PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017
Description Date: Sep 25 2015
Describer: Bruce Evans
NEON Plot ID: UKFS_004

Site ID: S2015KS045100

Pedon ID: S2015KS045100

Site Note: UKFS_004 - the center of pit is located 11.3 meters at 43 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0189
Soil Name as Described/Sampled: Oska
Classification: Fine, smectitic, mesic Vertic Argiudolls
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils:
Physiographic Division: Interior Plains
Physiographic Province: Central Lowland Province
Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:
Geomorphic Setting: on summit of interfluve of upland
on summit of interfluve of hillslope
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 19 to 57 cm.
Description origin: NASIS
Diagnostic Features: mollic epipedon 0 to 19 cm.
argillic horizon 19 to 57 cm.
lithic contact 57 to 57 cm.

Country: United States
State: Kansas
County: Douglas
MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills
Soil Survey Area: KS045 -- Douglas County, Kansas
Map Unit: 7461 -- Oska silty clay loam, 3 to 8 percent slopes, eroded
Pit Location: UKFS_004 - the center of pit is located 11.3 meters at 43 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.
Quad Name: Midland, Kansas
Std Latitude: 39.0430600
Std Longitude: -95.2028500

Latitude:
Longitude:
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed
Parent Material: residuum weathered from limestone
Bedrock Kind: Limestone
Bedrock Depth: 57 centimeters
Bedrock Hardness: indurated
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
57		bedrock, lithic	Indurated

Cont. Site ID: S2015KS045100 **Pedon ID:** S2015KS045100

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
1.0	316.0	180						well		

A--0 to 19 centimeters (0.0 to 7.5 inches); very dark brown (10YR 2/2) interior silty clay loam; 32 percent clay; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; common medium roots throughout and many fine roots throughout and common coarse roots throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00544

Bt1--19 to 32 centimeters (7.5 to 12.6 inches); reddish brown (5YR 4/4) interior silty clay loam; 38 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common very fine roots throughout and common fine roots throughout; 30 percent distinct 5YR 4/4), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00545

Bt2--32 to 57 centimeters (12.6 to 22.4 inches); yellowish red (5YR 4/6) interior silty clay; 41 percent clay; moderate medium subangular blocky structure; hard, firm, very sticky, very plastic; common very fine roots throughout and common fine roots throughout; 40 percent distinct 10YR 5/3), moist, clay films on vertical faces of peds; 2 percent nonflat subangular indurated 2 to 5-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; abrupt wavy boundary. Lab sample # 16N00546

R--57 to 200 centimeters (22.4 to 78.7 inches); indurated Limestone bedrock; . limestone

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 28 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_020

Site ID: S2015KS045101

Pedon ID: S2015KS045101

Site Note: UKFS_020 - the center of pit is located 5 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note: This pedon is a taxadjunct to the Rosendale series due to it containing more than 35% course fragments in the particle size control section. Also this pedon has a mollic epipedon that is not typically present in this series.

Lab Source ID: KSSL

Lab Pedon #: 16N0190

Soil Name as Described/Sampled: Rosendale

Classification: Loamy-skeletal, mixed, mesic Typic Hapludolls

Soil Name as Correlated:

Classification:

Pedon Type: taxadjunct to the series

Pedon Purpose: research site

Taxon Kind: taxadjunct

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on backslope of base slope of upland
on backslope of base slope of hillslope

Upslope Shape: linear

Cross Slope Shape: concave

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 53 cm.
cambic horizon 27 to 82 cm.
lithologic discontinuity 82 to 100 cm.
redox concentrations 82 to 100 cm.

Country: United States

State: Kansas

County: Douglas

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7550 -- Rosendale-Bendena silty clay loams, 3 to 40 percent slopes

Pit Location: UKFS_020 - the center of pit is located 5 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0417700

Std Longitude: -95.2013600

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: colluvium over residuum weathered from shale

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS045101 **Pedon ID:** S2015KS045101

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
20.0	308.0	270						well		

A1--0 to 8 centimeters (0.0 to 3.1 inches); black (10YR 2/1) interior silty clay loam; 28 percent clay; moderate fine subangular blocky, and moderate fine granular structure; slightly hard, friable, moderately sticky, moderately plastic; 4 percent nonflat angular indurated 5 to 20-millimeter Limestone fragments and 6 percent nonflat angular indurated 20 to 76-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00547

A2--8 to 27 centimeters (3.1 to 10.6 inches); black (10YR 2/1) interior extremely cobbly silty clay loam; 32 percent clay; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; 10 percent nonflat angular indurated 5 to 20-millimeter Limestone fragments and 20 percent nonflat angular indurated 20 to 76-millimeter Limestone fragments and 30 percent nonflat angular indurated 76 to 250-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00548

Bw1--27 to 53 centimeters (10.6 to 20.9 inches); very dark gray (10YR 3/1) interior extremely cobbly silty clay loam; 34 percent clay; moderate fine subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 10 percent nonflat angular indurated 5 to 20-millimeter Limestone fragments and 20 percent nonflat angular indurated 20 to 76-millimeter Limestone fragments and 40 percent nonflat angular indurated 76 to 250-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00549

Bw2--53 to 82 centimeters (20.9 to 32.3 inches); dark grayish brown (10YR 4/2) interior very gravelly silty clay loam; 36 percent clay; moderate fine subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 10 percent nonflat angular indurated 5 to 20-millimeter Limestone fragments and 20 percent nonflat angular indurated 20 to 76-millimeter Limestone fragments and 20 percent nonflat angular indurated 76 to 250-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00550

2C--82 to 100 centimeters (32.3 to 39.4 inches); light brownish gray (2.5Y 6/2) interior silt loam; 25 percent clay; structureless massive; hard, firm, slightly sticky, slightly plastic; 30 percent fine prominent spherical 10YR 5/6), moist, masses of oxidized iron Throughout; noneffervescent, by HCl, unspecified. Lab sample # 16N00551

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 28 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_001

Site ID: S2015KS045102

Pedon ID: S2015KS045102

Site Note: UKFS_001 - the center of pit is located 3.4 meters at 89 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note: At this site we discussed the effective depth of the soil. All along this contour that this pedon is on; there is a ledge of weathered limestone with some fragments over 6 feet in size. Though at this spot we were able to break through the weathered limestone and sample into the shale. We decided to call this pedon a Bendena (shallow soil) since we felt that this was a limestone ledge instead of colluvial material. Just in this particular spot it was weathered enough for us to break through the limestone. We also found some roots in the shale below the limestone. This is a taxadjunct to the series since it is loamy instead of fine.

Lab Source ID: KSSL

Lab Pedon #: 16N0191

Soil Name as Described/Sampled: Bendena

Classification: Loamy, mixed, superactive, mesic Lithic Hapludolls

Soil Name as Correlated:

Classification:

Pedon Type: taxadjunct to the series

Pedon Purpose: research site

Taxon Kind: taxadjunct

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on shoulder of side slope of upland
on shoulder of side slope of hillslope

Upslope Shape: concave

Cross Slope Shape: linear

Particle Size Control Section: 0 to 25 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 25 cm.
lithic contact 25 to 25 cm.
lithologic discontinuity 36 to 100 cm.
paralithic contact 76 to 76 cm.

Country: United States

State: Kansas

County: Douglas

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7550 -- Rosendale-Bendena silty clay loams, 3 to 40 percent slopes

Pit Location: UKFS_001 - the center of pit is located 3.4 meters at 89 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0374700

Std Longitude: -95.1971400

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: residuum weathered from limestone over residuum weathered from shale

Bedrock Kind: Limestone and shale

Bedrock Depth: 25 centimeters

Bedrock Hardness: very strongly cemented

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS045102 **Pedon ID:** S2015KS045102

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
25	36	bedrock, lithic	Indurated
76	100	bedrock, paralithic	Weakly cemented

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
7.0	318.0	45						somewhat excessively		

A--0 to 25 centimeters (0.0 to 9.8 inches); very dark gray (2.5Y 3/1) interior silty clay loam; 32 percent clay; weak fine granular structure; slightly hard, friable, moderately sticky, moderately plastic; many very fine roots throughout and common medium roots throughout and many fine roots throughout; 2 percent nonflat angular indurated 5 to 20-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; abrupt wavy boundary. Lab sample # 16N00552

R--25 to 36 centimeters (9.8 to 14.2 inches); very strongly cemented Limestone and shale bedrock; abrupt wavy boundary. Lab sample # 16N00553. extremely weathered limestone bedrock that looked like it would to break into thin flat stones and boulders

2C--36 to 76 centimeters (14.2 to 29.9 inches); brown (10YR 5/3) interior silty clay loam; 38 percent clay; structureless massive; hard, firm, moderately sticky, moderately plastic; common fine roots throughout and common coarse roots throughout; 35 percent fine distinct spherical weakly cemented masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00554

2Cr--76 to 100 centimeters (29.9 to 39.4 inches); dark gray (2.5Y 4/1) interior bedrock; moderate thin platy structure; . Lab sample # 16N00555

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017
Description Date: Sep 29 2015
Describer: Bruce Evans
NEON Plot ID: UKFS_011

Site ID: S2015KS045103

Pedon ID: S2015KS045103

Site Note: UKFS_011 - the center of pit is located 5 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0192
Soil Name as Described/Sampled: Wamego
Classification: Fine, mixed, superactive, mesic Typic Argiudolls
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils:
Physiographic Division: Interior Plains
Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of hillslope on upland
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 19 to 69 cm.
Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 39 cm.
argillic horizon 19 to 76 cm.
redox concentrations 55 to 76 cm.
lithologic discontinuity 76 to 76 cm.
lithic contact 76 to 76 cm.

Country: United States
State: Kansas
County: Douglas
MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7461 -- Oska silty clay loam, 3 to 8 percent slopes, eroded

Pit Location: UKFS_011 - the center of pit is located 5 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas
Std Latitude: 39.0322800
Std Longitude: -95.1883500

Latitude:
Longitude:
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: residuum weathered from shale over residuum weathered from limestone

Bedrock Kind: Limestone
Bedrock Depth: 76 centimeters
Bedrock Hardness: indurated
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
76		bedrock, lithic	Indurated

Cont. Site ID: S2015KS045103 **Pedon ID:** S2015KS045103

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
8.0	312.0	0						well		

A--0 to 19 centimeters (0.0 to 7.5 inches); black (10YR 2/1) interior silty clay loam; 28 percent clay; weak very fine subangular blocky structure; slightly hard, friable, slightly sticky, slightly plastic; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00556

Bt1--19 to 39 centimeters (7.5 to 15.4 inches); black (2.5Y 2.5/1) interior silty clay loam; 35 percent clay; moderate fine subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 35 percent distinct 2.5Y 2.5/1), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00557

Bt2--39 to 55 centimeters (15.4 to 21.7 inches); dark gray (2.5Y 4/1) interior silty clay; 40 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 45 percent distinct 2.5Y 4/1), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00558

Bt3--55 to 76 centimeters (21.7 to 29.9 inches); dark gray (2.5Y 4/1) interior silty clay; 42 percent clay; moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 45 percent distinct clay films on all faces of peds; 20 percent fine prominent spherical 10YR 5/6), moist, masses of oxidized iron with clear boundaries Throughout; 2 percent nonflat angular indurated 20 to 76-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; abrupt wavy boundary. Lab sample # 16N00559

2R--76 to 101 centimeters (29.9 to 39.8 inches); indurated Limestone bedrock; .

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 29 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_008

Site ID: S2015KS045104

Pedon ID: S2015KS045104

Site Note: UKFS_008 - the center of pit is located 3.3 meters at 70 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0193

Soil Name as Described/Sampled: Martin

Classification: Fine, smectitic, mesic Aquertic Argiudolls

Soil Name as Correlated:

Classification:

Pedon Type: correlates to named soil

Pedon Purpose: research site

Taxon Kind: series

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on toeslope of base slope of hillslope on upland

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 16 to 66 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 100 cm.
argillic horizon 16 to 100 cm.
redox concentrations 73 to 100 cm.

Country: United States

State: Kansas

County: Douglas

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7302 -- Martin silty clay loam, 3 to 7 percent slopes

Pit Location: UKFS_008 - the center of pit is located 3.3 meters at 70 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0335600

Std Longitude: -95.1897400

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: colluvium

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS045104 **Pedon ID:** S2015KS045104

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
2.0	289.0	315						moderately well		

A--0 to 16 centimeters (0.0 to 6.3 inches); black (10YR 2/1) interior silty clay loam; 32 percent clay; moderate very fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00560

Bt1--16 to 43 centimeters (6.3 to 16.9 inches); black (10YR 2/1) interior silty clay; 40 percent clay; moderate fine subangular blocky structure; hard, firm, very sticky, very plastic; 40 percent distinct 10YR 2/1), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00561

Bt2--43 to 73 centimeters (16.9 to 28.7 inches); black (10YR 2/1) interior silty clay; 45 percent clay; moderate medium subangular blocky structure; hard, firm, very sticky, very plastic; 40 percent distinct 10YR 2/1), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00562

Bt3--73 to 100 centimeters (28.7 to 39.4 inches); very dark gray (10YR 3/1) interior silty clay loam; 39 percent clay; moderate medium subangular blocky structure; hard, firm, very sticky, very plastic; 45 percent distinct 10YR 3/1), moist, clay films on all faces of peds; 5 percent fine distinct spherical strongly cemented 10YR 4/6), moist, iron-manganese concretions with clear boundaries Throughout; noneffervescent, by HCl, unspecified. Lab sample # 16N00563

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 29 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_022

Site ID: S2015KS045105

Pedon ID: S2015KS045105

Site Note: UKFS_022 - the center of pit is located 6.2 meters at 89 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0194

Soil Name as Described/Sampled: Martin

Classification: Fine, smectitic, mesic Aquertic Argiudolls

Soil Name as Correlated:

Classification:

Pedon Type: correlates to named soil

Pedon Purpose: research site

Taxon Kind: series

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on footslope of base slope of hillslope on upland

Upslope Shape: concave

Cross Slope Shape: linear

Particle Size Control Section: 21 to 71 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 61 cm.
argillic horizon 21 to 100 cm.
redox concentrations 61 to 100 cm.

Country: United States

State: Kansas

County: Douglas

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7305 -- Martin silty clay loam, 7 to 12 percent slopes, eroded

Pit Location: UKFS_022 - the center of pit is located 6.2 meters at 89 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0315944

Std Longitude: -95.1910278

Latitude: 39 degrees 1 minutes 53.74 seconds north

Longitude: 95 degrees 11 minutes 27.70 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: colluvium

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS045105 **Pedon ID:** S2015KS045105

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
11.0	279.0	270						moderately well		

A--0 to 21 centimeters (0.0 to 8.3 inches); very dark gray (10YR 3/1) interior silty clay loam; 31 percent clay; weak fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00564

Bt1--21 to 44 centimeters (8.3 to 17.3 inches); very dark gray (10YR 3/1) interior silty clay loam; 38 percent clay; moderate fine subangular blocky structure; slightly hard, firm, moderately sticky, moderately plastic; 10 percent distinct 10YR 3/1), moist, clay films on all faces of peds; 1 percent nonflat subangular very strongly cemented 2 to 5-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00565

Bt2--44 to 61 centimeters (17.3 to 24.0 inches); very dark gray (10YR 3/1) interior silty clay; 42 percent clay; moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 40 percent distinct 10YR 3/1), moist, clay films on all faces of peds; 1 percent nonflat subangular very strongly cemented 2 to 5-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00566

Bt3--61 to 100 centimeters (24.0 to 39.4 inches); dark gray (10YR 4/1) interior and dark grayish brown (10YR 4/2) interior silty clay; 45 percent clay; moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 45 percent distinct 10YR 4/1), moist, clay films on all faces of peds; 35 percent fine distinct spherical weakly cemented 7.5YR 5/6), moist, iron-manganese nodules with clear boundaries Throughout; noneffervescent, by HCl, unspecified. Lab sample # 16N00567

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017
Description Date: Sep 29 2015
Describer: M. Busch
NEON Plot ID: UKFS_019
Site ID: S2015KS045106
Pedon ID: S2015KS045106
Site Note: UKFS_019 - the center of pit is located 4 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0195
Soil Name as Described/Sampled: Martin
Classification: Fine, smectitic, mesic Aquertic Argiudolls
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils:
Physiographic Division: Interior Plains
Physiographic Province: Central Lowland Province
Physiographic Section: Dissected till plains
State Physiographic Area: Glaciated Region
Local Physiographic Area:
Geomorphic Setting: on footslope of base slope of hillslope on upland
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 7 to 57 cm.
Description origin: NASIS
Diagnostic Features: mollic epipedon 0 to 100 cm.
argillic horizon 7 to 100 cm.
redox concentrations 53 to 100 cm.

Country: United States
State: Kansas
County: Douglas
MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills
Soil Survey Area: KS045 -- Douglas County, Kansas
Map Unit: 7305 -- Martin silty clay loam, 7 to 12 percent slopes, eroded
Pit Location: UKFS_019 - the center of pit is located 4 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.
Quad Name: Midland, Kansas
Std Latitude: 39.0315519
Std Longitude: -95.1959213

Latitude:
Longitude:
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed
Parent Material: colluvium
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2015KS045106 **Pedon ID:** S2015KS045106

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
8.0	288.0	135						moderately well		

A--0 to 7 centimeters (0.0 to 2.8 inches); black (10YR 2/1) interior silty clay loam; 36 percent clay; moderate medium subangular blocky parts to moderate medium granular structure; slightly hard, friable, slightly sticky, moderately plastic; common fine roots throughout and common coarse roots throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00568

Bt1--7 to 25 centimeters (2.8 to 9.8 inches); black (10YR 2/1) interior silty clay; 44 percent clay; strong medium subangular blocky structure; hard, friable, slightly sticky, moderately plastic; common fine roots throughout; 30 percent distinct 10YR 2/1), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00569

Bt2--25 to 53 centimeters (9.8 to 20.9 inches); black (10YR 2/1) interior silty clay; 44 percent clay; strong medium subangular blocky structure; hard, friable, slightly sticky, moderately plastic; common very fine low-continuity tubular pores; 40 percent distinct 10YR 2/1), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00570

Bt3--53 to 100 centimeters (20.9 to 39.4 inches); very dark gray (10YR 3/1) interior silty clay; 42 percent clay; moderate coarse subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; common very fine low-continuity tubular pores; 40 percent distinct 10YR 3/1), moist, clay films on all faces of peds; 10 percent fine distinct spherical 10YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; 4 percent nonflat subangular indurated 2 to 5-millimeter Chert fragments; noneffervescent, by HCl, unspecified. Lab sample # 16N00571

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 30 2015

Describer: M. Busch

NEON Plot ID: UKFS_006

Site ID: S2015KS045107

Pedon ID: S2015KS045107

Site Note: UKFS_006 - the center of pit is located 7.5 meters at 23 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0196

Soil Name as Described/Sampled: Oska

Classification: Fine, smectitic, mesic Vertic Argiudolls

Soil Name as Correlated:

Classification:

Pedon Type: correlates to named soil

Pedon Purpose: research site

Taxon Kind: series

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on summit of interfluve of interfluve on upland

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 20 to 70 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 67 cm.
argillic horizon 20 to 100 cm.

Country: United States

State: Kansas

County: Douglas

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7461 -- Oska silty clay loam, 3 to 8 percent slopes, eroded

Pit Location: UKFS_006 - the center of pit is located 7.5 meters at 23 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0337300

Std Longitude: -95.1988500

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: residuum weathered from limestone

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS045107 **Pedon ID:** S2015KS045107

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
2.0	319.0	135						well		

A--0 to 20 centimeters (0.0 to 7.9 inches); very dark gray (10YR 3/1) interior silty clay; 40 percent clay; moderate medium subangular blocky parts to moderate medium granular structure; slightly hard, friable, slightly sticky, moderately plastic; common very fine roots throughout and common medium roots throughout; common fine tubular and common coarse tubular pores; noneffervescent, by HCl, unspecified; clear wavy boundary. Lab sample # 16N00572

Bt1--20 to 44 centimeters (7.9 to 17.3 inches); very dark grayish brown (10YR 3/2) interior silty clay; 48 percent clay; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky, moderately plastic; common very fine roots throughout and common medium roots throughout; 25 percent distinct 10YR 3/2), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear wavy boundary. Lab sample # 16N00573

Bt2--44 to 67 centimeters (17.3 to 26.4 inches); dark brown (7.5YR 3/3) interior silty clay; 46 percent clay; moderate fine subangular blocky structure; hard, friable, moderately sticky, moderately plastic; common very fine roots throughout; 50 percent distinct 7.5YR 3/3), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; clear wavy boundary. Lab sample # 16N00574

Bt3--67 to 100 centimeters (26.4 to 39.4 inches); brown (7.5YR 4/4) interior silty clay; 41 percent clay; moderate medium subangular blocky structure; hard, firm, slightly sticky, moderately plastic; common very fine roots throughout; 55 percent distinct 7.5YR 4/4), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified. Lab sample # 16N00575

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017
Description Date: Sep 30 2015
Describer: M. Busch
NEON Plot ID: UKFS_023

Site ID: S2015KS045108

Pedon ID: S2015KS045108

Site Note: UKFS_023 - the center of pit is located 9 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0197
Soil Name as Described/Sampled: Martin
Classification: Fine, smectitic, mesic Aquertic Argiudolls
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils:
Physiographic Division: Interior Plains
Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region
Local Physiographic Area:
Geomorphic Setting: on footslope of base slope of hillslope on upland
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 17 to 67 cm.
Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 100 cm.
argillic horizon 17 to 100 cm.
redox concentrations 52 to 100 cm.

Country: United States
State: Kansas
County: Douglas
MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7550 -- Rosendale-Bendena silty clay loams, 3 to 40 percent slopes

Pit Location: UKFS_023 - the center of pit is located 9 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas
Std Latitude: 39.0365100
Std Longitude: -95.2015400

Latitude:
Longitude:
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: colluvium
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2015KS045108 **Pedon ID:** S2015KS045108

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
2.0	299.0	225						moderately well		

A--0 to 17 centimeters (0.0 to 6.7 inches); black (10YR 2/1) interior silty clay loam; 35 percent clay; strong medium granular structure; slightly hard, very friable, slightly sticky, moderately plastic; common very fine roots throughout and common medium roots throughout; noneffervescent, by HCl, unspecified; clear wavy boundary. Lab sample # 16N00576

Bt1--17 to 37 centimeters (6.7 to 14.6 inches); black (10YR 2/1) interior silty clay; 42 percent clay; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky, moderately plastic; common very coarse roots throughout and common medium roots throughout; 20 percent distinct 10YR 2/1), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; gradual wavy boundary. Lab sample # 16N00577

Bt2--37 to 52 centimeters (14.6 to 20.5 inches); very dark gray (10YR 3/1) interior silty clay; 45 percent clay; moderate medium subangular blocky structure; hard, firm, slightly sticky, moderately plastic; common very fine roots throughout; common very fine low-continuity tubular pores; 35 percent distinct 10YR 3/1), moist, clay films on all faces of peds; 1 percent flat subangular indurated 2 to 150-millimeter Chert fragments and 1 percent nonflat subangular indurated 20 to 76-millimeter Chert fragments and 1 percent nonflat subangular indurated 2 to 5-millimeter Chert fragments; noneffervescent, by HCl, unspecified; gradual wavy boundary. Lab sample # 16N00578

Bt3--52 to 100 centimeters (20.5 to 39.4 inches); very dark gray (10YR 3/1) interior silty clay; 47 percent clay; moderate coarse subangular blocky parts to moderate medium granular structure; slightly hard, friable, slightly sticky, moderately plastic; common very fine low-continuity tubular pores; 40 percent distinct 10YR 3/1), moist, clay films on all faces of peds; 2 percent fine distinct spherical 10YR 5/6), moist, masses of oxidized iron with clear boundaries Throughout; 1 percent nonflat subangular indurated 5 to 20-millimeter Chert fragments and 1 percent nonflat subangular indurated 20 to 76-millimeter Chert fragments and 2 percent flat subangular indurated 2 to 150-millimeter Chert fragments; noneffervescent, by HCl, unspecified. Lab sample # 16N00579

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017
Description Date: Sep 30 2015
Describer: M. Busch
NEON Plot ID: UKFS_007

Site ID: S2015KS045110

Pedon ID: S2015KS045110

Site Note: UKFS_007 - the center of pit is located 5 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0199
Soil Name as Described/Sampled: Muscotah
Classification: Fine, smectitic, mesic Aquertic Hapludolls
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils:
Physiographic Division: Interior Plains
Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region
Local Physiographic Area:
Geomorphic Setting: drainageway on upland
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 25 to 100 cm.
Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 100 cm.
cambic horizon 10 to 100 cm.

Country: United States
State: Kansas
County: Douglas
MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS045 -- Douglas County, Kansas

Map Unit: 7302 -- Martin silty clay loam, 3 to 7 percent slopes

Pit Location: UKFS_007 - the center of pit is located 5 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas
Std Latitude: 39.0369300
Std Longitude: -95.2054800

Latitude:
Longitude:
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: alluvium
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2015KS045110 **Pedon ID:** S2015KS045110

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
1.0	279.0	270						moderately well		

A--0 to 10 centimeters (0.0 to 3.9 inches); black (10YR 2/1) interior silty clay loam; 36 percent clay; moderate medium subangular blocky parts to weak medium granular structure; slightly hard, very friable, slightly sticky, moderately plastic; common very fine roots throughout; noneffervescent, by HCl, unspecified; clear wavy boundary. Lab sample # 16N00584

Bw1--10 to 29 centimeters (3.9 to 11.4 inches); black (10YR 2/1) interior silty clay; 43 percent clay; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky, moderately plastic; common fine roots throughout; common very fine low-continuity tubular pores; noneffervescent, by HCl, unspecified; clear wavy boundary. Lab sample # 16N00585

Bw2--29 to 63 centimeters (11.4 to 24.8 inches); black (10YR 2/1) interior silty clay; 48 percent clay; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky, moderately plastic; common very fine roots throughout; common very fine low-continuity tubular pores; noneffervescent, by HCl, unspecified; gradual wavy boundary. Lab sample # 16N00586

Bw3--63 to 100 centimeters (24.8 to 39.4 inches); very dark gray (10YR 3/1) interior silty clay; 50 percent clay; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky, moderately plastic; common very fine low-continuity tubular pores; 1 percent nonflat subangular indurated 2 to 5-millimeter Chert fragments; slight effervescence, by HCl, unspecified. Lab sample # 16N00587

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017
Description Date: Sep 21 2015
Describer: Bruce Evans
NEON Plot ID: UKFS_018

Site ID: S2015KS087100

Pedon ID: S2015KS087100

Site Note: UKFS_018 - the center of pit is located 18.2 meters at 102 degree compass bearing from the 40x40 NW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note: This pedon is a taxadjunct to the Pawnee series due to the epipedon not meeting the thickness requirements for a mollic epipedon. This site used to be farmed and is in an eroded map unit.

Lab Source ID: KSSL
Lab Pedon #: 16N0200
Soil Name as Described/Sampled: Pawnee
Classification: Fine, smectitic, mesic Oxyaquic Vertic Hapludalfs
Soil Name as Correlated:
Classification:
Pedon Type: taxadjunct to the series
Pedon Purpose: research site
Taxon Kind: taxadjunct
Associated Soils:

Physiographic Division: Interior Plains
Physiographic Province: Central Lowland Province
Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region
Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of hillslope on upland
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 14 to 64 cm.
Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 14 cm.
argillic horizon 14 to 100 cm.
redox concentrations 14 to 100 cm.
slickensides 32 to 100 cm.

Country: United States
State: Kansas
County: Jefferson
MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills
Soil Survey Area: KS087 -- Jefferson County, Kansas
Map Unit: 7501 -- Pawnee clay loam, 4 to 8 percent slopes, eroded

Pit Location: UKFS_018 - the center of pit is located 18.2 meters at 102 degree compass bearing from the 40x40 NW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0532400
Std Longitude: -95.1929600

Latitude:
Longitude:
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Grass/herbaceous cover
Secondary Earth Cover: Grassland rangeland
Existing Vegetation: big bluestem, Cuman ragweed, Indiangrass, leadplant, little bluestem, Missouri goldenrod, sedge, sideoats grama, stiff goldenrod, switchgrass

Parent Material: till
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2015KS087100 **Pedon ID:** S2015KS087100

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
7.0	333.0	270						moderately well		

Ap--0 to 14 centimeters (0.0 to 5.5 inches); dark brown (10YR 3/3) interior clay loam; 32 percent clay; moderate fine subangular blocky structure; hard, friable, moderately sticky, moderately plastic; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00588

Bt--14 to 32 centimeters (5.5 to 12.6 inches); brown (10YR 4/3) interior clay; 42 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; 35 percent distinct 10YR 3/3), moist, clay films on all faces of peds; 1 percent medium distinct spherical very strongly cemented iron-manganese concretions with clear boundaries Throughout; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00589

Btss1--32 to 51 centimeters (12.6 to 20.1 inches); brown (10YR 4/3) interior clay; 45 percent clay; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; 10 percent distinct slickensides (pedogenic) and 40 percent distinct 10YR 4/3), moist, clay films on all faces of peds; 10 percent fine distinct 7.5YR 5/6), moist, masses of oxidized iron with clear boundaries In matrix; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00590

Btss2--51 to 69 centimeters (20.1 to 27.2 inches); dark yellowish brown (10YR 4/4) interior clay; 48 percent clay; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; 10 percent prominent slickensides (pedogenic) and 40 percent distinct clay films on all faces of peds; 15 percent fine distinct masses of oxidized iron with clear boundaries Throughout; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00591

Btss3--69 to 100 centimeters (27.2 to 39.4 inches); yellowish brown (10YR 5/4) interior clay; 46 percent clay; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; 10 percent prominent slickensides (pedogenic) and 45 percent distinct clay films on all faces of peds; 20 percent fine distinct masses of oxidized iron with clear boundaries Throughout; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments and 1 percent nonflat subangular strongly cemented 2 to 5-millimeter Chert fragments; noneffervescent, by HCl, unspecified. Lab sample # 16N00592

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 22 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_017

Site ID: S2015KS087101

Pedon ID: S2015KS087101

Site Note: UKFS_017 - the center of pit is located 7.1 meters at 50 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0201

Soil Name as Described/Sampled: Pawnee

Classification: Fine, smectitic, mesic Oxyaquic Vertic Argiudolls

Soil Name as Correlated:

Classification:

Pedon Type: correlates to named soil

Pedon Purpose: research site

Taxon Kind: series

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on backslope of side slope of upland on backslope of side slope of hillslope

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 29 to 79 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 50 cm.
argillic horizon 29 to 100 cm.
slickensides 29 to 67 cm.
redox concentrations 29 to 100 cm.
free carbonates 67 to 100 cm.

Country: United States

State: Kansas

County: Jefferson

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS087 -- Jefferson County, Kansas

Map Unit: 7501 -- Pawnee clay loam, 4 to 8 percent slopes, eroded

Pit Location: UKFS_017 - the center of pit is located 7.1 meters at 50 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0474300

Std Longitude: -95.1985100

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS087101 **Pedon ID:** S2015KS087101

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
5.0	328.0	180						moderately well		

A1--0 to 18 centimeters (0.0 to 7.1 inches); very dark brown (10YR 2/2) interior silty clay loam; 28 percent clay; weak fine granular structure; slightly hard, friable, moderately sticky, moderately plastic; many medium roots throughout and common coarse roots throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00593

A2--18 to 29 centimeters (7.1 to 11.4 inches); very dark brown (10YR 2/2) interior silty clay loam; 33 percent clay; weak medium subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; many fine roots throughout and common coarse roots throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00594

Btss1--29 to 50 centimeters (11.4 to 19.7 inches); very dark gray (10YR 3/1) interior clay; 40 percent clay; strong fine prismatic parts to strong fine subangular blocky structure; very hard, very firm, very sticky, very plastic; common medium roots throughout and common fine roots throughout; 10 percent distinct slickensides (pedogenic) and 40 percent distinct clay films on all faces of peds; 1 percent medium distinct spherical strongly cemented iron-manganese concretions with clear boundaries Throughout and 15 percent fine prominent spherical 7.5YR 5/6), moist, masses of oxidized iron with clear boundaries Throughout; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00595

Btss2--50 to 67 centimeters (19.7 to 26.4 inches); dark grayish brown (10YR 4/2) interior clay; 42 percent clay; strong medium prismatic parts to strong medium subangular blocky structure; very hard, very firm, very sticky, very plastic; common medium roots throughout and common fine roots throughout; 10 percent distinct slickensides (pedogenic) and 40 percent distinct 10YR 4/2), moist, clay films on all faces of peds; 1 percent medium distinct spherical strongly cemented iron-manganese concretions with clear boundaries Throughout and 15 percent fine distinct spherical 7.5YR 5/4), moist, masses of oxidized iron with clear boundaries Throughout; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00596

Btk--67 to 100 centimeters (26.4 to 39.4 inches); brown (10YR 5/3) interior clay; 44 percent clay; weak medium prismatic parts to moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common very fine roots throughout; 30 percent distinct clay films on all faces of peds; 25 percent medium prominent spherical masses of oxidized iron Throughout; 2 percent medium distinct spherical carbonate masses with clear boundaries throughout; strong effervescence, by HCl, unspecified. Lab sample # 16N00597

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 22 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_028

Site ID: S2015KS087102

Pedon ID: S2015KS087102

Site Note: UKFS_028 - the center of pit is located 4.2 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note: This pedon is a taxadjunct to the Wamego series due to the epipedon not meeting the thickness requirements for a mollic epipedon. This site used to be farmed and is in an eroded map unit.

Lab Source ID: KSSL

Lab Pedon #: 16N0202

Soil Name as Described/Sampled: Wamego

Classification: Fine, smectitic, mesic Typic Hapludalfs

Soil Name as Correlated:

Classification:

Pedon Type: correlates to named soil

Pedon Purpose: research site

Taxon Kind: taxadjunct

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on shoulder of interfluve of upland
on shoulder of interfluve of hillslope

Upslope Shape: convex

Cross Slope Shape: linear

Particle Size Control Section: 10 to 60 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 10 cm.
argillic horizon 10 to 100 cm.
redox concentrations 10 to 100 cm.

Country: United States

State: Kansas

County: Jefferson

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS087 -- Jefferson County, Kansas

Map Unit: 7461 -- Oska silty clay loam, 3 to 8 percent slopes, eroded

Pit Location: UKFS_028 - the center of pit is located 4.2 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0475600

Std Longitude: -95.2025900

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Grass/herbaceous cover

Secondary Earth Cover: Grassland rangeland

Existing Vegetation: big bluestem, Cuman ragweed, Indiangrass, leadplant, little bluestem, Missouri goldenrod, sedge, sideoats grama, stiff goldenrod, switchgrass

Parent Material: residuum weathered from clayey shale

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS087102 **Pedon ID:** S2015KS087102

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
6.0	325.0	270						well		

Ap--0 to 10 centimeters (0.0 to 3.9 inches); very dark grayish brown (10YR 3/2) interior silty clay loam; 35 percent clay; weak fine granular structure; slightly hard, friable, moderately sticky, moderately plastic; common medium roots throughout and many fine roots throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00598

Bt1--10 to 38 centimeters (3.9 to 15.0 inches); dark grayish brown (10YR 4/2) interior silty clay; 43 percent clay; strong fine prismatic parts to strong fine subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common fine roots throughout; 40 percent distinct 10YR 4/2), moist, clay films on all faces of peds; 1 percent medium distinct spherical strongly cemented iron-manganese concretions with clear boundaries Throughout and 15 percent fine prominent spherical 7.5YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00599

Bt2--38 to 65 centimeters (15.0 to 25.6 inches); brown (10YR 5/3) interior silty clay; 42 percent clay; strong fine prismatic parts to strong medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common fine roots throughout; 40 percent distinct 10YR 5/3), moist, clay films on vertical faces of peds; 45 percent medium prominent spherical 7.5YR 5/6), moist, masses of oxidized iron with clear boundaries Throughout; 1 percent nonflat subangular moderately cemented 2 to 5-millimeter Clayey shale fragments; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00600

Bt3--65 to 100 centimeters (25.6 to 39.4 inches); yellowish brown (10YR 5/4) interior silty clay; 45 percent clay; strong medium prismatic parts to strong medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common fine roots throughout; 40 percent distinct 10YR 5/4), moist, clay films on vertical faces of peds; 60 percent coarse distinct spherical 7.5YR 5/6), moist, masses of oxidized iron with clear boundaries Throughout; 2 percent nonflat subangular moderately cemented 2 to 5-millimeter Clayey shale fragments; noneffervescent, by HCl, unspecified. Lab sample # 16N00601

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 23 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_030

Site ID: S2015KS087103

Pedon ID: S2015KS087103

Site Note: UKFS_030 - the center of pit is located 12.2 meters at 0 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0203

Soil Name as Described/Sampled: Wymore

Classification: Fine, smectitic, mesic Aquertic Argiudolls

Soil Name as Correlated:

Classification:

Pedon Type: correlates to named soil

Pedon Purpose: research site

Taxon Kind: series

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on shoulder of interfluve of upland
on shoulder of interfluve of hillslope

Upslope Shape: convex

Cross Slope Shape: linear

Particle Size Control Section: 11 to 61 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 65 cm.
argillic horizon 11 to 65 cm.
redox concentrations 29 to 100 cm.

Country: United States

State: Kansas

County: Jefferson

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS087 -- Jefferson County, Kansas

Map Unit: 7501 -- Pawnee clay loam, 4 to 8 percent slopes, eroded

Pit Location: UKFS_030 - the center of pit is located 12.2 meters at 0 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0453700

Std Longitude: -95.2120000

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Grass/herbaceous cover

Secondary Earth Cover: Grassland rangeland

Existing Vegetation: big bluestem, Cuman ragweed, Indiangrass, leadplant, little bluestem, Missouri goldenrod, sedge, sideoats grama, stiff goldenrod, switchgrass

Parent Material: loess

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS087103 **Pedon ID:** S2015KS087103

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
4.0	326.0	270						moderately well		

Ap--0 to 11 centimeters (0.0 to 4.3 inches); very dark grayish brown (10YR 3/2) interior silty clay loam; 32 percent clay; moderate fine subangular blocky structure; hard, firm, moderately sticky, moderately plastic; many very fine roots throughout and many fine roots throughout; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00602

Bt1--11 to 29 centimeters (4.3 to 11.4 inches); very dark grayish brown (10YR 3/2) interior silty clay; 40 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; 30 percent distinct 10YR 3/2), moist, clay films on all faces of peds; noneffervescent, by HCl, unspecified; gradual smooth boundary. Lab sample # 16N00603

Bt2--29 to 47 centimeters (11.4 to 18.5 inches); very dark grayish brown (10YR 3/2) interior silty clay; 45 percent clay; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; distinct 10YR 2/2), moist, organic stains on vertical faces of peds and 40 percent distinct 10YR 3/2), moist, clay films on all faces of peds; 15 percent fine prominent spherical masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00604

Bt3--47 to 65 centimeters (18.5 to 25.6 inches); very dark grayish brown (10YR 3/2) interior silty clay; 42 percent clay; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; distinct 10YR 2/2), moist, organic stains on vertical faces of peds and 45 percent distinct 10YR 3/2), moist, clay films on all faces of peds; 20 percent fine prominent spherical 7.5YR 5/6), moist, masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00605

BC--65 to 100 centimeters (25.6 to 39.4 inches); 70 percent dark grayish brown (10YR 4/2) interior and 30 percent brown (7.5YR 5/4) interior silty clay loam; 40 percent clay; weak coarse subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; 40 percent fine prominent spherical masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified. Lab sample # 16N00606

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 24 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_012

Site ID: S2015KS087104

Pedon ID: S2015KS087104

Site Note: UKFS_012 - the center of pit is located 9.3 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note: This pedon is a taxadjunct to the Rosendale series due to the presence of a mollic epipedon not typically present in this series.

Lab Source ID: KSSL

Lab Pedon #: 16N0204

Soil Name as Described/Sampled: Rosendale

Classification: Fine, mixed, superactive, mesic Typic Hapludolls

Soil Name as Correlated:

Classification:

Pedon Type: taxadjunct to the series

Pedon Purpose: research site

Taxon Kind: taxadjunct

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on backslope of nose slope of upland
on backslope of nose slope of hillslope

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 38 cm.
cambic horizon 38 to 81 cm.
lithologic discontinuity 62 to 100 cm.
redox concentrations 81 to 100 cm.

Country: United States

State: Kansas

County: Jefferson

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS087 -- Jefferson County, Kansas

Map Unit: 7550 -- Rosendale-Bendena silty clay loams, 3 to 40 percent slopes

Pit Location: UKFS_012 - the center of pit is located 9.3 meters at 45 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0454400

Std Longitude: -95.1984000

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Hardwoods

Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed

Parent Material: colluvium derived from limestone over residuum weathered from calcareous shale

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS087104 **Pedon ID:** S2015KS087104

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
6.0	316.0	270						moderately well		

A1--0 to 14 centimeters (0.0 to 5.5 inches); black (10YR 2/1) interior silty clay loam; 28 percent clay; weak fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; 1 percent flat subangular indurated 20 to 76-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00607

A2--14 to 38 centimeters (5.5 to 15.0 inches); black (10YR 2/1) interior extremely flaggy silty clay loam; 30 percent clay; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; 15 percent flat subangular indurated 2 to 150-millimeter Limestone fragments and 45 percent flat subangular indurated 150 to 380-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00608

Bw1--38 to 62 centimeters (15.0 to 24.4 inches); dark grayish brown (10YR 4/2) interior very flaggy silty clay loam; 32 percent clay; moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; 10 percent flat subangular indurated 2 to 150-millimeter Limestone fragments and 40 percent flat subangular indurated 150 to 380-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00609

2Bw2--62 to 81 centimeters (24.4 to 31.9 inches); dark grayish brown (10YR 4/2) interior silty clay loam; 38 percent clay; weak medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00610

2Bk--81 to 100 centimeters (31.9 to 39.4 inches); dark gray (10YR 4/1) interior silty clay; 42 percent clay; weak coarse subangular blocky structure; very hard, very firm, very sticky, very plastic; 20 percent fine prominent spherical 10YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; 1 percent fine distinct spherical extremely weakly cemented carbonate masses with clear boundaries throughout; strong effervescence, by HCl, unspecified. Lab sample # 16N00611

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017

Description Date: Sep 24 2015

Describer: Bruce Evans

NEON Plot ID: UKFS_025

Site ID: S2015KS087105

Pedon ID: S2015KS087105

Site Note: UKFS_025 - the center of pit is located 13.4 meters at 260 degree compass bearing from the 40x40 NE marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0205

Soil Name as Described/Sampled: Grundy

Classification: Fine, smectitic, mesic Aquertic Argiudolls

Soil Name as Correlated:

Classification:

Pedon Type: correlates to named soil

Pedon Purpose: research site

Taxon Kind: series

Associated Soils:

Physiographic Division: Interior Plains

Physiographic Province: Central Lowland Province

Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:

Geomorphic Setting: on backslope of side slope of upland on backslope of side slope of hillslope

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 18 to 68 cm.

Description origin: NASIS

Diagnostic Features: mollic epipedon 0 to 38 cm.
argillic horizon 18 to 77 cm.
redox concentrations 18 to 100 cm.
reduced matrix 38 to 77 cm.
lithologic discontinuity 77 to 100 cm.

Country: United States

State: Kansas

County: Jefferson

MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills

Soil Survey Area: KS087 -- Jefferson County, Kansas

Map Unit: 7254 -- Grundy silty clay loam, 3 to 7 percent slopes, eroded

Pit Location: UKFS_025 - the center of pit is located 13.4 meters at 260 degree compass bearing from the 40x40 NE marker. 0.3 meters at 90 degrees from pit center to pit face.

Quad Name: Midland, Kansas

Std Latitude: 39.0555400

Std Longitude: -95.1894800

Latitude:

Longitude:

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Grass/herbaceous cover

Secondary Earth Cover: Grassland rangeland

Existing Vegetation: big bluestem, Cuman ragweed, Indiangrass, leadplant, little bluestem, Missouri goldenrod, sedge, sideoats grama, stiff goldenrod, switchgrass

Parent Material: loess over residuum weathered from limestone

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2015KS087105 **Pedon ID:** S2015KS087105

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
6.0	332.0	135						somewhat poorly		

Ap--0 to 18 centimeters (0.0 to 7.1 inches); very dark gray (10YR 3/1) interior silty clay loam; 35 percent clay; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; many very fine roots throughout and many fine roots throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00612

Bt--18 to 38 centimeters (7.1 to 15.0 inches); 80 percent very dark gray (10YR 3/1) interior and 20 percent dark grayish brown (10YR 4/2) interior silty clay; 42 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; many very fine roots throughout and many fine roots throughout; 30 percent distinct 10YR 4/2), moist, clay films on all faces of peds; 20 percent fine prominent spherical 7.5YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00613

Btg1--38 to 60 centimeters (15.0 to 23.6 inches); dark grayish brown (10YR 4/2) interior silty clay; 45 percent clay; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; many very fine roots throughout and many fine roots throughout; 40 percent distinct 10YR 5/3), moist, clay films on all faces of peds; 1 percent fine distinct spherical strongly cemented iron-manganese concretions with clear boundaries Throughout and 40 percent fine prominent spherical 7.5YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00614

Btg2--60 to 77 centimeters (23.6 to 30.3 inches); gray (10YR 5/1) interior silty clay; 45 percent clay; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; common very fine roots throughout; 40 percent distinct 10YR 5/1), moist, clay films on all faces of peds; 1 percent medium distinct spherical strongly cemented iron-manganese concretions with clear boundaries Throughout and 20 percent medium prominent spherical 7.5YR 4/8), moist, masses of oxidized iron with clear boundaries Throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00615

2BC--77 to 100 centimeters (30.3 to 39.4 inches); very pale brown (10YR 7/3) interior clay; 45 percent clay; moderate coarse subangular blocky structure; very hard, very firm, very sticky, very plastic; common very fine roots throughout; 1 percent medium prominent spherical strongly cemented iron-manganese concretions with clear boundaries Throughout and 20 percent medium faint spherical 7.5YR) masses of oxidized iron with clear boundaries Throughout; 2 percent nonflat subrounded indurated 2 to 5-millimeter Limestone fragments; noneffervescent, by HCl, unspecified. Lab sample # 16N00616

PEDON DESCRIPTION -- NEON Site UKFS

Print Date: Sep 3 2017
Description Date: Sep 24 2015
Describer: Bruce Evans
NEON Plot ID: UKFS_015

Site ID: S2015KS087106

Pedon ID: S2015KS087106

Site Note: UKFS_015 - the center of pit is located 1.6 meters at 89 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0206
Soil Name as Described/Sampled: Oska
Classification: Fine, smectitic, mesic Vertic Argiudolls
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils:
Physiographic Division: Interior Plains
Physiographic Province: Central Lowland Province
Physiographic Section: Dissected till plains

State Physiographic Area: Glaciated Region

Local Physiographic Area:
Geomorphic Setting: on shoulder of interfluve of upland
on shoulder of interfluve of hillslope
Upslope Shape: convex
Cross Slope Shape: linear
Particle Size Control Section: 11 to 53 cm.
Description origin: NASIS
Diagnostic Features: mollic epipedon 0 to 26 cm.
argillic horizon 11 to 53 cm.
lithic contact 53 to 53 cm.

Country: United States
State: Kansas
County: Jefferson
MLRA: 106 -- Nebraska and Kansas Loess-Drift Hills
Soil Survey Area: KS087 -- Jefferson County, Kansas
Map Unit: 7550 -- Rosendale-Bendena silty clay loams, 3 to 40 percent slopes
Pit Location: UKFS_015 - the center of pit is located 1.6 meters at 89 degree compass bearing from the 40x40 SW marker. 0.3 meters at 90 degrees from pit center to pit face.
Quad Name: Midland, Kansas
Std Latitude: 39.0535000
Std Longitude: -95.2046100

Latitude:
Longitude:
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation: ash, buckbrush, eastern redcedar, elm, honeylocust, oak, Osage-orange, smooth sumac, stickseed
Parent Material: residuum weathered from limestone
Bedrock Kind: Limestone
Bedrock Depth: 53 centimeters
Bedrock Hardness: very strongly cemented
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
53		bedrock, lithic	Very strongly cemented

Cont. Site ID: S2015KS087106 **Pedon ID:** S2015KS087106

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
7.0	312.0	270						well		

A--0 to 11 centimeters (0.0 to 4.3 inches); very dark brown (10YR 2/2) interior silty clay loam; 32 percent clay; moderate fine subangular blocky, and moderate very fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; common medium roots throughout and common fine roots throughout; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00617

Bt1--11 to 26 centimeters (4.3 to 10.2 inches); dark brown (7.5YR 3/2) interior silty clay loam; 39 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common medium roots throughout and common fine roots throughout; 30 percent distinct 7.5YR 3/2), moist, clay films on all faces of peds; 1 percent nonflat subangular indurated 2 to 5-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; clear smooth boundary. Lab sample # 16N00618

Bt2--26 to 53 centimeters (10.2 to 20.9 inches); yellowish red (5YR 5/6) interior silty clay; 42 percent clay; moderate medium subangular blocky structure; hard, firm, very sticky, very plastic; common very fine roots throughout and common fine roots throughout; 50 percent distinct 5YR 5/6), moist, clay films on vertical faces of peds; 5 percent nonflat subangular indurated 2 to 5-millimeter Limestone fragments; noneffervescent, by HCl, unspecified; abrupt wavy boundary. Lab sample # 16N00619

R--53 to 200 centimeters (20.9 to 78.7 inches); very strongly cemented Limestone bedrock; .