

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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
13.0	3,224.0	133						well		

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 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: ls 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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
13.0	3,503.0	183						well		

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 32 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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
39.0	3,267.1	181						well		

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
subrounded indurated 250- to 600-millimeter
Hornblende gneiss fragments and 1.2 percent
nonflat subrounded indurated 600- to 1000-
millimeter Hornblende gneiss fragments

Description database: KSSL

Cont. Site ID: S2018CO013007

Pedon ID: S2018CO013007

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
5.0	3,030.0	100						well		

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; 20 percent distinct clay films on all faces of peds; 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 4/3) 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

Cont. Site ID: S2018CO013008

Pedon ID: S2018CO013008

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
9.0	3,503.7	15						well		

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: -105.5555300

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

Cont. Site ID: S2018CO013011

Pedon ID: S2018CO013011

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
24.0	3,129.1	15						well		

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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
23.0	3,210.0	43						well		

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; 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 roots throughout; 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

PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019
Description Date: Jul 9 2018
Describer: Chris Fabian
NEON Plot ID: NIWO_015
Site ID: S2018CO013015
Pedon ID: S2018CO013015
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2863
Soil Name as Described/Sampled: snd
Classification: Fine-loamy, mixed, superactive Aquic 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 backslope of mountainflank of Is mountains
on backslope of mountainflank of If mountain slope
Upslope Shape: linear
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: 40.0402500
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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
10.0	3,216.6	20						well		

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

PEDON DESCRIPTION -- NEON Site NIWO

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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
36.0	3,125.0	195						well		

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.

PEDON DESCRIPTION -- NEON Site NIWO

Print Date: Mar 23 2019

Description Date: Jul 16 2018

Describer: Chris Fabian

NEON Plot ID: NIWO_018

Site ID: S2018CO013018

Pedon ID: S2018CO013018

Site Note:

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 18N2865

Soil Name as Described/Sampled: snd

Classification: Coarse-loamy, 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 backslope of mountainflank, upper third of Is mountains

on backslope of mountainflank, upper third of If mountain slope

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: 40.0526900

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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
10.0	3,484.8	165						well		

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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
19.0	3,147.1	135						well		

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; 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 throughout; 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 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 footslope of mountainflank, center third of ls mountains

on footslope of mountainflank, center third of lf 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

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
14.0	3,378.0	163						well		

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

Cont. Site ID: S2018CO013029

Pedon ID: S2018CO013029

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
28.0	3,496.9	246						well		

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.