PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 13 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_001
Site ID: S2018CO013001
Pedon ID: S2018CO013001
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2856
Soil Name as Described/Sampled: snd
Classification:
Loamy-skeletal, mixed, superactive Typic Haplocryalfs

Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:

State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on mountainflank, center third of Is mountains
on mountainflank, center third of If mountain slope
Upslope Shape: convex
Cross Slope Shape: linear
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0422100
Std Longitude: -105.5587600
Latitude: 40 degrees 2 minutes 31.96 seconds north
Longitude: 105 degrees 33 minutes 32.40 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 452334 meters
UTM Northing: 4432592 meters
Primary Earth Cover: Tree cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation: blueberry, bluegrass, common juniper, Engelmann spruce, heartleaf arnica, limber pine, lodgepole pine, strawberry, subalpine fir, yarrow
Parent Material: glacial till colluvium derived from granite and gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 2.0 percent nonflat subrounded indurated 250- to 600-millimeter Mixed rock fragments and 0.7 percent nonflat subrounded indurated 600- to 1000-millimeter Mixed rock fragments
Description database: KSSL
O--0 to 8 centimeters (0.0 to 3.1 inches); common very fine roots and common medium roots and common fine roots and common coarse roots; clear smooth boundary. Lab sample # 18N06752

E--8 to 48 centimeters (3.1 to 18.9 inches); brown (10YR 4/3) extremely gravelly loam, pale brown (10YR 6/3), dry; 50 percent sand; 21 percent clay; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky, slightly plastic; common very fine roots and common medium roots and common fine roots and common coarse roots; 10 percent masses of reduced iron and 45 percent clay depletions; 1 percent fine mica flakes, unspecified in matrix; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 45 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; noneffervescent; moderately acid, pH 5.6; clear smooth boundary. Lab sample # 18N06753

Bt1--48 to 62 centimeters (18.9 to 24.4 inches); dark yellowish brown (10YR 3/6) extremely gravelly sandy clay loam, yellowish brown (10YR 5/4), dry; 60 percent sand; 26 percent clay; weak fine subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common very fine roots and common medium roots; 20 percent distinct clay bridges between sand grains; 15 percent masses of reduced iron and 60 percent clay depletions; 2 percent fine mica flakes, unspecified in matrix; 8 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 60 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.4; diffuse wavy boundary. Lab sample # 18N06754

Bt2--62 to 102 centimeters (24.4 to 40.2 inches); dark yellowish brown (10YR 3/6) extremely gravelly sandy clay loam, yellowish brown (10YR 5/4), dry; 62 percent sand; 23 percent clay; weak fine subangular blocky structure; hard, firm, slightly sticky, nonplastic; common fine roots; 20 percent distinct clay bridges between sand grains; 2 percent fine mica flakes, unspecified in matrix; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 60 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.3. Lab sample # 18N06755
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 10 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_003
Site ID: S2018CO013003
Pedon ID: S2018CO013003
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2857
Soil Name as Described/Sampled: snd
Classification: Loamy-skeletal, mixed, superactive Typic Humicryepts
Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: Is mountains
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: to cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0513200
Std Longitude: -105.5648700
Latitude: 40 degrees 3 minutes 4.75 seconds north
Longitude: 105 degrees 33 minutes 53.53 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 451819 meters
UTM Northing: 4433606 meters
Primary Earth Cover:
Secondary Earth Cover:
Existing Vegetation:
Parent Material: colluvium derived from gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 17.0 percent nonflat subrounded indurated 250- to 600-millimeter Gneiss fragments and 3.0 percent nonflat subrounded indurated 600- to 1000-millimeter Gneiss fragments
Description database: KSSL
Cont. Site ID: S2018CO013003

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<th>Drainage Class</th>
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</table>

A—0 to 10 centimeters (0.0 to 3.9 inches); very dark brown (10YR 2/2) very cobbly sandy loam, very dark grayish brown (10YR 3/2), dry; 64 percent sand; 17 percent clay; moderate medium granular, and weak medium granular structure; slightly hard, very friable, slightly sticky; many very fine roots throughout and many very fine roots throughout and many medium roots throughout; 2 percent faint clay films on bottom of rock fragments; 8 percent masses of reduced iron and 23 percent clay depletions; 3 percent fine mica flakes, unspecified in matrix; 8 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 16 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 23 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; clear wavy boundary. Lab sample # 18N06756

BA—10 to 19 centimeters (3.9 to 7.5 inches); very dark grayish brown (10YR 3/2) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4), dry; 70 percent sand; 13 percent clay; weak fine subangular blocky structure; slightly hard, very friable, nonsticky; many very fine roots throughout and many medium roots throughout and common fine roots throughout; 25 percent masses of reduced iron and 45 percent clay depletions; 3 percent fine mica flakes, unspecified in matrix; 2 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 25 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 45 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; gradual wavy boundary. Lab sample # 18N06757

Bw—19 to 50 centimeters (7.5 to 19.7 inches); brown (10YR 4/3) extremely gravelly loamy coarse sand, yellowish brown (10YR 5/4), dry; 82 percent sand; 7 percent clay; weak fine subangular blocky structure; slightly hard, very friable, nonsticky; common medium roots throughout and common fine roots throughout; 2 percent distinct clay bridges between sand grains; 3 percent fine mica flakes, unspecified in matrix; 20 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 30 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 30 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; very strongly acid, pH 5.0; gradual wavy boundary. Lab sample # 18N06758

C—50 to 105 centimeters (19.7 to 41.3 inches); dark yellowish brown (10YR 4/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/6), dry; 69 percent sand; 9 percent clay; weak massive; slightly hard, very friable, nonsticky; common medium roots throughout and common fine roots throughout; 3 percent fine mica flakes, unspecified in matrix; 10 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 32 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; very strongly acid, pH 5.0. Lab sample # 18N06759
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 9 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_005
Site ID: S2018CO013005
Pedon ID: S2018CO013005
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2858
Soil Name as Described/Sampled: snd
Classification: Loamy-skeletal, mixed, superactive Typic Dystrocryepts

Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on mountainflank, center third of Is mountains on mountainflank, center third of If mountain slope
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0437900
Std Longitude: -105.5697500

Latitude: 40 degrees 2 minutes 37.65 seconds north
Longitude: 105 degrees 34 minutes 11.10 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 451397 meters
UTM Northing: 4432773 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation: blueberry, common juniper, Engelmann spruce, golden currant, limber pine, subalpine fir
Parent Material: colluvium derived from hornblende gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 21.0 percent nonflat subrounded indurated 250- to 600-millimeter Hornblende gneiss fragments and 3.0 percent nonflat subrounded indurated 600- to 1000-millimeter Hornblende gneiss fragments
Description database: KSSL
Oi--0 to 4 centimeters (0.0 to 1.6 inches); common very fine roots throughout and common fine roots throughout and common coarse roots throughout; noneffervescent; abrupt smooth boundary. Lab sample # 18N06760

E--4 to 19 centimeters (1.6 to 7.5 inches); brown (7.5YR 4/3) extremely gravelly sandy loam, pink (7.5YR 7/3), dry; 55 percent sand; 19 percent clay; weak fine subangular blocky structure; soft; many medium roots throughout and common fine roots throughout and common coarse roots throughout; 15 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 20 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 45 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.2; clear wavy boundary. Lab sample # 18N06761

Bw--19 to 49 centimeters (7.5 to 19.3 inches); reddish brown (5YR 4/4) extremely gravelly sandy clay loam, yellowish red (5YR 5/6), dry; 65 percent sand; 25 percent clay; weak medium subangular blocky, and weak fine subangular blocky structure; slightly hard, friable, slightly sticky, slightly plastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout; 2 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 18 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 40 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.4; gradual wavy boundary. Lab sample # 18N06762

C--49 to 105 centimeters (19.3 to 41.3 inches); brown (7.5YR 4/4) extremely gravelly sandy clay loam, brown (7.5YR 5/4), dry; 65 percent sand; 22 percent clay; massive; soft, friable, slightly sticky, slightly plastic; few medium roots in cracks and common fine roots in cracks; 8 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 50 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.4. Lab sample # 18N06763
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 12 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_007
Site ID: S2018CO013007
Pedon ID: S2018CO013007
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2859
Soil Name as Described/Sampled: snd
Classification: Loamy-skeletal, mixed, superactive Typic Haplocryalfs

Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: Is mountains
If lateral moraine
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0379400
Std Longitude: -105.5630500

Latitude: 40 degrees 2 minutes 16.59 seconds north
Longitude: 105 degrees 33 minutes 46.98 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 451965 meters
UTM Northing: 4432120 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation: common juniper, Engelmann spruce, lodgepole pine, sedge, subalpine fir
Parent Material: glacial till derived from hornblende gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 1.0 percent nonflat surrounded indurated 250- to 600-millimeter Hornblende gneiss fragments and 1.2 percent nonflat surrounded indurated 600- to 1000-millimeter Hornblende gneiss fragments
Description database: KSSL
Oe--0 to 6 centimeters (0.0 to 2.4 inches); black (10YR 2/1), very dark brown (10YR 2/2), dry; subrounded Gneiss fragments and; very strongly acid, pH 5.0. Lab sample # 18N06764

A--6 to 21 centimeters (2.4 to 8.3 inches); dark brown (10YR 3/3) very cobbly sandy loam, brown (10YR 4/3), dry; 65 percent sand; 16 percent clay; medium subangular blocky structure; many very fine roots and common medium roots and common fine roots and common coarse roots; 2 percent nonflat subrounded indurated 250 to 600-millimeter Gneiss fragments and 10 percent nonflat subrounded indurated 20 to 75-millimeter unspecified fragments and 10 percent nonflat subrounded indurated 2 to 20-millimeter Gneiss fragments and 25 percent nonflat subrounded indurated 75 to 250-millimeter Gneiss fragments; strongly acid, pH 5.1. Lab sample # 18N06765

Bt--21 to 44 centimeters (8.3 to 17.3 inches); brown (7.5YR 4/4) very gravelly sandy clay loam, strong brown (7.5YR 4/6), dry; 55 percent sand; 22 percent clay; moderate medium subangular blocky structure; slightly sticky, slightly plastic; many very fine roots and common medium roots and common fine roots and common coarse roots; 2 percent nonflat subrounded indurated 250 to 600-millimeter Gneiss fragments and 5 percent nonflat subrounded indurated 75 to 250-millimeter Gneiss fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Gneiss fragments and 20 percent nonflat subrounded indurated 20 to 75-millimeter Gneiss fragments; strongly acid, pH 5.4. Lab sample # 18N06766

E--21 to 44 centimeters (8.3 to 17.3 inches); brown (7.5YR 4/4) very gravelly sandy loam, brown (7.5YR 4/4), dry; 55 percent sand; 19 percent clay; moderate very fine granular structure; slightly sticky, slightly plastic; many very fine roots and common medium roots and common fine roots and common coarse roots; 2 percent nonflat subrounded indurated 250 to 600-millimeter Gneiss fragments and 5 percent nonflat subrounded indurated 75 to 250-millimeter Gneiss fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Gneiss fragments and 20 percent nonflat subrounded indurated 20 to 75-millimeter Gneiss fragments; strongly acid, pH 5.4. Lab sample # 18N06766

BC--44 to 100 centimeters (17.3 to 39.4 inches); brown (7.5YR 4/4) very cobbly sandy loam, strong brown (7.5YR 4/6), dry; 65 percent sand; 19 percent clay; moderate medium subangular blocky structure; moderately sticky, slightly plastic; common very coarse roots and common coarse roots; 10 percent nonflat subrounded indurated 250 to 600-millimeter Gneiss fragments and 20 percent nonflat subrounded indurated 20 to 75-millimeter Gneiss fragments and 20 percent nonflat subrounded indurated 2 to 20-millimeter Gneiss fragments and 30 percent nonflat subrounded indurated 75 to 250-millimeter Gneiss fragments; strongly acid, pH 5.4. Lab sample # 18N06767
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jun 10 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_008
Site ID: S2018CO013008
Pedon ID: S2018CO013008
Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2860
Soil Name as Described/Sampled: snd
Classification: Loamy-skeletal over fragmental, mixed, superactive Typic Humicryepts
Soil Name as Correlated:

Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:

State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on mountaintop of Is mountains
on mountaintop of If mountain
Upslope Shape: concave
Cross Slope Shape: linear
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0545500
Std Longitude: -105.5676730
Latitude: 40 degrees 3 minutes 16.38 seconds north
Longitude: 105 degrees 34 minutes 3.62 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 451582 meters
UTM Northing: 4433966 meters

Primary Earth Cover: Grass/herbaceous cover
Secondary Earth Cover:
Existing Vegetation: blue grama, bluegrass, muttongrass, wheatgrass
Parent Material: colluvium derived from granite
over residuum weathered from gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 0.5 percent nonflat
subangular indurated 250- to 600-millimeter
Granite fragments
Description database: KSSL
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A--0 to 15 centimeters (0.0 to 5.9 inches); black (10YR 2/1) sandy loam, gravel, very dusky red (2.5YR 2/2), dry; 65 percent sand; 15 percent clay; moderate medium granular, and moderate fine granular structure; friable; common medium roots throughout and many fine roots throughout; 5 percent fine mica flakes, unspecified in matrix; 5 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 5 percent flat subangular indurated 2 to 150-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; noneffervescent; slightly acid, pH 6.4; gradual wavy boundary. Lab sample # 18N06768

Bw--15 to 40 centimeters (5.9 to 15.7 inches); dark brown (7.5YR 3/4) extremely gravelly sandy loam, brown (7.5YR 5/4), dry; 52 percent sand; 19 percent clay; weak fine subangular blocky parts to weak fine granular structure; friable; common medium roots throughout and common fine roots throughout; 1 percent faint clay films on all faces of peds; 5 percent fine mica flakes, unspecified in matrix; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 20 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 40 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; noneffervescent; moderately acid, pH 5.6; abrupt wavy boundary. Lab sample # 18N06769

C--40 to 100 centimeters (15.7 to 39.4 inches); dark brown (7.5YR 3/4) cobbles, brown (7.5YR 5/4), dry; massive; friable; common very fine roots throughout and common fine roots throughout; 5 percent fine mica flakes, unspecified; 15 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 61 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.4.
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 17 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_011
Site ID: S2018CO013011
Pedon ID: S2018CO013011
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2861
Soil Name as Described/Sampled: Leighcan
Classification: Loamy-skeletal, mixed, superactive Typic Dystrocryepts

Soil Name as Correlated: 
Classification: 
Pedon Type: 
Pedon Purpose: soil survey inventory 
Taxon Kind: series 
Associated Soils: 
Physiographic Division: 
Physiographic Province: 

Physiographic Section: 
State Physiographic Area: 

Local Physiographic Area: 
Geomorphic Setting: on shoulder of side slope of Is mountains on shoulder of side slope of If moraine 
Upslope Shape: convex 
Cross Slope Shape: linear 
Particle Size Control Section: 

Description origin: Pedon PC 6.3 
Diagnostic Features: ? to ? cm.

Country: United States 
State: Colorado 
County: Boulder 
MLRA: 48A -- Southern Rocky Mountains 
Soil Survey Area: 
Map Unit: 
Pit Location: 
Quad Name: 
Std Latitude: 40.0341600 
Std Longitude: -105.555300 

Latitude: 40 degrees 2 minutes 2.98 seconds north 
Longitude: 105 degrees 33 minutes 19.91 seconds west 
Datum: WGS84 
UTM Zone: 13 
UTM Easting: 452604 meters 
UTM Northing: 4431697 meters 

Primary Earth Cover: Tree cover 
Secondary Earth Cover: Other grass/herbaceous cover 
Existing Vegetation: blueberry, common juniper, Engelmann spruce, lodgepole pine, subalpine fir 
Parent Material: glacial till derived from granite and gneiss 
Bedrock Kind: 
Bedrock Depth: 
Bedrock Hardness: 
Bedrock Fracture Interval: 
Surface Fragments: 3.5 percent nonflat subrounded indurated 250- to 600-millimeter Mixed rock fragments and 3.5 percent nonflat subrounded indurated 600- to 1000-millimeter Mixed rock fragments 
Description database: KSSL
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<th>Aspect (deg)</th>
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Oe—0 to 5 centimeters (0.0 to 2.0 inches); black (10YR 2/1), very dark grayish brown (10YR 3/2), dry; common very fine roots throughout and common fine roots throughout and common coarse roots throughout; abrupt smooth boundary. Lab sample # 18N06770

E—5 to 37 centimeters (2.0 to 14.6 inches); dark grayish brown (10YR 4/2) extremely gravelly sandy loam, light brownish gray (10YR 6/2), dry; 60 percent sand; 16 percent clay; weak fine subangular blocky, and weak fine granular structure; very friable; common medium roots throughout and common fine roots throughout and common coarse roots throughout; common dendritic tubular pores; 4 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 25 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 38 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; clear smooth boundary. Lab sample # 18N06771

Bw—37 to 74 centimeters (14.6 to 29.1 inches); brown (7.5YR 4/4) very gravelly sandy loam, brown (7.5YR 5/3), dry; 70 percent sand; 8 percent clay; weak medium granular structure; very friable; common very fine roots throughout and common fine roots throughout; common dendritic tubular pores; 10 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 25 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 25 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; very strongly acid, pH 5.0; clear wavy boundary. Lab sample # 18N06772

C—74 to 109 centimeters (29.1 to 42.9 inches); brown (10YR 4/3) extremely gravelly loamy sand, grayish brown (10YR 5/2), dry; 85 percent sand; 6 percent clay; massive; very friable; few very fine roots throughout and common fine roots throughout; 8 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 25 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 30 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; moderately acid, pH 6.0; clear wavy boundary. Lab sample # 18N06773
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 11 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_014
Site ID: S2018CO013014
Pedon ID: S2018CO013014
Site Note: Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2862
Soil Name as Described/Sampled: snd
Classification: Loamy-skeletal, mixed, superactive Umbric Haplocryalfs

Soil Name as Correlated:
Classification: Pedon Type: Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils: Physiographic Division: Physiographic Province:
Physiographic Section:
State Physiographic Area: Local Physiographic Area:
Geomorphic Setting: on backslope of nose slope of mountainflank of Is mountains
on backslope of nose slope of mountainflank of If mountain slope
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0509200
Std Longitude: -105.5480100

Latitude: 40 degrees 3 minutes 3.31 seconds north
Longitude: 105 degrees 32 minutes 52.84 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 453257 meters
UTM Northing: 4433553 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation: blueberry, bluegrass, Geyer's sedge, limber pine, subalpine fir, yarrow
Parent Material: colluvium derived from biotite gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 2.4 percent nonflat subrounded indurated 250- to 600-millimeter Biotite gneiss fragments and 0.4 percent nonflat subrounded indurated 600- to 1000-millimeter Biotite gneiss fragments
Description database: KSSL
### Site Information

**Cont. Site ID:** S2018CO013014  
**Pedon ID:** S2018CO013014

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Oe--0 to 4 centimeters (0.0 to 1.6 inches); 2/1 2/1), 2/2 2/2), dry; neutral, pH 7.2; clear wavy boundary.

EA--4 to 23 centimeters (1.6 to 9.1 inches); 3/3 3/3) very gravelly sandy loam, 5/3 5/3), dry; 68 percent sand; 14 percent clay; weak medium subangular blocky parts to moderate medium granular structure; soft, very friable, nonsticky, nonplastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout and few coarse roots throughout; 3 percent fine mica flakes, unspecified throughout; 3 percent nonflat subangular indurated 250 to 600-millimeter Mixed rock fragments and 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 35 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; very strongly acid, pH 5.0; clear wavy boundary. Lab sample # 18N06774

Bt1--23 to 39 centimeters (9.1 to 15.4 inches); 3/4 3/4) very gravelly sandy clay loam, 5/4 5/4), dry; 60 percent sand; 22 percent clay; moderate medium subangular blocky structure; slightly sticky, nonplastic; common very fine roots throughout and common medium roots throughout and many fine roots throughout and very few coarse roots throughout; common very fine dendritic tubular pores; 5 percent distinct clay films on all faces of peds; 3 percent fine mica flakes, unspecified throughout; 3 percent nonflat subangular indurated 250 to 600-millimeter Mixed rock fragments and 8 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 30 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; gradual wavy boundary. Lab sample # 18N06775

Bt2--39 to 57 centimeters (15.4 to 22.4 inches); 4/4 4/4) very gravelly sandy clay loam, 5/4 5/4), dry; 60 percent sand; 22 percent clay; weak medium subangular blocky structure; slightly sticky, nonplastic; common very fine roots throughout and few medium roots throughout and common fine roots throughout and very few coarse roots throughout; common very fine dendritic tubular pores; 1 percent faint clay bridges between sand grains and 1 percent faint carbonate coats on bottom of rock fragments; 3 percent fine mica flakes, unspecified throughout; 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 11 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 20 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; gradual wavy boundary. Lab sample # 18N06776

Bt3--57 to 110 centimeters (22.4 to 43.3 inches); brown (7.5YR 4/4) very gravelly sandy loam, brown (7.5YR 5/4), dry; 65 percent sand; 19 percent clay; moderate medium subangular blocky structure; nonsticky, nonplastic; common very fine roots throughout and common fine interstitial pores; 7 percent faint clay bridges between sand grains; 3 percent fine mica flakes, unspecified throughout; 1 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 16 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 25 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4. Lab sample # 18N06777
Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0402500
Std Longitude: -105.5725300

Latitude: 40 degrees 2 minutes 24.90 seconds north
Longitude: 105 degrees 34 minutes 21.11 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 451158 meters
UTM Northing: 4432382 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation: blueberry, bluegrass, Engelmann spruce, heartleaf arnica, Rocky Mountain juniper, subalpine fir
Parent Material: slope alluvium derived from metamorphic rock over glacial till derived from hornblende gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 1.5 percent nonflat subrounded indurated 250- to 600-millimeter Hornblende gneiss fragments and 1.5 percent nonflat subrounded indurated 600- to 1000-millimeter Hornblende gneiss fragments
Description database: KSSL
Cont. Site ID: S2018CO013015
Pedon ID: S2018CO013015

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<th>Elevation (meters)</th>
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<th>Drainage Class</th>
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Oe—0 to 6 centimeters (0.0 to 2.4 inches); many medium roots and many fine roots; 6 percent fine mica flakes, unspecified throughout; strongly acid, pH 5.3; clear smooth boundary. Lab sample # 18N06778

A—6 to 17 centimeters (2.4 to 6.7 inches); very dark brown (10YR 2/2) silt loam; 35 percent sand; 11 percent clay; moderate fine subangular blocky parts to weak coarse granular, and moderate medium subangular blocky parts to weak coarse granular structure; friable, moderately sticky, moderately plastic; common very coarse roots throughout and many medium roots throughout and common coarse roots throughout; 1 percent fine mica flakes, unspecified throughout; 1 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.2; clear wavy boundary. Lab sample # 18N06779

BA—17 to 39 centimeters (6.7 to 15.4 inches); 40 percent dark brown (10YR 3/3) clay loam; 25 percent sand; 29 percent clay; 25 percent (7.5YR 2.5/3) and 35 percent (7.5R 3/4) and 40 percent (10YR 4/3) mottles; weak coarse subangular blocky parts to weak coarse platy structure; friable, moderately sticky, moderately plastic; many medium roots throughout and common fine roots throughout and common coarse roots throughout; 25 percent medium distinct irregular 7.5YR 3/4), moist, and 7.5YR 2.5/3), moist, masses of oxidized iron; 6 percent fine mica flakes, unspecified throughout; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 2 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.3; clear wavy boundary. Lab sample # 18N06780

ABb—39 to 59 centimeters (15.4 to 23.2 inches); 80 percent brown (10YR 4/3) and 20 percent black (10YR 2/1) gravelly clay loam; 40 percent sand; 30 percent clay; 40 percent coarse cylindrical (7.5YR 3/4) and 45 percent cylindrical (10YR 4/3) mottles; weak medium subangular blocky structure; friable, moderately sticky, moderately plastic; common medium roots throughout and common fine roots throughout; few fine tubular pores; 55 percent coarse distinct irregular 10YR 4/3), moist, and 7.5YR 3/4), moist, masses of oxidized iron; 2 percent fine mica flakes, unspecified throughout; 0 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 2 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 7 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 8 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; noneffervescent; strongly acid, pH 5.4; clear wavy boundary. Lab sample # 18N06781

BC—59 to 115 centimeters (23.2 to 45.3 inches); 47 percent reddish brown (2.5YR 4/4) very gravelly sandy clay loam; 65 percent sand; 30 percent clay; 8 percent cylindrical (2.5Y 4/2) and 45 percent cylindrical (7.5YR 4/4) and 47 percent cylindrical (2.5YR 4/4) mottles; weak coarse prismatic parts to moderate medium angular blocky structure; firm, moderately sticky, moderately plastic; common medium roots throughout; 40 percent faint pressure faces on all faces of peds; 8 percent fine faint irregular 2.5Y 4/2), moist, masses of reduced iron and 45 percent medium distinct irregular 7.5YR 3/3), moist, masses of oxidized iron; 6 percent fine mica flakes, unspecified throughout; 1 percent nonflat subrounded indurated 250 to 600-millimeter Hornblende gneiss fragments and 1 percent nonflat subrounded indurated 75 to 250-millimeter Hornblende gneiss fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Hornblende gneiss fragments and 25 percent nonflat subrounded indurated 20 to 75-millimeter Hornblende gneiss fragments; noneffervescent; moderately acid, pH 5.6. Lab sample # 18N06782
Print Date: Mar 23 2019
Description Date: Jul 11 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_016
Site ID: S2018CO013016
Pedon ID: S2018CO013016
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2864
Soil Name as Described/Sampled: snd
Classification: Loamy-skeletal, mixed, superactive Typic Haplocryalfs
Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on backslope of mountainflank, center third of Is mountains
on backslope of mountainflank, center third of If mountain slope
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section:
Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.
Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0483600
Std Longitude: -105.5426100
Latitude: 40 degrees 2 minutes 54.10 seconds north
Longitude: 105 degrees 32 minutes 33.40 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 453716 meters
UTM Northing: 4433266 meters
Primary Earth Cover: Tree cover
Secondary Earth Cover: Other shrub cover
Existing Vegetation: common evening primrose, common juniper, currant, Geyer's sedge, limber pine, lodgepole pine, sedge, subalpine fir
Parent Material: colluvium derived from gneiss over till derived from gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 0.5 percent nonflat subrounded indurated 250- to 600-millimeter Gneiss fragments and 0.5 percent nonflat subrounded indurated 600- to 1000-millimeter Gneiss fragments
Description database: KSSL
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<th>Slope (%)</th>
<th>Elevation (meters)</th>
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<th>MSAT (°C)</th>
<th>MWAT (°C)</th>
<th>MAP (mm)</th>
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Oi—0 to 4 centimeters (0.0 to 1.6 inches); clear smooth boundary.

A—4 to 15 centimeters (1.6 to 5.9 inches); 3/3 3/3) extremely gravelly coarse sandy loam, 4/3 4/3), dry; 63 percent sand; 11 percent clay; moderate medium granular structure; nonsticky, nonplastic; common very fine roots and common medium roots and common fine roots and common coarse roots; 5 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments and 30 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments and 35 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments; noneffervescent; moderately acid, pH 5.6; clear smooth boundary. Lab sample # 18N06783

E—15 to 37 centimeters (5.9 to 14.6 inches); 5/3 5/3) extremely gravelly coarse sandy loam, 6/3 6/3), dry; 80 percent sand; 12 percent clay; weak medium subangular blocky parts to moderate fine granular structure; nonsticky, nonplastic; common very fine roots and common medium roots and common fine roots and very few coarse roots; 5 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments and 35 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments and 35 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments; noneffervescent; moderately acid, pH 5.6; clear smooth boundary. Lab sample # 18N06784

Bt—37 to 66 centimeters (14.6 to 26.0 inches); brown (7.5YR 4/4) extremely gravelly sandy clay loam, brown (7.5YR 5/4), dry; 60 percent sand; 25 percent clay; weak medium subangular blocky structure; moderately sticky, moderately plastic; common very fine roots and common fine roots; 2 percent faint clay films on all faces of peds and 15 percent distinct clay films on rock fragments; 9 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments and 40 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments and 40 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments; noneffervescent; strongly acid, pH 5.2; clear smooth boundary. Lab sample # 18N06785

2BCT—66 to 100 centimeters (26.0 to 39.4 inches); brown (7.5YR 5/4) extremely gravelly clay loam, light brown (7.5YR 6/4), dry; 44 percent sand; 30 percent clay; weak medium subangular blocky structure; moderately sticky, moderately plastic; common fine roots; 10 percent distinct clay films on all faces of peds; 10 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments and 18 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments and 60 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments; noneffervescent; very strongly acid, pH 5.0.
Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0526900
Std Longitude: -105.5838600
Latitude: 40 degrees 3 minutes 9.69 seconds north
Longitude: 105 degrees 35 minutes 1.90 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 450200 meters
UTM Northing: 4433769 meters
Primary Earth Cover: Grass/herbaceous cover
Secondary Earth Cover: Other tree cover
Existing Vegetation: goldenrod, hazel alder, sedge, spike trisetum, subalpine fir, willow
Parent Material: glacial till derived from hornblende gneiss
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 4.0 percent nonflat subrounded indurated 250- to 600-millimeter hornblende gneiss fragments
Description database: KSSL

Soil Name as Described/Sampled: snd
Classification: Coarse-loamy, mixed, superactive Typic Humicrypts

Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:

State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of mountainflank, upper third of Is mountains
on backslope of mountainflank, upper third of lf mountain slope
Upslope Shape: concave
Cross Slope Shape: linear
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.
A1--0 to 7 centimeters (0.0 to 2.8 inches); black (10YR 2/1) gravelly sandy loam, dark yellowish brown (10YR 3/4), dry; 65 percent sand; 16 percent clay; weak medium subangular blocky parts to moderate medium single grain; soft, very friable, nonsticky, nonplastic; common very fine roots throughout and common fine roots throughout; common very fine dendritic tubular pores; 2 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.2; clear smooth boundary. Lab sample # 18N06786

A2--7 to 17 centimeters (2.8 to 6.7 inches); very dark brown (10YR 2/2) cobbly sandy loam, dark grayish brown (10YR 4/2), dry; 64 percent sand; 19 percent clay; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout; common very fine interstitial pores; 1 percent nonflat subrounded indurated 250 to 600-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 20 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 20 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; very strongly acid, pH 5.0; clear wavy boundary. Lab sample # 18N06787

EB--17 to 42 centimeters (6.7 to 16.5 inches); brown (7.5YR 4/3) sandy loam, brown (7.5YR 5/4), dry; 65 percent sand; 17 percent clay; 20 percent (5Y 4/6) mottles; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; few very fine roots throughout and common very fine roots throughout and common medium roots throughout; common very fine dendritic tubular pores; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; very strongly acid, pH 4.6; clear wavy boundary. Lab sample # 18N06788

Bw1--42 to 74 centimeters (16.5 to 29.1 inches); dark brown (7.5YR 3/4) gravelly sandy loam, brown (7.5YR 4/3), dry; 65 percent sand; 18 percent clay; weak medium subangular blocky parts to moderate fine granular structure; slightly hard, very friable, nonsticky, nonplastic; few fine roots throughout; common very fine interstitial pores; 3 percent fine mica flakes, unspecified in matrix; 2 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; very strongly acid, pH 5.0; clear wavy boundary. Lab sample # 18N06789

Bw2--74 to 115 centimeters (29.1 to 45.3 inches); dark yellowish brown (10YR 3/4) gravelly sandy loam, dark yellowish brown (10YR 4/4), dry; 65 percent sand; 14 percent clay; weak medium subangular blocky parts to moderate fine granular structure; slightly hard, very friable, nonsticky, nonplastic; very few fine roots throughout; common very fine interstitial pores; 3 percent fine mica flakes, unspecified in matrix; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments and 13 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; very strongly acid, pH 5.0. Lab sample # 18N06790
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 16 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_022
Site ID: S2018CO013022
Pedon ID: S2018CO013022
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2866
Soil Name as Described/Sampled: Leighcan
Classification: Loamy-skeletal, mixed, superactive Typic Dystrocryepts

Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:

State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on backslope of mountainflank, center third of Is mountains
on backslope of mountainflank, center third of If mountain slope
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0387100
Std Longitude: -105.5570000
Latitude: 40 degrees 2 minutes 19.36 seconds north
Longitude: 105 degrees 33 minutes 25.20 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 452481 meters
UTM Northing: 4432202 meters
Primary Earth Cover: Tree cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation: blueberry, common juniper, Engelmann spruce, Geyer's sedge, lodgepole pine, subalpine fir
Parent Material: glacial till derived from granite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 2.0 percent nonflat subrounded indurated 250- to 600-millimeter granite fragments and 1.0 percent nonflat subrounded indurated 600- to 1000-millimeter granite fragments
Description database: KSSL
Oe--0 to 2 centimeters (0.0 to 0.8 inches); dark brown (7.5YR 3/2), brown (7.5YR 5/2), dry; abrupt smooth boundary.

E--2 to 13 centimeters (0.8 to 5.1 inches); brown (7.5YR 4/3) gravelly sandy loam, brown (10YR 5/3), dry; 65 percent sand; 18 percent clay; nonsticky, nonplastic; common medium roots throughout and common fine roots throughout and common coarse roots throughout; 2 percent nonflat subangular indurated 75 to 150-millimeter Mixed rock fragments and 10 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 10 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; very strongly acid, pH 5.0; clear smooth boundary. Lab sample # 18N06791

Bw1--13 to 29 centimeters (5.1 to 11.4 inches); strong brown (7.5YR 4/6) very gravelly sandy loam; 68 percent sand; 17 percent clay; weak medium subangular blocky structure; soft, very friable, nonsticky, nonplastic; common very fine roots throughout and common fine roots throughout and common coarse roots throughout; 2 percent nonflat subangular indurated 75 to 150-millimeter Mixed rock fragments and 2 percent nonflat subangular indurated 250 to 600-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 19 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; very strongly acid, pH 5.0; gradual wavy boundary. Lab sample # 18N06792

Bw2--29 to 54 centimeters (11.4 to 21.3 inches); brown (7.5YR 4/4) very gravelly coarse sandy loam, strong brown (7.5YR 5/6), dry; 75 percent sand; 12 percent clay; weak medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; very few very coarse roots and common medium roots and few medium roots and few fine roots and few medium roots and few fine roots and common very fine dendritic tubular pores; 16 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 20 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.2; gradual wavy boundary. Lab sample # 18N06793

BC1--54 to 78 centimeters (21.3 to 30.7 inches); dark yellowish brown (10YR 4/6) gravelly sandy loam, yellowish brown (10YR 5/6), dry; 70 percent sand; 16 percent clay; weak very thick platy structure; slightly hard, friable, nonsticky, nonplastic; few very fine roots and common medium roots and few medium roots and few fine roots; common very fine dendritic tubular pores; 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 12 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments and 16 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; gradual wavy boundary. Lab sample # 18N06794

BC2--78 to 110 centimeters (30.7 to 43.3 inches); olive brown (2.5Y 4/4) very gravelly sandy loam, light yellowish brown (2.5Y 6/4), dry; 63 percent sand; 16 percent clay; weak medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; few very fine roots and few fine roots; common very fine dendritic tubular pores; 8 percent faint pressure faces on all faces of peds; 1 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subangular indurated 20 to 75-millimeter Mixed rock fragments and 30 percent nonflat subangular indurated 2 to 20-millimeter Mixed rock fragments; strongly acid, pH 5.2. Lab sample # 18N06795
PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 12 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_026
Site ID: S2018CO013026
Pedon ID: S2018CO013026
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2867
Soil Name as Described/Sampled: snd
Classification: Coarse-loamy, mixed, superactive Typic Humicrypts

Soil Name as Correlated:
Classification:
Pedon Type:
Pedon Purpose: soil survey inventory
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:

State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on footslope of mountainflank, center third of Is mountains
on footslope of mountainflank, center third of If mountain slope
Upslope Shape: concave
Cross Slope Shape: concave
Particle Size Control Section:

Description origin: Pedon PC 6.3
Diagnostic Features: ? to ? cm.

Country: United States
State: Colorado
County: Boulder
MLRA: 48A -- Southern Rocky Mountains
Soil Survey Area:
Map Unit:
Pit Location:
Quad Name:
Std Latitude: 40.0494800
Std Longitude: -105.5719100
Latitude: 40 degrees 2 minutes 58.13 seconds north
Longitude: 105 degrees 34 minutes 18.88 seconds west
Datum: WGS84
UTM Zone: 13
UTM Easting: 451217 meters
UTM Northing: 4433406 meters

Primary Earth Cover: Grass/herbaceous cover
Secondary Earth Cover: Other tree cover
Existing Vegetation: aster, bluegrass, common juniper, Engelmann spruce, limber pine, milkvetch, pussytoes, sedge, winterfat
Parent Material: glacial till derived from granite
Bedrock Kind:

Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 1.9 percent nonflat subrounded indurated 250- to 600-millimeter Granite fragments and 0.9 percent nonflat subrounded indurated 600- to 1000-millimeter Granite fragments
Description database: KSSL
<table>
<thead>
<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>

A1--0 to 9 centimeters (0.0 to 3.5 inches); very dark gray (10YR 3/1) loam, very dark grayish brown (10YR 3/2), dry; 35 percent sand; 20 percent clay; moderate fine granular structure; slightly hard, very friable, nonsticky, nonplastic; common very fine roots throughout and common fine roots throughout; common very fine tubular pores; 3 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments; strongly acid, pH 5.4; clear smooth boundary. Lab sample # 18N06796

A2--9 to 21 centimeters (3.5 to 8.3 inches); very dark grayish brown (10YR 3/2) grassy loam, very dark grayish brown (10YR 3/2), dry; 40 percent sand; 26 percent clay; weak fine subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; common very fine roots throughout and common fine roots throughout; common very fine tubular pores; 3 percent nonflat subrounded indurated 2 to 20-millimeter unspecified fragments and 5 percent nonflat subrounded indurated 75 to 250-millimeter unspecified fragments and 8 percent nonflat subrounded indurated 20 to 75-millimeter unspecified fragments; strongly acid, pH 5.4; clear smooth boundary. Lab sample # 18N06797

BAt--21 to 44 centimeters (8.3 to 17.3 inches); very dark grayish brown (10YR 3/2) grassy loam, dark brown (10YR 3/3), dry; 42 percent sand; 22 percent clay; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; few very fine roots throughout and few fine roots throughout; common very fine tubular pores; 10 percent faint clay films on all faces of peds; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 20 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.2; clear wavy boundary. Lab sample # 18N06798

Bt--44 to 65 centimeters (17.3 to 25.6 inches); reddish brown (5YR 4/4) very gravelly sandy loam, reddish brown (5YR 5/4), dry; 58 percent sand; 18 percent clay; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; common very fine roots throughout; common very fine dendritic tubular pores; 25 percent distinct clay bridges between sand grains; 15 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 25 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; clear wavy boundary. Lab sample # 18N06799

BCt--65 to 110 centimeters (25.6 to 43.3 inches); dark brown (10YR 3/3) very gravelly sandy loam, dark yellowish brown (10YR 4/4), dry; 75 percent sand; 10 percent clay; weak medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; few fine roots throughout; common very fine interstitial pores; 15 percent prominent clay films on all faces of peds; 2 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 2 to 20-millimeter Mixed rock fragments and 20 percent nonflat subrounded indurated 20 to 75-millimeter Mixed rock fragments; strongly acid, pH 5.4; clear wavy boundary. Lab sample # 18N06800
**PEDON DESCRIPTION -- NEON Site NIWO**

Print Date: Mar 23 2019  
Description Date: Jul 13 2018  
Describer: Chris Fabian  
NEON Plot ID: NIWO_029  
Site ID: S2018CO013029  
Pedon ID: S2018CO013029  
Site Note:  
Pedon Note:  
Lab Source ID: KSSL  
Lab Pedon #: 18N2868  
Soil Name as Described/Sampled: Leighcan  
Classification: Loamy-skeletal, mixed, superactive Typic Dystrocryepts  

Soil Name as Correlated:  
Classification:  
Pedon Type:  
Pedon Purpose: soil survey inventory  
Taxon Kind: series  
Associated Soils:  
Physiographic Division:  
Physiographic Province:  
Physiographic Section:  
State Physiographic Area:  
Local Physiographic Area:  
Geomorphic Setting: on backslope of mountainflank, upper third of Is mountains  
on backslope of mountainflank, upper third of If mountain slope  
Upslope Shape: linear  
Cross Slope Shape: linear  
Particle Size Control Section:  

Description origin: Pedon PC 6.3  
Diagnostic Features: ? to ? cm.  
Country: United States  
State: Colorado  
County: Boulder  
MLRA: 48A -- Southern Rocky Mountains  
Soil Survey Area:  
Map Unit:  
Pit Location:  
Quad Name:  
Std Latitude: 40.0527400  
Std Longitude: -105.5660000  
Latitude: 40 degrees 3 minutes 9.87 seconds north  
Longitude: 105 degrees 33 minutes 57.60 seconds west  
Datum: WGS84  
UTM Zone: 13  
UTM Easting: 451723 meters  
UTM Northing: 4433764 meters  
Primary Earth Cover: Grass/herbaceous cover  
Secondary Earth Cover: Other shrub cover  
Existing Vegetation: Geyer's sedge, Indian ricegrass, sand bluestem, sedge, spiny phlox  
Parent Material: colluvium derived from gneiss  
Bedrock Kind:  
Bedrock Depth:  
Bedrock Hardness:  
Bedrock Fracture Interval:  
Surface Fragments: 24.0 percent nonflat  
subrounded indurated 250- to 600-millimeter  
Gneiss fragments and 1.0 percent nonflat  
subrounded indurated 600- to 1000-millimeter  
Gneiss fragments  
Description database: KSSL
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<th>Elevation (meters)</th>
<th>Aspect (deg)</th>
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<th>MSAT (C)</th>
<th>MWAT (C)</th>
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<th>Frost-Free Days</th>
<th>Drainage Class</th>
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</table>

A--0 to 8 centimeters (0.0 to 3.1 inches); black (10YR 2/1) cobbly loam, dark brown (10YR 3/3), dry; 45 percent sand; 18 percent clay; weak medium granular, and weak fine granular structure; soft, friable, slightly sticky, slightly plastic; many very fine roots throughout and common medium roots throughout and common fine roots throughout; 3 percent mica flakes, unspecified in matrix; 8 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments and 10 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments and 10 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments; noneffervescent; moderately acid, pH 5.6; clear smooth boundary. Lab sample # 18N06801

Bw--8 to 27 centimeters (3.1 to 10.6 inches); brown (7.5YR 4/3) very gravelly loam, brown (7.5YR 5/4), dry; 50 percent sand; 20 percent clay; weak fine subangular blocky structure; soft, friable, slightly sticky, slightly plastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout; 3 percent mica flakes, unspecified in matrix; 19 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments and 20 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments and 20 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments; noneffervescent; strongly acid, pH 5.2; gradual wavy boundary. Lab sample # 18N06802

BC--27 to 64 centimeters (10.6 to 25.2 inches); strong brown (7.5YR 4/6) extremely gravelly sandy loam, brown (7.5YR 5/4), dry; 63 percent sand; 15 percent clay; weak fine subangular blocky structure; soft, friable, moderately sticky, moderately plastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout; 2 percent mica flakes, unspecified in matrix; 18 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments and 24 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments and 39 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments; noneffervescent; very strongly acid, pH 4.8; diffuse irregular boundary. Lab sample # 18N06803

CB--64 to 105 centimeters (25.2 to 41.3 inches); strong brown (7.5YR 4/6) extremely cobbly sandy loam, brown (7.5YR 5/4), dry; 68 percent sand; 13 percent clay; weak fine subangular blocky structure; soft, friable, slightly sticky, slightly plastic; common fine roots throughout; 2 percent mica flakes, unspecified in matrix; 15 percent nonflat subangular indurated 2 to 20-millimeter Gneiss fragments and 33 percent nonflat subangular indurated 75 to 250-millimeter Gneiss fragments and 35 percent nonflat subangular indurated 20 to 75-millimeter Gneiss fragments; noneffervescent; extremely acid, pH 4.4.