PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Genevieve Landucci
NEON Plot ID: SOAP_002
Site ID: S2018CA019002

Pedon ID: S2018CA019002
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2063
Soil Name as Described/Sampled: Cumulic Humixerepts
Classification: Sandy, mixed, mesic Cumulic Humixerepts

Soil Name as Correlated:

Classification:
Pedon Type: undefined observation
Pedon Purpose: laboratory sampling site
Taxon Kind: family
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains

Physiographic Section: Sierra Nevada
State Physiographic Area:
Local Physiographic Area: Soaproot
Geomorphic Setting: on footslope of mountainflank of mountains on footslope of mountainflank of mountain slope
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS
Diagnostic Features: umbric epipedon 0 to 120 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0305840
Std Longitude: 119.2816240

Latitude: 37 degrees 1 minutes 50.02 seconds north
Longitude: 119 degrees 16 minutes 53.85 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 297057 meters
UTM Northing: 4100700 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: alluvium derived from granitoid
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 2.0 percent nonflat 2- to 75-millimeter

Description database: KSSL

Cont. Site ID: S2018CA019002 **Pedon ID:** S2018CA019002

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
2.0	1,299.0	124						somewhat excessively		

A1--0 to 16 centimeters (0.0 to 6.3 inches); brown (10YR 4/3) sandy loam, very dark brown (10YR 2/2), moist; 70 percent sand; 10 percent clay; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; many very fine roots and common fine roots; common fine irregular pores; 4 percent nonflat subangular indurated 2 to 75-millimeter Granitoid fragments; noneffervescent; clear wavy boundary. Lab sample # 18N06245

A2--16 to 30 centimeters (6.3 to 11.8 inches); brown (10YR 4/3) sandy loam, very dark brown (10YR 2/2), moist; 75 percent sand; 9 percent clay; weak medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; common very fine roots and common fine roots; common very fine irregular and common fine irregular pores; 5 percent nonflat subangular indurated 2 to 75-millimeter Granitoid fragments; noneffervescent; clear smooth boundary. Lab sample # 18N06246

C1--30 to 60 centimeters (11.8 to 23.6 inches); brown (10YR 5/3) gravelly coarse sand, dark brown (10YR 3/3), moist; 95 percent sand; 1 percent clay; single grain; loose, loose, nonsticky, nonplastic; common very fine roots; common coarse irregular pores; 25 percent nonflat subangular indurated 2 to 75-millimeter Granitoid fragments; noneffervescent; clear smooth boundary. Lab sample # 18N06247

C2--60 to 120 centimeters (23.6 to 47.2 inches); brown (10YR 5/3) sand, dark brown (10YR 3/3), moist; 95 percent sand; 1 percent clay; single grain; loose, loose, nonsticky, nonplastic; common fine irregular pores; 2 percent nonflat subangular indurated 2 to 75-millimeter Granitoid fragments; noneffervescent; abrupt smooth boundary. Lab sample # 18N06248

C3--120 to 150 centimeters (47.2 to 59.1 inches); light brownish gray (2.5Y 6/2) sandy loam, very dark grayish brown (2.5Y 3/2), moist; 13 percent clay; massive; slightly hard, very friable, nonsticky, nonplastic; 5 percent faint 7.5YR 4/3), moist, masses of oxidized iron On faces of peds; noneffervescent.

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Julie Baker
NEON Plot ID: SOAP_004
Site ID: S2018CA019004

Pedon ID: S2018CA019004
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2064
Soil Name as Described/Sampled: Holland
Classification: Fine-loamy, mixed, active, mesic Ultic Haploxeralfs

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains

Physiographic Section: Sierra Nevada
State Physiographic Area:
Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank of mountain slope on backslope of mountainflank of mountains
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 26 to 76 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 26 cm.
argillic horizon 26 to 174 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0375650
Std Longitude: 119.2694630

Latitude: 37 degrees 2 minutes 15.15 seconds north
Longitude: 119 degrees 16 minutes 10.07 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 298157 meters
UTM Northing: 4101448 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: residuum weathered from granite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018CA019004 **Pedon ID:** S2018CA019004

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
30.0	1,194.0	30						well		

Oi--0 to 8 centimeters (0.0 to 3.1 inches); brown (7.5YR 4/3) slightly decomposed plant material, very dark brown (7.5YR 2.5/2), moist; noneffervescent; slightly acid, pH 6.4, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N06249

A--8 to 26 centimeters (3.1 to 10.2 inches); brown (7.5YR 5/2) sandy loam, dark brown (7.5YR 3/2), moist; 70 percent sand; 5 percent clay; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky, nonplastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout and common coarse roots throughout; many very fine irregular and common fine irregular pores; 5 percent nonflat subrounded very strongly cemented 2 to 75-millimeter Granite fragments; noneffervescent; slightly acid, pH 6.4, pH indicator solutions; gradual smooth boundary. Lab sample # 18N06250

Bt1--26 to 62 centimeters (10.2 to 24.4 inches); brown (7.5YR 5/4) sandy clay loam, reddish brown (5YR 4/4), moist; 60 percent sand; 24 percent clay; moderate coarse prismatic structure; moderately hard, firm, moderately sticky, slightly plastic; few very fine roots throughout and common medium roots throughout and few fine roots throughout and common coarse roots throughout; many very fine irregular and common very fine tubular and common fine tubular pores; 10 percent distinct clay films on all faces of peds; 2 percent nonflat subrounded very strongly cemented 2 to 75-millimeter Granite fragments; noneffervescent; moderately acid, pH 5.6, pH indicator solutions; gradual smooth boundary. Lab sample # 18N06251

Bt2--62 to 148 centimeters (24.4 to 58.3 inches); brown (7.5YR 5/4) sandy clay, reddish brown (5YR 4/4), moist; 65 percent sand; 36 percent clay; moderate very coarse prismatic structure; very hard, extremely firm, moderately sticky, moderately plastic; very few very fine roots throughout and common medium roots throughout and very few fine roots throughout; common very fine tubular and common very fine irregular and common medium tubular and common fine tubular pores; 30 percent distinct clay films on all faces of peds; 10 percent nonflat subrounded very strongly cemented 2 to 75-millimeter Granite fragments; noneffervescent; strongly acid, pH 5.4, pH indicator solutions. Lab sample # 18N06252

Bt3--148 to 174 centimeters (58.3 to 68.5 inches); strong brown (7.5YR 5/6) sandy clay loam, brown (7.5YR 4/4), moist; 70 percent sand; 25 percent clay; moderately hard, firm, moderately sticky, slightly plastic; common medium roots throughout and very few fine roots throughout; common very fine irregular pores; 15 percent distinct clay films on all faces of peds; 5 percent nonflat subrounded very strongly cemented 2 to 75-millimeter Granite fragments; noneffervescent; strongly acid, pH 5.4, pH indicator solutions.

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Genevieve Landucci
NEON Plot ID: SOAP_005
Site ID: S2018CA019005

Pedon ID: S2018CA019005
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2065
Soil Name as Described/Sampled: Holland
Classification: Fine-loamy, mixed, active, mesic Ultic Haploxeralfs

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains

Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank of mountains on backslope of mountainflank of mountain slope
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 52 to 102 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 52 cm.
argillic horizon 52 to 150 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0322580
Std Longitude: 119.2630670

Latitude: 37 degrees 1 minutes 56.04 seconds north
Longitude: 119 degrees 15 minutes 47.04 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 298712 meters
UTM Northing: 4100846 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: residuum weathered from granitoid
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018CA019005 **Pedon ID:** S2018CA019005

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
15.0	1,196.0	55						well		

Oi--0 to 6 centimeters (0.0 to 2.4 inches); brown (10YR 4/3) slightly decomposed plant material, dark yellowish brown (10YR 3/4), moist; abrupt wavy boundary. Lab sample # 18N06253

A--6 to 13 centimeters (2.4 to 5.1 inches); dark grayish brown (10YR 4/2) loamy sand, very dark brown (10YR 2/2), moist; 68 percent sand; 8 percent clay; moderate medium granular structure; slightly hard, very friable, nonsticky, nonplastic; common very fine roots and common fine roots; common fine irregular pores; noneffervescent; abrupt wavy boundary. Lab sample # 18N06254

Bw--13 to 52 centimeters (5.1 to 20.5 inches); yellowish brown (10YR 5/4) and dark yellowish brown (10YR 3/4) loamy sand; 65 percent sand; 12 percent clay; moderate medium subangular blocky structure; moderately hard, friable, nonsticky, nonplastic; common very fine roots and very few very coarse roots and common medium roots and common fine roots and very few coarse roots; common fine irregular pores; 2 percent nonflat 2 to 75-millimeter unspecified fragments; noneffervescent; clear smooth boundary. Lab sample # 18N06255

Bt1--52 to 120 centimeters (20.5 to 47.2 inches); reddish brown (5YR 4/4) sandy clay loam, dark reddish brown (5YR 3/4), moist; 55 percent sand; 21 percent clay; moderate medium subangular blocky structure; hard, friable, moderately sticky, slightly plastic; common very fine roots and common medium roots and common fine roots and very few coarse roots; common very fine dendritic tubular and common fine dendritic tubular pores; 5 percent distinct 5YR 3/4), moist, clay films on surfaces along pores; noneffervescent; gradual smooth boundary. Lab sample # 18N06256

Bt2--120 to 150 centimeters (47.2 to 59.1 inches); reddish brown (5YR 4/4) sandy clay loam, dark reddish brown (5YR 3/4), moist; 52 percent sand; 24 percent clay; hard, friable, moderately sticky, moderately plastic; common very fine roots and common fine roots; 5 percent distinct 5YR 3/4), moist, clay films on surfaces along pores and 5 percent distinct clay films on all faces of peds; noneffervescent.

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Andrew Brown
NEON Plot ID: SOAP_008
Site ID: S2018CA019008

Pedon ID: S2018CA019008
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2066
Soil Name as Described/Sampled: Holland
Classification: Fine-loamy, mixed, active, mesic Ultic Haploxeralfs

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains

Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank, upper third of mountains
on backslope of mountainflank, upper third of mountain slope
Upslope Shape: linear
Cross Slope Shape: concave
Particle Size Control Section: 54 to 104 cm.
Description origin: NASIS
Diagnostic Features: umbric epipedon 2 to 33 cm.
cambic horizon 9 to 54 cm.
argillic horizon 54 to 133 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0292750
Std Longitude: 119.2761330

Latitude: 37 degrees 1 minutes 45.30 seconds north
Longitude: 119 degrees 16 minutes 34.08 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 297542 meters
UTM Northing: 4100542 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: colluvium derived from granodiorite over residuum weathered from granodiorite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018CA019008 **Pedon ID:** S2018CA019008

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
12.0	1,307.0	270						well		

Oi--0 to 2 centimeters (0.0 to 0.8 inches); slightly decomposed plant material; many very fine irregular and many fine irregular pores; noneffervescent; strongly acid, pH 5.2, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N06257

A--2 to 9 centimeters (0.8 to 3.5 inches); dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2), moist; 65 percent sand; 9 percent clay; weak fine granular structure; soft, very friable, nonsticky, nonplastic; common very fine roots throughout and common medium roots throughout; many fine irregular pores; 2 percent nonflat subrounded very strongly cemented 2 to 75-millimeter Granodiorite fragments; noneffervescent; strongly acid, pH 5.4, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N06258

BA--9 to 33 centimeters (3.5 to 13.0 inches); brown (7.5YR 4/3) sandy loam, dark brown (7.5YR 3/3), moist; 60 percent sand; 12 percent clay; weak medium subangular blocky structure; soft, very friable, nonsticky, nonplastic; common very coarse roots throughout and common medium roots throughout and common fine roots throughout; common fine irregular pores; noneffervescent; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 18N06259

Bw--33 to 54 centimeters (13.0 to 21.3 inches); brown (7.5YR 4/4) sandy loam, dark brown (7.5YR 3/4), moist; 60 percent sand; 14 percent clay; weak medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; common medium roots throughout and common fine roots throughout; common fine irregular pores; 2 percent nonflat subrounded very strongly cemented 2 to 75-millimeter Granodiorite fragments and 4 percent nonflat subrounded very strongly cemented 75 to 250-millimeter Granodiorite fragments; noneffervescent; strongly acid, pH 5.4, pH indicator solutions; clear smooth boundary. Lab sample # 18N06260

Bt--54 to 133 centimeters (21.3 to 52.4 inches); strong brown (7.5YR 4/6) sandy clay loam, dark brown (7.5YR 3/4), moist; 55 percent sand; 21 percent clay; weak medium subangular blocky, and weak coarse subangular blocky structure; moderately hard, friable, nonsticky, nonplastic; common medium roots throughout and common fine roots throughout; common fine irregular pores; 3 percent nonflat subrounded very strongly cemented 2 to 75-millimeter Granodiorite fragments and 5 percent nonflat subrounded very strongly cemented 75 to 250-millimeter Granodiorite fragments; noneffervescent; strongly acid, pH 5.2, pH indicator solutions; clear smooth boundary. Lab sample # 18N06261

BC--133 to 155 centimeters (52.4 to 61.0 inches); brown (7.5YR 5/4) sandy clay loam, brown (7.5YR 4/3), moist; 55 percent sand; 24 percent clay; weak medium subangular blocky structure; hard, friable, nonsticky, slightly plastic; common medium roots throughout and common fine roots throughout; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. lots of paramica

C--155 to 209 centimeters (61.0 to 82.3 inches); very pale brown (10YR 7/4) loam, pale brown (10YR 6/3), moist; 50 percent sand; 24 percent clay; massive; hard, friable, nonsticky, slightly plastic; common fine roots throughout; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions. lots of paramica

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Andrew Brown
NEON Plot ID: SOAP_010
Site ID: S2018CA019010

Pedon ID: S2018CA019010
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2067
Soil Name as Described/Sampled: Lithic Xeropsamments
Classification: Mixed, mesic Lithic Xeropsamments

Soil Name as Correlated:

Classification:
Pedon Type: undefined observation
Pedon Purpose: laboratory sampling site
Taxon Kind: family
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains
Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on shoulder of mountainflank, upper third of mountains
on shoulder of mountainflank, upper third of mountain slope
Upslope Shape: linear
Cross Slope Shape: concave

Particle Size Control Section:

Description origin: NASIS
Diagnostic Features: ? to ? cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0350800
Std Longitude: 119.2738520

Latitude: 37 degrees 2 minutes 6.20 seconds north
Longitude: 119 degrees 16 minutes 25.87 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 297760 meters
UTM Northing: 4101182 meters

Primary Earth Cover: Shrub cover
Secondary Earth Cover: Native shrubs
Existing Vegetation:
Parent Material: colluvium over residuum derived from granite
Bedrock Kind: Granite

Bedrock Depth: 16 centimeters

Bedrock Hardness:
Bedrock Fracture Interval: 45 to less than 100 centimeters
Surface Fragments: 5.0 percent nonflat 75- to 250-millimeter
Description database: KSSL

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

Cont. Site ID: S2018CA019010 **Pedon ID:** S2018CA019010

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
30.0	1,340.0	340						somewhat excessively		

Oi--0 to 7 centimeters (0.0 to 2.8 inches); very dark brown (7.5YR 2.5/2) slightly decomposed plant material; moderately acid, pH 5.6, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N06262

A--7 to 16 centimeters (2.8 to 6.3 inches); very dark grayish brown (10YR 3/2) highly organic loamy sand, dark grayish brown (10YR 4/2), dry; 82 percent sand; 5 percent clay; weak fine subangular blocky, and weak medium subangular blocky structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; common very fine irregular and common fine irregular pores; 2 percent nonflat 2 to 75-millimeter unspecified fragments; moderately acid, pH 5.8; very abrupt wavy boundary. Lab sample # 18N06263

R--16 to 41 centimeters (6.3 to 16.1 inches); Granite bedrock, fractured at intervals of 45 to less than 100 centimeters; common fine roots top of horizon; .

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Andrew Paolucci
NEON Plot ID: SOAP_012
Site ID: S2018CA019012

Pedon ID: S2018CA019012

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2068
Soil Name as Described/Sampled: Holland
Classification: Fine-loamy, mixed, semiactive, mesic Ultic Haploxeralfs

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains

Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank, upper third of mountains
on backslope of mountainflank, upper third of mountain slope
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 38 to 88 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 38 cm.
argillic horizon 38 to 173 cm.
paralithic contact 173 to cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
Map Unit: 137 -- Holland family, 35 to 65 percent slopes
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0306370
Std Longitude: 119.2768190

Latitude: 37 degrees 1 minutes 50.21 seconds north
Longitude: 119 degrees 16 minutes 36.55 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 297484 meters
UTM Northing: 4100695 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: colluvium over residuum derived from granodiorite
Bedrock Kind: Granodiorite

Bedrock Depth: 173 centimeters

Bedrock Hardness: very weakly cemented
Bedrock Fracture Interval:
Surface Fragments: 1.0 percent nonflat subangular strongly cemented 2- to 75-millimeter Granodiorite fragments and 1.0 percent nonflat subangular strongly cemented 75- to 250-millimeter Granodiorite fragments

Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
173		bedrock, paralithic	Very weakly cemented

Cont. Site ID: S2018CA019012 **Pedon ID:** S2018CA019012

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
22.0	1,324.0	237						well		

A--0 to 15 centimeters (0.0 to 5.9 inches); brown (10YR 4/3) crushed highly organic sandy loam, very dark brown (10YR 2/2) crushed, moist; 65 percent sand; 28 percent silt; 7 percent clay; weak medium subangular blocky, and weak very fine granular structure; slightly hard, friable, Noncemented, slightly sticky, nonplastic; many very fine roots throughout and common fine roots throughout; common very fine irregular and few medium irregular and common fine irregular pores; 3 percent nonflat subrounded strongly cemented 2 to 20-millimeter Granodiorite fragments; 7.5 NaF pH; noneffervescent, by HCl, 1 normal; strongly acid, pH 5.2, pH meter; clear wavy boundary. Lab sample # 18N06264. Granular structure in patches of this horizon where there are high amounts of fine roots.

AB--15 to 38 centimeters (5.9 to 15.0 inches); yellowish brown (10YR 5/4) crushed sandy loam, very dark grayish brown (10YR 3/2) crushed, moist; 61 percent sand; 25 percent silt; 14 percent clay; moderate medium subangular blocky structure; slightly hard, friable, Noncemented, slightly sticky, nonplastic; common very fine roots throughout and few medium roots throughout and few fine roots throughout and common coarse roots throughout; common very fine irregular and few medium irregular and few fine irregular pores; 1 percent nonflat subangular weakly cemented 75 to 250-millimeter Granodiorite fragments and 2 percent nonflat subrounded strongly cemented 2 to 20-millimeter Granodiorite fragments; 9.0 NaF pH; noneffervescent, by HCl, 1 normal; moderately acid, pH 5.8, pH meter; gradual smooth boundary. Lab sample # 18N06265

Bt1--38 to 67 centimeters (15.0 to 26.4 inches); brown (7.5YR 5/4) broken face sandy clay loam, brown (7.5YR 4/4) broken face, moist; 57 percent sand; 19 percent silt; 24 percent clay; moderate coarse subangular blocky structure; moderately hard, firm, Noncemented, moderately sticky, moderately plastic; common very fine roots throughout and common medium roots throughout and few fine roots throughout and common coarse roots throughout; few very fine tubular and common very fine irregular pores; 5 percent faint clay films on all faces of peds; 3 percent nonflat subrounded strongly cemented 2 to 20-millimeter Granodiorite fragments; 8.0 NaF pH; noneffervescent, by HCl, 1 normal; strongly acid, pH 5.5, pH meter; gradual wavy boundary. Lab sample # 18N06266

Bt2--67 to 107 centimeters (26.4 to 42.1 inches); brown (7.5YR 5/4) broken face paracobbly sandy clay loam, brown (7.5YR 4/4) broken face, moist; 60 percent sand; 19 percent silt; 21 percent clay; weak fine subangular blocky, and weak medium subangular blocky structure; slightly hard, friable, Noncemented, moderately sticky, slightly plastic; few very fine roots throughout and common medium roots throughout and few fine roots throughout; common very fine tubular and few medium tubular and common fine tubular pores; 18 percent prominent clay films on all faces of peds; 6 percent nonflat subrounded strongly cemented 2 to 20-millimeter Granodiorite fragments and 20 percent nonflat subangular very weakly cemented 75 to 250-millimeter Granodiorite fragments; 8.0 NaF pH; noneffervescent, by HCl, 1 normal; moderately acid, pH 5.6, pH meter; diffuse smooth boundary. Lab sample # 18N06267

Bt3--107 to 173 centimeters (42.1 to 68.1 inches); light brown (7.5YR 6/4) broken face very paracobbly sandy loam, brown (7.5YR 4/4) broken face, moist; 68 percent sand; 24 percent silt; 8 percent clay; weak fine subangular blocky structure; slightly hard, friable, Noncemented, slightly sticky, nonplastic; very few very fine roots throughout and very few fine roots throughout; common very fine interstitial and few fine interstitial pores; 5 percent faint clay films on all faces of peds; 7 percent nonflat subrounded weakly cemented 2 to 20-millimeter Granodiorite fragments and 30 percent nonflat subangular very weakly cemented 75 to 250-millimeter Granodiorite fragments; 8.0 NaF pH; noneffervescent, by HCl, 1 normal; strongly acid, pH 5.4, pH meter; clear wavy boundary.

Cr--173 to 180 centimeters (68.1 to 70.9 inches); very weakly cemented Granodiorite bedrock; Very weakly cemented; noneffervescent, by HCl, 1 normal.

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Jul 31 2018
Describer: Andrew Paolucci
NEON Plot ID: SOAP_015
Site ID: S2018CA019015

Pedon ID: S2018CA019015

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2069
Soil Name as Described/Sampled: Humic Dystroxerepts
Classification: Coarse-loamy, mixed, superactive, mesic Humic Dystroxerepts
Soil Name as Correlated:

Classification:
Pedon Type: undefined observation
Pedon Purpose: laboratory sampling site
Taxon Kind: family
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains

Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank, lower third of mountains
on backslope of mountainflank, lower third of mountain slope
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 16 cm.
cambic horizon 16 to 74 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
Map Unit: 137 -- Holland family, 35 to 65 percent slopes
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0382040
Std Longitude: 119.2518020

Latitude: 37 degrees 2 minutes 17.45 seconds north
Longitude: 119 degrees 15 minutes 6.49 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 299729 meters
UTM Northing: 4101482 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: colluvium derived from quartz-diorite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 1.0 percent nonflat subangular very strongly cemented 75- to 250-millimeter Quartz-diorite fragments and 5.0 percent nonflat subangular indurated 250- to 600-millimeter Quartz-diorite fragments and 15.0 percent nonflat subangular indurated 600- to 3000-millimeter Quartz-diorite fragments

Description database: KSSL

Cont. Site ID: S2018CA019015 **Pedon ID:** S2018CA019015

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
46.0	1,071.0	40						well		

A--0 to 1 centimeters (0.0 to 0.4 inches); very dark gray (10YR 3/1) crushed fine gravelly sandy loam, black (10YR 2/1) crushed, moist; 68 percent sand; 25 percent silt; 7 percent clay; weak very fine granular structure; soft, very friable, Noncemented, slightly sticky, nonplastic; many very fine roots throughout and few fine roots throughout; common very fine irregular and common fine irregular pores; 2 percent nonflat subangular very strongly cemented 75 to 250-millimeter Quartz-diorite fragments and 15 percent nonflat subangular strongly cemented 2 to 20-millimeter Quartz-diorite fragments; 9.0 NaF pH; noneffervescent, by HCl, 1 normal; neutral, pH 6.9, pH meter; abrupt smooth boundary. Lab sample # 18N06268. Hydrophobic

AB--1 to 16 centimeters (0.4 to 6.3 inches); dark grayish brown (10YR 4/2) crushed sandy loam, very dark grayish brown (10YR 3/2) crushed, moist; 68 percent sand; 25 percent silt; 7 percent clay; weak medium subangular blocky, and weak coarse subangular blocky structure; slightly hard, friable, Noncemented, slightly sticky, nonplastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout and few coarse roots throughout; common very fine irregular and common fine irregular pores; 3 percent nonflat subangular very strongly cemented 75 to 250-millimeter Quartz-diorite fragments and 8 percent nonflat subangular very strongly cemented 2 to 75-millimeter Quartz-diorite fragments; 9.0 NaF pH; noneffervescent, by HCl, 1 normal; slightly acid, pH 6.4, pH meter; gradual smooth boundary. Lab sample # 18N06269. Hydrophobic

Bw1--16 to 49 centimeters (6.3 to 19.3 inches); yellowish brown (10YR 5/4) broken face sandy loam, dark yellowish brown (10YR 4/4) broken face, moist; 66 percent sand; 25 percent silt; 9 percent clay; weak very coarse subangular blocky, and weak coarse subangular blocky structure; slightly hard, friable, Noncemented, slightly sticky, nonplastic; common very fine roots throughout and few very coarse roots throughout and common medium roots throughout and common fine roots throughout and common coarse roots throughout; common very fine irregular and common very fine tubular and few medium tubular and few fine tubular pores; 1 percent nonflat subangular indurated 250 to 600-millimeter Quartz-diorite fragments and 2 percent nonflat subangular very strongly cemented 75 to 250-millimeter Quartz-diorite fragments and 7 percent nonflat subangular very strongly cemented 2 to 75-millimeter Quartz-diorite fragments; 9.0 NaF pH; noneffervescent, by HCl, 1 normal; neutral, pH 6.6, pH meter; gradual smooth boundary. Lab sample # 18N06270. Hydrophobic with 2% black charcoal ranging from fine to coarse in size.

Bw2--49 to 74 centimeters (19.3 to 29.1 inches); dark yellowish brown (10YR 4/4) broken face stony coarse sandy loam, dark yellowish brown (10YR 3/4) broken face, moist; 72 percent sand; 23 percent silt; 5 percent clay; weak medium subangular blocky structure; soft, very friable, Noncemented, slightly sticky, nonplastic; common very fine roots throughout and few very coarse roots throughout and common medium roots throughout and common fine roots throughout and common coarse roots throughout; common very fine interstitial pores; 3 percent nonflat subangular very strongly cemented 75 to 250-millimeter Quartz-diorite fragments and 5 percent nonflat subangular very strongly cemented 2 to 75-millimeter Quartz-diorite fragments and 7 percent nonflat subangular indurated 250 to 600-millimeter Quartz-diorite fragments; 9.0 NaF pH; noneffervescent, by HCl, 1 normal; neutral, pH 6.7, pH meter; clear wavy boundary. Lab sample # 18N06271

CB--74 to 151 centimeters (29.1 to 59.4 inches); brownish yellow (10YR 6/6) broken face very stony loamy coarse sand, dark yellowish brown (10YR 4/6) broken face, moist; 84 percent sand; 13 percent silt; 3 percent clay; structureless massive; soft, very friable, Noncemented, nonsticky, nonplastic; common very fine roots around fragments and few fine roots around fragments; common very fine interstitial pores; 5 percent nonflat subangular very strongly cemented 75 to 250-millimeter Quartz-diorite fragments and 7 percent nonflat subangular very strongly cemented 2 to 75-millimeter Quartz-diorite fragments and 25 percent nonflat subangular indurated 250 to 600-millimeter Quartz-diorite fragments; 9.0 NaF pH; noneffervescent, by HCl, 1 normal; slightly acid, pH 6.2, pH meter. Lab sample # 18N06272

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Jul 31 2018
Describer: Andrew Brown
NEON Plot ID: SOAP_016
Site ID: S2018CA019016

Pedon ID: S2018CA019016
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2070
Soil Name as Described/Sampled: Musick
Classification: Fine-loamy, mixed, active, mesic Ultic Haploxeralfs

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains

Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on shoulder of mountainflank, upper third of mountains
on shoulder of mountainflank, upper third of mountain slope
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 6 to 56 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 6 cm.
argillic horizon 6 to 154 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0285200
Std Longitude: 119.2528730

Latitude: 37 degrees 1 minutes 42.59 seconds north
Longitude: 119 degrees 15 minutes 10.35 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 299609 meters
UTM Northing: 4100410 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: colluvium derived from granodiorite over residuum weathered from granodiorite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018CA019016 **Pedon ID:** S2018CA019016

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
17.0	1,203.0	19						well		

A--0 to 6 centimeters (0.0 to 2.4 inches); grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2), moist; 62 percent sand; 10 percent clay; moderate thick platy structure; slightly hard, very friable, nonsticky, nonplastic; common very fine roots throughout and common fine roots throughout; common very fine irregular and common fine irregular pores; noneffervescent; strongly acid, pH 5.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N06273

BAt--6 to 39 centimeters (2.4 to 15.4 inches); pale brown (10YR 6/3) fine sandy loam, brown (7.5YR 4/4), moist; 62 percent sand; 14 percent clay; moderate medium subangular blocky structure; moderately hard, firm, slightly sticky, slightly plastic; common very fine roots throughout and very few medium roots throughout and few fine roots throughout; common very fine irregular and common fine irregular pores; 5 percent clay films on all faces of peds; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N06274

Bt1--39 to 63 centimeters (15.4 to 24.8 inches); yellowish red (5YR 5/6) sandy clay loam, dark red (2.5YR 3/6), moist; 58 percent sand; 24 percent clay; moderate medium angular blocky structure; very hard, very firm, moderately sticky, moderately plastic; very few medium roots throughout and common fine roots throughout and very few coarse roots throughout; common very fine tubular pores; 10 percent clay films on all faces of peds; noneffervescent; strongly acid, pH 5.2, pH indicator solutions; clear wavy boundary. Lab sample # 18N06275

Bt2--63 to 154 centimeters (24.8 to 60.6 inches); yellowish red (5YR 4/6) sandy loam, dark red (2.5YR 3/6), moist; 60 percent sand; 18 percent clay; weak medium angular blocky structure; moderately hard, very firm, slightly sticky, slightly plastic; very few medium roots throughout; 3 percent clay films on all faces of peds; noneffervescent; strongly acid, pH 5.2, pH indicator solutions. Lab sample # 18N06276

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Jul 31 2018
Describer: Cathy Scott
NEON Plot ID: SOAP_019
Site ID: S2018CA019019

Pedon ID: S2018CA019019
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2071
Soil Name as Described/Sampled: Entic Humixerepts
Classification: Sandy-skeletal, mixed, mesic Entic Humixerepts

Soil Name as Correlated:

Classification:
Pedon Type: undefined observation
Pedon Purpose: laboratory sampling site
Taxon Kind: family
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains
Physiographic Section: Sierra Nevada
State Physiographic Area:
Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank of None Assigned
Upslope Shape: convex
Cross Slope Shape: linear
Particle Size Control Section: 37 to 112 cm.

Description origin: NASIS
Diagnostic Features: umbric epipedon 12 to 46 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Dinkey Creek, California
Std Latitude: 37.0307170
Std Longitude: 119.2458060

Latitude: 37 degrees 1 minutes 50.50 seconds north
Longitude: 119 degrees 14 minutes 44.90 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 300243 meters
UTM Northing: 4100638 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Conifers
Existing Vegetation:
Parent Material: colluvium derived from granitoid
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 1.0 percent nonflat subrounded indurated 2- to 75-millimeter Granitoid fragments and 1.0 percent nonflat subrounded indurated 75- to 250-millimeter Granitoid fragments and 2.0 percent nonflat subrounded indurated 250- to 600-millimeter Granitoid fragments and 1.0 percent nonflat subrounded indurated 600- to 1000-millimeter Granitoid fragments

Description database: KSSL

Cont. Site ID: S2018CA019019 **Pedon ID:** S2018CA019019

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
25.0	1,186.0	257						somewhat excessively		

Oi--0 to 12 centimeters (0.0 to 4.7 inches); slightly decomposed plant material, black (7.5YR 2.5/1), moist; clear wavy boundary. Lab sample # 18N06277

A--12 to 20 centimeters (4.7 to 7.9 inches); dark grayish brown (10YR 4/2) loamy sand, very dark brown (10YR 2/2), moist; weak medium granular structure; many very fine roots throughout and common fine roots throughout; many very fine irregular pores; 1 percent nonflat subangular indurated 75 to 250-millimeter Granitoid fragments and 1 percent nonflat subangular indurated 250 to 600-millimeter Granitoid fragments and 10 percent nonflat subangular indurated 2 to 75-millimeter Granitoid fragments; clear wavy boundary. Lab sample # 18N06278

Bw1--20 to 46 centimeters (7.9 to 18.1 inches); brown (7.5YR 5/3) very stony loamy sand, dark brown (7.5YR 3/3), moist; weak medium subangular blocky structure; many very fine roots throughout and common medium roots throughout and common fine roots throughout and common coarse roots throughout; common very fine irregular and common fine tubular pores; 5 percent nonflat subangular very strongly cemented 75 to 250-millimeter Granitoid fragments and 5 percent nonflat subangular very strongly cemented 600 to 1000-millimeter Granitoid fragments and 10 percent nonflat subangular very strongly cemented 2 to 75-millimeter Granitoid fragments and 15 percent nonflat subangular very strongly cemented 250 to 600-millimeter Granitoid fragments; clear wavy boundary. Lab sample # 18N06279

Bw2--46 to 79 centimeters (18.1 to 31.1 inches); brown (7.5YR 5/3) very bouldery loamy sand, dark brown (7.5YR 3/4), moist; weak medium subangular blocky structure; common very fine roots throughout and common very coarse roots throughout and common medium roots throughout and common fine roots throughout and common coarse roots throughout; common very fine irregular and common very fine tubular pores; 10 percent nonflat subangular very strongly cemented 75 to 250-millimeter Granitoid fragments and 10 percent nonflat subangular very strongly cemented 2 to 75-millimeter Granitoid fragments and 15 percent nonflat subangular very strongly cemented 250 to 600-millimeter Granitoid fragments and 15 percent nonflat subangular very strongly cemented 600 to 1000-millimeter Granitoid fragments; clear wavy boundary. Lab sample # 18N06280

C--79 to 110 centimeters (31.1 to 43.3 inches); brown (7.5YR 5/3) very bouldery loamy sand, dark brown (7.5YR 3/4), moist; massive; common very coarse roots throughout and common medium roots throughout and common fine roots throughout and common coarse roots throughout; many very fine irregular pores; 5 percent nonflat subangular very strongly cemented 2 to 75-millimeter Granitoid fragments and 10 percent nonflat subangular very strongly cemented 75 to 250-millimeter Granitoid fragments and 15 percent nonflat subangular very strongly cemented 600 to 1000-millimeter Granitoid fragments and 15 percent nonflat subangular very strongly cemented 250 to 600-millimeter Granitoid fragments. Lab sample # 18N06281

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Jul 31 2018
Describer: Julie Baker
NEON Plot ID: SOAP_025
Site ID: S2018CA019025

Pedon ID: S2018CA019025
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2072
Soil Name as Described/Sampled: Lithic Humixerepts
Classification: Loamy, mixed, superactive, mesic Lithic Humixerepts

Soil Name as Correlated:

Classification:
Pedon Type: undefined observation
Pedon Purpose: laboratory sampling site
Taxon Kind: family
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains
Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank of mountain slope on backslope of mountainflank of mountains
Upslope Shape: convex
Cross Slope Shape: convex

Particle Size Control Section: 0 to 12 cm.
Description origin: NASIS
Diagnostic Features: umbric epipedon 0 to 12 cm.
lithic contact 12 to cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0377500
Std Longitude: 119.2583630

Latitude: 37 degrees 2 minutes 15.82 seconds north
Longitude: 119 degrees 15 minutes 30.11 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 299145 meters
UTM Northing: 4101445 meters

Primary Earth Cover: Shrub cover
Secondary Earth Cover: Native shrubs
Existing Vegetation:
Parent Material: slope alluvium derived from granite over residuum weathered from granite
Bedrock Kind: Granite
Bedrock Depth: 12 centimeters
Bedrock Hardness: very strongly cemented
Bedrock Fracture Interval: 200 centimeters or more
Surface Fragments:
Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
12	200	bedrock, lithic	Very strongly cemented

Cont. Site ID: S2018CA019025 **Pedon ID:** S2018CA019025

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
45.0	1,108.0	310						somewhat excessively		

A1--0 to 8 centimeters (0.0 to 3.1 inches); brown (10YR 5/3) gravelly loamy coarse sand, dark brown (10YR 3/3), moist; 80 percent sand; 6 percent clay; moderate medium granular, and moderate coarse granular structure; soft, friable, nonsticky, nonplastic; many very fine roots throughout; many very fine irregular and common fine irregular pores; 25 percent nonflat subangular strongly cemented 2 to 75-millimeter Granite fragments; noneffervescent; strongly acid, pH 5.4, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N06282

A2--8 to 12 centimeters (3.1 to 4.7 inches); brown (10YR 5/3) very channery sandy loam, dark brown (10YR 3/3), moist; 75 percent sand; 8 percent clay; moderate very thick platy structure; slightly hard, friable, nonsticky, nonplastic; common very fine roots throughout; common medium tubular and common fine tubular pores; 25 percent nonflat subangular strongly cemented 2 to 75-millimeter Granite fragments and 25 percent flat subangular strongly cemented 2 to 150-millimeter Granite fragments; noneffervescent; strongly acid, pH 5.4, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N06283

R--12 to 200 centimeters (4.7 to 78.7 inches); common fine roots top of horizon; .

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Andrew Paolucci
NEON Plot ID: SOAP_026
Site ID: S2018CA019026

Pedon ID: S2018CA019026

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2073
Soil Name as Described/Sampled: Lithic Humixerepts
Classification: Loamy-skeletal, mixed, superactive, mesic Lithic Humixerepts
Soil Name as Correlated:

Classification:
Pedon Type: undefined observation
Pedon Purpose: laboratory sampling site
Taxon Kind: family
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains
Physiographic Section: Sierra Nevada
State Physiographic Area:

Local Physiographic Area: Soaproot
Geomorphic Setting: on backslope of mountainflank, upper third of mountains
on backslope of mountainflank, upper third of mountain slope
Upslope Shape: linear
Cross Slope Shape: concave

Particle Size Control Section: 25 to 41 cm.

Description origin: NASIS
Diagnostic Features: umbric epipedon 0 to 41 cm.
lithic contact 41 to 200 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
Map Unit: 166 -- Tollhouse family-Rock outcrop complex, 30 to 60 percent slopes
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0302640
Std Longitude: 119.2704680

Latitude: 37 degrees 1 minutes 48.87 seconds north
Longitude: 119 degrees 16 minutes 13.69 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 298048 meters
UTM Northing: 4100640 meters

Primary Earth Cover: Shrub cover
Secondary Earth Cover: Native shrubs
Existing Vegetation:
Parent Material: colluvium andresiduum derived from granodiorite
Bedrock Kind: Granodiorite

Bedrock Depth: 41 centimeters

Bedrock Hardness: very strongly cemented
Bedrock Fracture Interval: 100 to less than 200 centimeters

Surface Fragments: 5.0 percent nonflat subangular very strongly cemented 2- to 75-millimeter Granodiorite fragments and 1.0 percent nonflat subangular very strongly cemented 75- to 250-millimeter Granodiorite fragments and 7.0 percent nonflat subangular indurated 250- to 600-millimeter Granodiorite fragments and 3.0 percent nonflat subangular indurated 600- to 3000-millimeter Granodiorite fragments

Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
41	200	bedrock, lithic	Very strongly cemented

Cont. Site ID: S2018CA019026 **Pedon ID:** S2018CA019026

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
17.0	1,247.0	78						somewhat excessively		

A--0 to 9 centimeters (0.0 to 3.5 inches); dark grayish brown (10YR 4/2) crushed very gravelly coarse sandy loam, very dark grayish brown (10YR 3/2) crushed, moist; 72 percent sand; 21 percent silt; 5 percent clay; weak medium subangular blocky, and weak very fine granular structure; slightly hard, friable, Noncemented, slightly sticky, nonplastic; common very fine roots throughout; common very fine interstitial and few medium irregular and common fine irregular pores; 5 percent nonflat subangular very strongly cemented 75 to 250-millimeter Granodiorite fragments and 5 percent nonflat subangular very strongly cemented 20 to 75-millimeter Granodiorite fragments and 25 percent nonflat subangular very strongly cemented 2 to 20-millimeter Granodiorite fragments; 8.5 NaF pH; noneffervescent, by HCl, 1 normal; strongly acid, pH 5.4, pH meter; clear wavy boundary. Lab sample # 18N06284

Bw--9 to 41 centimeters (3.5 to 16.1 inches); brown (10YR 5/3) crushed very cobbly sandy loam, very dark grayish brown (10YR 3/2) crushed, moist; 68 percent sand; 25 percent silt; 7 percent clay; weak medium subangular blocky parts to weak fine subangular blocky structure; soft, very friable, Noncemented, slightly sticky, nonplastic; common very fine roots throughout and very few medium roots throughout and few fine roots throughout; few very fine tubular and common very fine interstitial and common fine irregular pores; 3 percent nonflat subangular indurated 250 to 600-millimeter Granodiorite fragments and 5 percent nonflat subangular very strongly cemented 20 to 75-millimeter Granodiorite fragments and 15 percent nonflat subangular very strongly cemented 75 to 250-millimeter Granodiorite fragments and 20 percent nonflat subangular very strongly cemented 2 to 20-millimeter Granodiorite fragments; 8.5 NaF pH; noneffervescent, by HCl, 1 normal; strongly acid, pH 5.5, pH meter; abrupt irregular boundary. Lab sample # 18N06285

R--41 to 200 centimeters (16.1 to 78.7 inches); very strongly cemented Granodiorite bedrock, fractured at intervals of 100 to less than 200 centimeters; Very strongly cemented; very few very fine roots top of horizon and common medium roots top of horizon and very few fine roots top of horizon; noneffervescent, by HCl, 1 normal.

PEDON DESCRIPTION -- NEON Site SOAP

Print Date: Oct 21 2018
Description Date: Aug 1 2018
Describer: Julie Baker
NEON Plot ID: SOAP_028
Site ID: S2018CA019028

Pedon ID: S2018CA019028
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2074
Soil Name as Described/Sampled: Holland
Classification: Fine-loamy, mixed, active, mesic Ultic Haploxeralfs

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division: Pacific Mountain
Physiographic Province: Cascade-Sierra Mountains
Physiographic Section: Sierra Nevada
State Physiographic Area:
Local Physiographic Area: Soaproot
Geomorphic Setting: on shoulder of mountainflank of mountain slope on shoulder of mountainflank of mountains
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 28 to 78 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 28 cm.
argillic horizon 28 to 142 cm.

Country: United States
State: California
County: Fresno
MLRA: 22A -- Sierra Nevada Mountains
Soil Survey Area: CA750 -- Sierra National Forest Area Parts of Fresno, California
2-SON -- Sonora, California
Map Unit:
Pit Location:
Quad Name: Shaver Lake, California
Std Latitude: 37.0253100
Std Longitude: 119.2733760

Latitude: 37 degrees 1 minutes 31.03 seconds north
Longitude: 119 degrees 16 minutes 24.15 seconds west
Datum: WGS84
UTM Zone: 11
UTM Easting: 297776 meters
UTM Northing: 4100097 meters

Primary Earth Cover: Shrub cover
Secondary Earth Cover: Native shrubs
Existing Vegetation:
Parent Material: residuum weathered from granite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018CA019028 **Pedon ID:** S2018CA019028

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
22.0	1,297.0	44						well		

Oi--0 to 2 centimeters (0.0 to 0.8 inches); slightly decomposed plant material; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N06286

A--2 to 14 centimeters (0.8 to 5.5 inches); sandy loam; 65 percent sand; 9 percent clay; weak very thick platy parts to moderate fine subangular blocky structure; slightly hard, firm, slightly sticky, slightly plastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout; common very fine tubular and common very fine irregular and common medium tubular pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Granite fragments; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. Lab sample # 18N06287

Bw--14 to 28 centimeters (5.5 to 11.0 inches); loam; 45 percent sand; 14 percent clay; moderate coarse subangular blocky structure; moderately hard, firm, moderately sticky, slightly plastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout and common coarse roots throughout; common very fine irregular and common medium tubular and common fine tubular pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Granite fragments; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. Lab sample # 18N06288

Bt1--28 to 55 centimeters (11.0 to 21.7 inches); loam; 45 percent sand; 22 percent clay; moderate coarse subangular blocky structure; hard, very firm, moderately sticky, slightly plastic; common very fine roots throughout and common very coarse roots throughout and common medium roots throughout and common fine roots throughout; common very fine irregular and common medium tubular and common fine tubular pores; 5 percent distinct clay films on all faces of peds; 5 percent nonflat subrounded indurated 2 to 75-millimeter Granite fragments; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. Lab sample # 18N06289

Bt2--55 to 78 centimeters (21.7 to 30.7 inches); clay loam; 40 percent sand; 31 percent clay; moderate medium prismatic structure; very hard, very firm, very sticky, moderately plastic; few very fine roots throughout and few fine roots throughout; common very fine irregular and few medium tubular and common fine tubular pores; 20 percent distinct clay films on all faces of peds; 6 percent nonflat subrounded indurated 2 to 75-millimeter Granite fragments; noneffervescent; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. Lab sample # 18N06290

Bt3--78 to 142 centimeters (30.7 to 55.9 inches); clay loam; 40 percent sand; 33 percent clay; moderate coarse prismatic structure; very hard, extremely firm, very sticky, very plastic; few very fine roots throughout and few fine roots throughout; common very fine irregular and few medium tubular and few fine tubular pores; 30 percent distinct clay films on all faces of peds; 10 percent nonflat subrounded indurated 2 to 75-millimeter Granite fragments; noneffervescent; strongly acid, pH 5.2, pH indicator solutions; gradual smooth boundary. Lab sample # 18N06291

BCt--142 to 178 centimeters (55.9 to 70.1 inches); loam; 45 percent sand; 10 percent clay; hard, very firm, nonsticky, nonplastic; few fine roots throughout; few very fine irregular and few fine irregular pores; 3 percent faint clay bridges between sand grains; 10 percent nonflat subrounded indurated 2 to 75-millimeter Granite fragments; noneffervescent; strongly acid, pH 5.2, pH indicator solutions.