay
 R—31 to 35 inches; unweathered bedrock

Minor Components**Sogn**

Composition: About 10 percent
Landform: 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)

Lb—Labette silty clay loam, 3 to 5 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 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 6.5 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Loamy Upland (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 42 inches; unweathered bedrock

Minor Components

Irwin

Composition: About 8 percent

Slope: 1 to 3 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-36)

Dwight

Composition: About 7 percent

Slope: 1 to 3 percent

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

Drainage class: Moderately well drained

Ecological site: Clay Pan (pe30-36)

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 6.3 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 (pe30-36)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 6 inches; silty clay loam

H2—6 to 38 inches; silty clay

R—38 to 42 inches; unweathered bedrock

Minor Components

Dwight

Composition: About 5 percent

Slope: 1 to 3 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 5 percent

Slope: 1 to 3 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-36)

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

Lc—Labette silty clay loam, 2 to 5 percent slopes, eroded

Map Unit Composition

Labette: 90 percent

Minor components: 10 percent

Component Descriptions

Labette

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Map Unit Composition

Labette: 50 percent

Dwight: 41 percent

Minor components: 9 percent

Component Descriptions

Labette

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from limestone and 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 6.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Upland (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 42 inches; unweathered bedrock

Dwight

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from cherty limestone
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: Low (About 5.8 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 Pan (pe30-36)
Land capability (nonirrigated): 4

Typical Profile:

H1—0 to 5 inches; silt loam
 H2—5 to 21 inches; silty clay
 H3—21 to 42 inches; silty clay
 R—42 to 46 inches; unweathered bedrock

Minor Components

Irwin

Composition: About 3 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Ladysmith

Composition: About 3 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

Zaar

Composition: About 3 percent
Landform: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

Le—Labette-Sogn complex, 2 to 12 percent slopes

Map Unit Composition

Labette: 47 percent
 Sogn: 38 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 and 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 6.5 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): 6e

Typical Profile:

H1—0 to 10 inches; silty clay loam
 H2—10 to 38 inches; silty clay
 R—38 to 42 inches; unweathered bedrock

Sogn

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Loamy residuum weathered from limestone
Slope: 2 to 12 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very low (About 1.2 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: Shallow Limy (pe30-36)
Land capability (nonirrigated): 7

Typical Profile:
 H1—0 to 6 inches; silty clay loam
 R—6 to 10 inches;

Minor Components

Florence

Composition: About 8 percent
Slope: 2 to 12 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Dwight

Composition: About 7 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

LEE—Labette-Sogn complex, 2 to 8 percent slopes

Map Unit Composition

Labette: 70 percent
 Sogn: 20 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 and 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: 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: High
Ecological site: Loamy Upland (pe30-36)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; silty clay loam
 H2—8 to 26 inches; silty clay
 R—26 to 30 inches; unweathered bedrock

Sogn

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Loamy residuum weathered from limestone
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 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 (pe30-36)
Land capability (nonirrigated): 7s

Typical Profile:

H1—0 to 8 inches; silty clay loam
 R—8 to 12 inches; unweathered bedrock

Minor Components

Dwight

Composition: About 3 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Kipson

Composition: About 3 percent
Slope: 3 to 15 percent
Depth to restrictive feature: 7 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Limy Upland (pe30-36)

Florence

Composition: About 3 percent
Slope: 2 to 12 percent

Depth to restrictive feature: 40 to 60 inches
to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Unnamed Hydric Soil (saturation)

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

Lm—Ladysmith silty clay loam, 0 to 1 percent slopes

Map Unit Composition

Ladysmith: 85 percent
Minor components: 15 percent

Component Descriptions

Ladysmith

MLRA: 76 - Bluestem Hills
Landform: Paleoterrace on upland
Parent material: Clayey alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Impermeable (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: High
Ecological site: Clay Upland (pe30-36)
Land capability (nonirrigated): 2s

Typical Profile:

H1—0 to 9 inches; silty clay loam
H2—9 to 37 inches; silty clay
H3—37 to 60 inches; silty clay loam

Minor Components

Irwin

Composition: About 8 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Dwight

Composition: About 7 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches
to bedrock (lithic)

Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Lo—Ladysmith silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Ladysmith: 85 percent
Minor components: 15 percent

Component Descriptions

Ladysmith

MLRA: 76 - Bluestem 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 8.9 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): 3e

Typical Profile:

H1—0 to 9 inches; silty clay loam
H2—9 to 37 inches; silty clay
H3—37 to 60 inches; silty clay loam

Minor Components

Irwin

Composition: About 8 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Dwight

Composition: About 7 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches
to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Ls—Ladysmith silty clay loam, 1 to 3 percent slopes, eroded**Map Unit Composition**

Ladysmith: 85 percent
 Minor components: 15 percent

Component Descriptions**Ladysmith**

MLRA: 76 - Bluestem 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 8.6 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 5 inches; silty clay loam
 H2—5 to 37 inches; silty clay
 H3—37 to 60 inches; silty clay loam

Minor Components**Irwin**

Composition: About 8 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-36)

Dwight

Composition: About 7 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

LSS—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: Paleoterrace on upland
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: High
Ecological site: Clay Upland (pe25-34)
Land capability (nonirrigated): 3s

Typical Profile:

H1—0 to 8 inches; silty clay loam
 H2—8 to 35 inches; silty clay
 H3—35 to 60 inches; silty clay

Minor Components**Dwight**

Composition: About 5 percent
Slope: 1 to 3 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 5 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe25-34)

M-W—Miscellaneous Water

Ma—Martin silty clay loam, 2 to 6 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: 2 to 6 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 9 inches; silty clay loam
 H2—9 to 15 inches; silty clay loam
 H3—15 to 60 inches; silty clay

Minor Components**Tully**

Composition: About 5 percent

Slope: 3 to 7 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 5 percent

Slope: 3 to 25 percent

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

Drainage class: Well drained

Ecological site: Limy Upland (pe30-36)

Zaar

Composition: About 5 percent

Landform: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Somewhat poorly drained

Ecological site: Clay Upland (pe30-36)

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

Martin: 100 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: 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

Mc—Martin silty clay loam, 2 to 6 percent slopes, eroded**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: 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: 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 12 inches; silty clay loam
 H3—12 to 60 inches; silty clay

Minor Components

Tully

Composition: About 5 percent
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 5 percent
Slope: 3 to 25 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Zaar

Composition: About 5 percent
Landform: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

Mg—Martin-Gullied land complex, 3 to 10 percent slopes

Map Unit Composition

Martin: 80 percent
 Gullied land: 20 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: 3 to 10 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): 6e

Typical Profile:

H1—0 to 6 inches; silty clay loam
 H2—6 to 12 inches; silty clay loam
 H3—12 to 60 inches; silty clay

Gullied land

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Drainage class: Moderately well drained
Depth to seasonal water saturation: More than 6 feet

Minor Components

Clime

Slope: 3 to 25 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Zaar

Landform: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

Om—Olpe-Smolán complex, 2 to 10 percent slopes

Map Unit Composition

Olpe: 60 percent
 Smolan: 40 percent

Component Descriptions

Olpe*MLRA: 76 - Bluestem Hills**Landform: Paleoterrace on upland**Parent material: Clayey alluvium**Slope: 2 to 10 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 9 inches; gravelly silt loam**H2—9 to 18 inches; very gravelly silty clay loam**H3—18 to 60 inches; extremely gravelly silty clay***Smolan***MLRA: 76 - Bluestem Hills**Landform: Paleoterrace on upland**Hillslope position: Summit**Parent material: Silty and clayey loess**Slope: 2 to 10 percent**Drainage class: Well drained**Slowest permeability: Slow (About 0.06 in/hr)**Available water capacity: High (About 10.2 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: Loamy Upland (pe30-36)**Land capability (nonirrigated): 3**Typical Profile:**H1—0 to 15 inches; silty clay loam**H2—15 to 19 inches; silty clay loam**H3—19 to 60 inches; silty clay***Os—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 6.5 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: Negligible**Ecological site: Clay Lowland (pe30-36)**Land capability (nonirrigated): 3w**Typical Profile:**H1—0 to 21 inches; silty clay**H2—21 to 60 inches; silty clay***Minor Components****Chase***Composition: About 5 percent**Slope: 0 to 2 percent**Drainage class: Somewhat poorly drained**Ecological site: Loamy Lowland (pe30-36)***Solomon***Composition: About 5 percent**Slope: 0 to 1 percent**Drainage class: Poorly drained**Ecological site: Clay Lowland (pe30-36)***QUA—Quarries****Ra—Reading silt loam, 0 to 1 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 1 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: Low
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 1

Typical Profile:
 H1—0 to 17 inches; silt loam
 H2—17 to 48 inches; silty clay loam
 H3—48 to 60 inches; silty clay loam

Minor Components

Kahola

Composition: About 8 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-36)

Chase

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

Available water capacity: High (About 11.5 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 6 inches; silt loam
 H2—6 to 60 inches; silty clay loam

Minor Components

Chase

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Loamy Lowland (pe25-34)

Wells

Composition: About 5 percent
Landform: hillslope on upland
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe25-34)

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

Map Unit Composition

Reading: 90 percent
 Minor components: 10 percent

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

Map Unit Composition

Reading: 90 percent
 Minor components: 10 percent

Component Descriptions

Reading

MLRA: 76 - Bluestem Hills
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)

Component Descriptions

Reading

MLRA: 76 - Bluestem Hills
Landform: Terrace on river 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 17 inches; silt loam
 H2—17 to 48 inches; silty clay loam
 H3—48 to 60 inches; silty clay loam

Minor Components

Tully

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

Re—Reading Soils, 6 to 12 percent slopes, eroded

Map Unit Composition

Reading: 90 percent
 Minor components: 10 percent

Component Descriptions

Reading

MLRA: 76 - Bluestem Hills
Landform: Terrace on river valley
Parent material: Silty alluvium
Slope: 6 to 12 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: High
Ecological site: Loamy Lowland (pe30-36)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 7 inches; silt loam
 H2—7 to 48 inches; silty clay loam
 H3—48 to 60 inches; silty clay loam

Minor Components

Ivan

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-36)

Kahola

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

Sm—Smolan silty clay loam, 2 to 6 percent slopes

Map Unit Composition

Smolan: 90 percent
 Minor components: 10 percent

Component Descriptions

Smolan

MLRA: 76 - Bluestem Hills
Landform: Paleoterrace on upland
Hillslope position: Summit
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 10.2 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 15 inches; silty clay loam
 H2—15 to 19 inches; silty clay loam
 H3—19 to 60 inches; silty clay

Minor Components

Irwin

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

Tully

Composition: About 5 percent
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-36)

So—Solomon silty clay, occasionally flooded

Map Unit Composition

Solomon: 100 percent

Component Descriptions

Solomon

MLRA: 76 - Bluestem Hills

Landform: Flood plain on river valley

Parent material: Calcareous 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: High (About 7.5 LEP)

Flooding hazard: Occasional

Ponding hazard: Frequent

Depth to seasonal water saturation: About 0 to 24 inches

Runoff class: Negligible

Ecological site: Clay Lowland (pe30-36)

Land capability (irrigated): 3w

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 18 inches; silty clay

H2—18 to 60 inches; silty clay

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

Drainage class: Somewhat excessively drained

Slowest permeability: Very slow (About 0.01 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: Very high

Ecological site: Limy Upland (pe30-36)

Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 2 inches; stony silty clay loam

H2—2 to 9 inches; silty clay

H3—9 to 27 inches; silty clay

H4—27 to 33 inches; silty clay

Cr—33 to 37 inches; unweathered bedrock

Tc—Tully silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Tully: 85 percent

Minor components: 15 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

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): 3e

Typical Profile:

H1—0 to 14 inches; silty clay loam

H2—14 to 60 inches; silty clay

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

Map Unit Composition

Clime: 100 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

Minor Components

Irwin

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

Martin

Composition: About 5 percent
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Smolan

Composition: About 3 percent
Landform: paleoterrace on upland
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Dwight

Composition: About 2 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches
to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Ts—Tully silty clay loam, 3 to 7 percent slopes, eroded

Map Unit Composition

Tully: 85 percent
 Minor components: 15 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
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 8.1 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): 4e

Typical Profile:

H1—0 to 5 inches; silty clay loam
 H2—5 to 60 inches; silty clay

Minor Components**Irwin**

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

Martin

Composition: About 5 percent
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Smolan

Composition: About 3 percent
Landform: paleoterrace on upland
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Dwight

Composition: About 2 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches
to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Tu—Tully Cherty silty clay loam, 5 to 15 percent slopes

Map Unit Composition

Tully: 70 percent
 Minor components: 30 percent

Component Descriptions

Tully

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Parent material: Clayey colluvium
Slope: 5 to 15 percent
Drainage class: 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: More than 6 feet
Runoff class: Very high
Ecological site: Loamy Upland (pe30-36)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 14 inches; gravelly silty clay loam

H2—14 to 60 inches; silty clay

Minor Components

Martin

Composition: About 15 percent
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 15 percent
Slope: 3 to 25 percent
Depth to restrictive feature: 20 to 40 inches
 to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

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

Available water capacity: Moderate (About 8.5 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 12 to 24 inches

Runoff class: Very high

Ecological site: Clay Upland (pe30-36)

Land capability (nonirrigated): 4e

Typical Profile:

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

Minor Components

Dwight

Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches
 to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe30-36)

Martin

Composition: About 5 percent
Slope: 2 to 6 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 5 percent
Slope: 3 to 25 percent
Depth to restrictive feature: 20 to 40 inches
 to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

W—Water Areas, Streams, Lakes

Map Unit Composition

Water Areas: 100 percent

Component Descriptions

Water Areas

MLRA: 76 - Bluestem Hills
Depth to seasonal water saturation: More than 6 feet

Typical Profile:

Za—Zaar silty clay, 3 to 7 percent slopes

Map Unit Composition

Zaar: 85 percent
 Minor components: 15 percent

Component Descriptions

Zaar

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Ancient alluvium and/or clayey colluvium and/or residuum weathered from shale
Slope: 3 to 7 percent
Drainage class: Somewhat poorly drained

Zd—Zaar-Dwight complex, 1 to 3 percent slopes

Map Unit Composition

Zaar: 55 percent
 Dwight: 45 percent

Component Descriptions

Zaar

MLRA: 76 - Bluestem Hills
Landform: Hillslope on upland
Hillslope position: Summit

Parent material: Ancient alluvium and/or clayey colluvium and/or residuum weathered from 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 8.5 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 12 to 24 inches

Runoff class: Very high

Ecological site: Clay Upland (pe30-36)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 15 inches; silty clay

H2—15 to 54 inches; silty clay

H3—54 to 60 inches; silty clay

Dwight

MLRA: 76 - Bluestem Hills

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from cherty limestone

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: Low (About 5.8 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 Pan (pe30-36)

Land capability (nonirrigated): 4

Typical Profile:

H1—0 to 5 inches; silt loam

H2—5 to 21 inches; silty clay

H3—21 to 42 inches; silty clay

R—42 to 46 inches;

Minor Components

Martin

Slope: 2 to 6 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe30-36)

Clime

Slope: 3 to 25 percent

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

Drainage class: Well drained

Ecological site: Limy Upland (pe30-36)

Ladysmith

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Ecological site: Clay Upland (pe30-36)