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
Diagnoistic Features: mollic epipedon 0 to 19 cm.
argillic horizon 19 to 57 cm.
lithic contact 57 to 57 cm.

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

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
<table>
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<tr>
<th>Slope (%)</th>
<th>Elevation (meters)</th>
<th>Aspect (deg)</th>
<th>MAAT (°C)</th>
<th>MSAT (°C)</th>
<th>MWAT (°C)</th>
<th>MAP (mm)</th>
<th>Frost-Free Days</th>
<th>Drainage Class</th>
<th>Slope Length (meters)</th>
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</table>

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

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

Site ID: S2015KS045101
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.

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: Rosendale
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 hillside
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.

Latitude: 39.0417700
Longitude: -95.2013600
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
### Soil Profile Data

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<th>Slope (%)</th>
<th>Elevation (meters)</th>
<th>Aspect (deg)</th>
<th>MAAT (°C)</th>
<th>MSAT (°C)</th>
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<td></td>
<td></td>
<td></td>
<td>well</td>
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</tbody>
</table>

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; clear 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
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.
### Top Depth (cm) Bottom Depth (cm) Restriction Kind Restriction Hardness
<p>| | | | |</p>
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<tbody>
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<td>36</td>
<td>bedrock, lithic</td>
<td>Indurated</td>
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<tr>
<td>76</td>
<td>100</td>
<td>bedrock, paralithic</td>
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<th>MSAT (C)</th>
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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.

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<th>Top Depth (cm)</th>
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<td>76</td>
<td>76</td>
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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

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
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
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; 45 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
Print Date: Sep 3 2017
Description Date: Sep 29 2015
Describer: Bruce Evans
NEON Plot ID: UKFS_022

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

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.

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
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<tr>
<th>Slope (%)</th>
<th>Elevation (meters)</th>
<th>Aspect (deg)</th>
<th>MAAT (°C)</th>
<th>MSAT (°C)</th>
<th>MWAT (°C)</th>
<th>MAP (mm)</th>
<th>Frost-Free Days</th>
<th>Drainage Class</th>
<th>Slope Length (meters)</th>
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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
Table: Site and Pedon IDs

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A horizon:

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 horizon:

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 horizon:

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 horizon:

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

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

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.
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; non-effervescent, 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; non-effervescent, 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; non-effervescent, 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; non-effervescent, by HCl, unspecified. Lab sample # 16N00575

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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

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:
Existing Vegetation:
Surface Fragments:
Description database: KSSL
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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: Fine, smectitic, mesic Aquertic Hapludolls
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: drainage setting 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
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:
Geomorph 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

Diagonal 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
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
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; non-effervescent, 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; non-effervescent, 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. 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. Lab sample # 16N00598

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
### Soil Description

**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

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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

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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:**
- **Geomorphologic 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
Slope (°) | Elevation (m) | Aspect (°) | MAAT (°C) | MSAT (°C) | MWAT (°C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (m) | Upslope Length (m) |
---|---|---|---|---|---|---|---|---|---|---|
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; non-effervescent, 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; non-effervescent, 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; non-effervescent, 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; non-effervescent, 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
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; non-effervescent, 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; non-effervescent, 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; non-effervescent, 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; non-effervescent, 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; non-effervescent, 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.

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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; .