PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 19 2018
Describer: Mike Kolman
NEON Plot ID: PUUM_004

Site ID: S2018HI001004

Pedon ID: S2018HI001004

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2288
Soil Name as Described/Sampled: Kopua
Classification: Hydrous, ferrihydritic, isothermic Lithic Hydrudands

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of ash field on lava flow on mauna loa shield volcano
Upslope Shape: linear
Cross Slope Shape: concave
Particle Size Control Section: 0 to 50 cm.
Description origin: NASIS
Diagnostic Features: andic soil properties 0 to 30 cm.
umbric epipedon 0 to 30 cm.
cambic horizon 8 to 30 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 651 -- Keei slightly decomposed plant material, 3 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5577800
Std Longitude: -155.2302900

Latitude: 19 degrees 33 minutes 28.00 seconds north
Longitude: 155 degrees 13 minutes 49.00 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: basic volcanic ash
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018HI001004 **Pedon ID:** S2018HI001004

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
4.0	1,117.6	70	16.9			6,579	365	well		

A--0 to 8 centimeters (0.0 to 3.1 inches); very dark brown (10YR 2/2) highly organic hydrous silt loam; 20 percent clay; strong fine granular, and strong medium granular structure; friable, slightly sticky, slightly plastic; weakly smeary; fine roots and coarse roots; very fine vesicular and fine vesicular pores; clear wavy boundary. Lab sample # 18N05220

Bw--8 to 30 centimeters (3.1 to 11.8 inches); dark brown (7.5YR 3/2) hydrous silty clay loam; 32 percent clay; weak very fine subangular blocky structure; firm, moderately sticky, moderately plastic; moderately smeary; very fine roots; very fine interstitial pores; 2 percent nonflat subrounded strongly cemented 2 to 5-millimeter Cinders and 2 percent nonflat subrounded strongly cemented 5 to 20-millimeter Cinders and 5 percent nonflat subrounded strongly cemented 20 to 75-millimeter Cinders and 20 percent nonflat subrounded weakly cemented 2 to 20-millimeter Charcoal fragments. Lab sample # 18N05221

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 21 2018
Describer: Jacqueline Vega
NEON Plot ID: PUUM_006

Site ID: S2018HI001006

Pedon ID: S2018HI001006

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2289
Soil Name as Described/Sampled: Kau
Classification: Fragmental, isotic, isomesic Typic Udorthents

Soil Name as Correlated:

Classification:
Pedon Type: taxadjunct to the series
Pedon Purpose: laboratory sampling site
Taxon Kind: taxadjunct
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of ash field on lava flow on mauna loa shield volcano
Upslope Shape: concave
Cross Slope Shape: convex
Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: hemic soil materials 0 to 4 cm.
ochric epipedon 4 to 12 cm.
andic soil properties 4 to 27 cm.
lithologic discontinuity 12 to 30 cm.
cambic horizon 12 to 27 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 615 -- Kau hydrous silt loam, 3 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5781900
Std Longitude: -155.3182100

Latitude: 19 degrees 34 minutes 41.50 seconds north
Longitude: 155 degrees 19 minutes 5.80 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: basic volcanic ash over aa lava
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 2.0 percent nonflat angular very strongly cemented 75- to 250-millimeter Aa lava fragments and 2.0 percent nonflat angular very strongly cemented 250- to 1000-millimeter Aa lava fragments

Description database: KSSL

Cont. Site ID: S2018HI001006 **Pedon ID:** S2018HI001006

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
3.0	1,698.5		14.2			2,555	365	well		

Oe--0 to 4 centimeters (0.0 to 1.6 inches); moderately decomposed plant material; nonsticky, nonplastic; very fine roots and fine roots; clear smooth boundary.

A--4 to 12 centimeters (1.6 to 4.7 inches); very dark brown (7.5YR 2.5/2) highly organic hydrous silt loam; 15 percent clay; weak fine granular structure; very friable, slightly sticky, moderately plastic; weakly smeary; very fine roots and fine roots and coarse roots; 5 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments; gradual wavy boundary. Lab sample # 18N05222

2Bw--12 to 27 centimeters (4.7 to 10.6 inches); 60 percent very dark brown (7.5YR 2.5/2) and 40 percent dark reddish brown (5YR 3/4) cobbly highly organic hydrous loam; 20 percent clay; weak fine granular, and weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; weakly smeary; very fine roots and medium roots and fine roots and coarse roots; 20 percent distinct; 10 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments and 20 percent nonflat subangular very strongly cemented 75 to 250-millimeter Aa lava fragments; gradual wavy boundary. Lab sample # 18N05223

3C--27 to 30 centimeters (10.6 to 11.8 inches); cobbles; loose, nonsticky, nonplastic; 20 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments and 80 percent nonflat subangular very strongly cemented 75 to 250-millimeter Aa lava fragments.

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 19 2018
Describer: Mike Kolman
NEON Plot ID: PUUM_007
Site ID: S2018HI001007
Pedon ID: S2018HI001007
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2290
Soil Name as Described/Sampled: Kopua
Classification: Hydrous, ferrihydritic, isothermic Lithic Hydrudands
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on backslope of ash field on lava flow on mauna loa shield volcano
Upslope Shape: concave
Cross Slope Shape: convex
Particle Size Control Section: 0 to 50 cm.
Description origin: NASIS
Diagnostic Features: sapric soil materials 0 to 3 cm.
andic soil properties 3 to 30 cm.
umbric epipedon 3 to 30 cm.
cambic horizon 12 to 30 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 651 -- Keei slightly decomposed plant material, 3 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5541400
Std Longitude: -155.2288700
Latitude: 19 degrees 33 minutes 14.90 seconds north
Longitude: 155 degrees 13 minutes 43.90 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:
Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: basic volcanic ash
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018HI001007 **Pedon ID:** S2018HI001007

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
7.0	1,118.3	330	16.9			6,490	365	well		

Oa--0 to 3 centimeters (0.0 to 1.2 inches); very dark brown (10YR 2/2) highly decomposed plant material; moderate medium granular, and moderate coarse granular structure; very friable, nonsticky, nonplastic; diffuse wavy boundary. Lab sample # 18N05224. Decomposed plant leaves that brake down to highly decomposed plant materials.

A--3 to 12 centimeters (1.2 to 4.7 inches); black (10YR 2/1) highly organic hydrous silt loam; 18 percent clay; moderate medium granular, and moderate fine granular structure; friable, slightly sticky, slightly plastic; weakly smeary; fine roots and coarse roots; very fine vesicular pores; clear wavy boundary. Lab sample # 18N05225

Bw--12 to 30 centimeters (4.7 to 11.8 inches); dark brown (7.5YR 3/2) hydrous silt loam; 25 percent clay; moderate medium subangular blocky, and moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; weakly smeary; very fine roots and medium roots; very fine tubular and very fine irregular pores; . Lab sample # 18N05226

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 19 2018
Describer: Jacqueline Vega
NEON Plot ID: PUUM_010

Site ID: S2018HI001010

Pedon ID: S2018HI001010

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2291
Soil Name as Described/Sampled: Kulani
Classification: Hydrous, ferrihydritic, isomesic Typic Placudands

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of ash field on lava flow on mauna loa shield volcano
Upslope Shape: concave
Cross Slope Shape: convex
Particle Size Control Section: 0 to 100 cm.

Description origin: NASIS

Diagnostic Features: hemic soil materials 0 to 2 cm.
andic soil properties 2 to 30 cm.
umbric epipedon 2 to 26 cm.
cambic horizon 13 to 30 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 616 -- Kahaluu highly decomposed plant material, 3 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5647300
Std Longitude: -155.3138100

Latitude: 19 degrees 35 minutes 57.80 seconds north
Longitude: 155 degrees 18 minutes 49.30 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: basic volcanic ash over aa lava
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 1.0 percent nonflat subangular very strongly cemented 75- to 250-millimeter Aa lava fragments and 1.0 percent nonflat subangular very strongly cemented 250- to 1000-millimeter Aa lava fragments

Description database: KSSL

Cont. Site ID: S2018HI001010 **Pedon ID:** S2018HI001010

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	1,682.4		14.1			2,565	365	well		

Oe--0 to 2 centimeters (0.0 to 0.8 inches); black (7.5YR 2.5/1) moderately decomposed plant material; nonsticky, nonplastic; very fine roots and fine roots; clear smooth boundary.

A--2 to 13 centimeters (0.8 to 5.1 inches); very dark brown (7.5YR 2.5/2) hydrous silt loam; 15 percent clay; moderate fine granular structure; very friable, slightly sticky, slightly plastic; weakly smeary; very fine roots and medium roots and fine roots; gradual wavy boundary. Lab sample # 18N05227

Bw1--13 to 26 centimeters (5.1 to 10.2 inches); 80 percent very dark brown (7.5YR 2.5/2) and 20 percent 5YR 3/6 (5YR 3/6) cobbly hydrous silt loam; 15 percent clay; moderate fine subangular blocky structure; very friable, slightly sticky, slightly plastic; weakly smeary; very fine roots and very fine roots and fine roots and fine roots and ; 10 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments and 15 percent nonflat subangular very strongly cemented 75 to 250-millimeter Aa lava fragments; gradual wavy boundary. Lab sample # 18N05228

Bw2/2C--26 to 30 centimeters (10.2 to 11.8 inches); 80 percent very dark brown (7.5YR 2.5/2) and 20 percent 5YR 3/6 (5YR 3/6) very cobbly hydrous loam; 25 percent clay; moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; weakly smeary; 10 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments and 25 percent nonflat subangular very strongly cemented 75 to 250-millimeter Aa lava fragments. Lab sample # 18N05229

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 21 2018
Describer: Jacqueline Vega
NEON Plot ID: PUUM_014

Site ID: S2018HI001014

Pedon ID: S2018HI001014

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2292
Soil Name as Described/Sampled: Lalaau
Classification: Euic, isomesic Typic Udifolists

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of ash field on lava flow on mauna loa shield volcano
Upslope Shape: concave
Cross Slope Shape: convex
Particle Size Control Section: 0 to 27 cm.

Description origin: NASIS
Diagnostic Features: hemic soil materials 0 to 1 cm.
sapric soil materials 1 to 27 cm.
folistic epipedon 1 to 27 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 616 -- Kahaluu highly decomposed plant material, 3 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5875200
Std Longitude: -155.3398600

Latitude: 19 degrees 35 minutes 15.10 seconds north
Longitude: 155 degrees 20 minutes 23.50 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: organic material over aa lava
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 5.0 percent nonflat angular very strongly cemented 75- to 250-millimeter Aa lava fragments and 2.0 percent nonflat angular very strongly cemented 250- to 1000-millimeter Aa lava fragments

Description database: KSSL

Cont. Site ID: S2018HI001014 **Pedon ID:** S2018HI001014

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	1,798.5		13.7			2,235	365	well		

Oe--0 to 1 centimeters (0.0 to 0.4 inches); moderately decomposed plant material; massive; nonsticky, nonplastic; clear smooth boundary.

Oa1--1 to 13 centimeters (0.4 to 5.1 inches); silt loam, highly decomposed plant material; massive parts to weak fine granular; very friable, moderately sticky, slightly plastic; weakly smeary; very fine roots and fine roots and coarse roots; gradual wavy boundary. Lab sample # 18N05230

Oa2--13 to 27 centimeters (5.1 to 10.6 inches); silt loam, highly decomposed plant material; massive; very friable, slightly sticky, slightly plastic; weakly smeary; fine roots; 3 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments and 8 percent nonflat subangular very strongly cemented 75 to 250-millimeter Aa lava fragments; abrupt wavy boundary. Lab sample # 18N05231

2C--27 to 30 centimeters (10.6 to 11.8 inches); stones; 25 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments and 75 percent nonflat subangular very strongly cemented 75 to 250-millimeter Aa lava fragments.

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 19 2018
Describer: Mike Kolman
NEON Plot ID: PUUM_015

Site ID: S2018HI001015

Pedon ID: S2018HI001015

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2293
Soil Name as Described/Sampled: Kopua
Classification: Hydrous, ferrihydritic, isothermic Lithic Hydrudands

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of ash field on lava flow on mauna loa shield volcano
Upslope Shape: convex
Cross Slope Shape: concave
Particle Size Control Section: 0 to 50 cm.

Description origin: NASIS

Diagnostic Features: sapric soil materials 0 to 5 cm.
andic soil properties 5 to 30 cm.
umbric epipedon 5 to 30 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 613 -- Kiloa extremely cobbly highly decomposed plant material, 3 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5609200
Std Longitude: -155.2497100

Latitude: 19 degrees 33 minutes 39.30 seconds north
Longitude: 155 degrees 14 minutes 59.00 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: basic volcanic ash
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 4.0 percent nonflat subrounded strongly cemented 5- to 20-millimeter Cinders

Description database: KSSL

Cont. Site ID: S2018HI001015 **Pedon ID:** S2018HI001015

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	1,208.5	134	16.5			4,587	365	well		

Oa--0 to 5 centimeters (0.0 to 2.0 inches); very dark brown (7.5YR 2.5/2) highly decomposed plant material; massive; medium roots and fine roots; very fine vesicular and fine vesicular pores; clear smooth boundary. Lab sample # 18N05232

A--5 to 30 centimeters (2.0 to 11.8 inches); dark brown (7.5YR 3/2) highly organic hydrous silt loam; 25 percent clay; strong fine granular structure; very friable, slightly sticky, slightly plastic; weakly smeary; very coarse roots and medium roots and fine roots; very fine interstitial pores; 2 percent nonflat subangular very strongly cemented 2 to 5-millimeter Cinders and 2 percent nonflat subangular very strongly cemented 5 to 20-millimeter Cinders. Lab sample # 18N05233

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 19 2018
Describer: Jacqueline Vega
NEON Plot ID: PUUM_031

Site ID: S2018HI001031

Pedon ID: S2018HI001031

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2294
Soil Name as Described/Sampled: Kulani
Classification: Hydrous, ferrihydritic, isomesic Typic Placudands

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of ash field on lava flow on mauna loa shield volcano
Upslope Shape: convex
Cross Slope Shape: concave
Particle Size Control Section: 0 to 100 cm.
Description origin: NASIS
Diagnostic Features: hemic soil materials 0 to 1 cm.
andic soil properties 1 to 30 cm.
umbric epipedon 1 to 30 cm.
cambic horizon 13 to 30 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 519 -- Lalaau very cobbly highly decomposed plant material, 2 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5535100
Std Longitude: -155.3192300

Latitude: 19 degrees 33 minutes 12.60 seconds north
Longitude: 155 degrees 19 minutes 9.20 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: basic volcanic ash
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018HI001031 **Pedon ID:** S2018HI001031

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
4.0	1,762.3		13.6			2,383	365	well		

Oe--0 to 1 centimeters (0.0 to 0.4 inches); moderately decomposed plant material; massive; nonsticky, nonplastic; clear smooth boundary.

A--1 to 13 centimeters (0.4 to 5.1 inches); black (7.5YR 2.5/1) hydrous silt loam; 15 percent clay; weak medium granular structure; very friable, slightly sticky, slightly plastic; weakly smeary; very fine roots and medium roots and fine roots; gradual wavy boundary. Lab sample # 18N05234

Bw--13 to 30 centimeters (5.1 to 11.8 inches); 90 percent very dark brown (7.5YR 2.5/3) and 10 percent yellowish red (5YR 4/6) gravelly hydrous loam; 20 percent clay; weak fine granular structure; friable, slightly sticky, moderately plastic; weakly smeary; medium roots and fine roots; 2 percent nonflat subangular weakly cemented 5 to 20-millimeter Pumice fragments and 10 percent nonflat subangular very strongly cemented 2 to 75-millimeter Aa lava fragments and 10 percent nonflat subrounded very weakly cemented 2 to 75-millimeter Charcoal fragments and 15 percent nonflat subangular very strongly cemented 75 to 250-millimeter Aa lava fragments. Lab sample # 18N05235

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 21 2018
Describer: Mike Kolman
NEON Plot ID: PUUM_032

Site ID: S2018HI001032

Pedon ID: S2018HI001032

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2295
Soil Name as Described/Sampled: Kahaluu
Classification: Euic, isomesic, micro Lithic Udifolists

Soil Name as Correlated:

Classification:
Pedon Type: taxadjunct to the series
Pedon Purpose: laboratory sampling site
Taxon Kind: taxadjunct
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of lava flow on mauna loa shield volcano
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 0 to 10 cm.

Description origin: NASIS

Diagnostic Features: sapric soil materials 0 to 10 cm.
lithic contact 10 to 30 cm.
lithologic discontinuity 10 to 30 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows

Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii

Map Unit: 519 -- Lalaau very cobbly highly decomposed plant material, 2 to 10 percent slopes

Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5505400
Std Longitude: -155.3162100

Latitude: 19 degrees 33 minutes 1.90 seconds north

Longitude: 155 degrees 18 minutes 58.30 seconds west

Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: organic material over pahoehoe lava

Bedrock Kind: Pahoehoe lava

Bedrock Depth: 10 centimeters

Bedrock Hardness: indurated
Bedrock Fracture Interval:
Surface Fragments: 10.0 percent nonflat subangular very strongly cemented 75- to 250-millimeter Pahoehoe lava fragments and 50.0 percent nonflat subangular very strongly cemented 250- to 1000-millimeter Pahoehoe lava fragments

Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
10	30	bedrock, lithic	Very strongly cemented

Cont. Site ID: S2018HI001032 **Pedon ID:** S2018HI001032

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
7.0	1,710.0	50	14.0			2,459	365	well		

Oa--0 to 10 centimeters (0.0 to 3.9 inches); black (10YR 2/1) extremely cobbly silt loam, highly decomposed plant material; 13 percent clay; moderate very fine granular, and moderate fine granular structure; very friable, slightly sticky, slightly plastic; weakly smeary; very fine roots and fine roots and coarse roots; very fine interstitial and fine irregular pores; 25 percent nonflat subangular very strongly cemented 20 to 75-millimeter Pahoehoe lava fragments and 50 percent nonflat subangular very strongly cemented 75 to 250-millimeter Pahoehoe lava fragments; very abrupt smooth boundary. Lab sample # 18N05236

2R--10 to 30 centimeters (3.9 to 11.8 inches); indurated Pahoehoe lava bedrock; .

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 19 2018
Describer: Jacqueline Vega
NEON Plot ID: PUUM_034

Site ID: S2018HI001034

Pedon ID: S2018HI001034

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2296
Soil Name as Described/Sampled: Lalaau
Classification: Euic, isomesic Typic Udifolists

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of ash field on lava flow on mauna loa shield volcano
Upslope Shape: convex
Cross Slope Shape: concave
Particle Size Control Section: 0 to 30 cm.

Description origin: NASIS
Diagnostic Features: hemic soil materials 0 to 2 cm.
folistic epipedon 0 to 30 cm.
sapric soil materials 2 to 30 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 519 -- Lalaau very cobbly highly decomposed plant material, 2 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5490500
Std Longitude: -155.3123900

Latitude: 19 degrees 32 minutes 56.60 seconds north
Longitude: 155 degrees 18 minutes 44.60 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: organic material over aa lava
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments: 1.0 percent nonflat subangular very strongly cemented 75- to 250-millimeter Aa lava fragments and 2.0 percent nonflat subangular very strongly cemented 250- to 1000-millimeter Aa lava fragments

Description database: KSSL

Cont. Site ID: S2018HI001034 **Pedon ID:** S2018HI001034

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	1,678.0		14.0			2,530	365	well		

Oe--0 to 2 centimeters (0.0 to 0.8 inches); moderately decomposed plant material; massive; nonsticky, nonplastic; very fine roots and fine roots; clear smooth boundary.

Oa1--2 to 13 centimeters (0.8 to 5.1 inches); silt loam, highly decomposed plant material; weak fine granular structure; very friable, slightly sticky, slightly plastic; weakly smeary; very fine roots and fine roots; gradual wavy boundary. Lab sample # 18N05237

Oa2/2C--13 to 30 centimeters (5.1 to 11.8 inches); very cobbly silt loam, highly decomposed plant material; massive parts to weak fine granular; friable, slightly sticky, slightly plastic; weakly smeary; fine roots; 15 percent nonflat subangular very strongly cemented 20 to 75-millimeter Aa lava fragments and 25 percent nonflat angular very strongly cemented 75 to 250-millimeter Aa lava fragments; abrupt wavy boundary. Lab sample # 18N05238

PEDON DESCRIPTION -- NEON Site PUUM

Print Date: Aug 21 2018
Description Date: Jun 21 2018
Describer: Mike Kolman
NEON Plot ID: PUUM_036

Site ID: S2018HI001036

Pedon ID: S2018HI001036

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 18N2297
Soil Name as Described/Sampled: Lalaau
Classification: Euic, isomesic Typic Udifolists

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: laboratory sampling site
Taxon Kind: series
Associated Soils:
Physiographic Division:
Physiographic Province:
Physiographic Section:
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on summit of lava flow on mauna loa shield volcano
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section: 0 to 18 cm.
Description origin: NASIS

Diagnostic Features: hemic soil materials 0 to 18 cm.
folistic epipedon 0 to 18 cm.

Country: United States
State: Hawaii
County: Hawaii
MLRA: 162 -- Humid and Very Humid Organic Soils on Lava Flows
Soil Survey Area: HI801 -- Island of Hawaii Area, Hawaii
Map Unit: 519 -- Lalaau very cobbly highly decomposed plant material, 2 to 10 percent slopes
Pit Location:
Quad Name: Kulani, Hawaii
Std Latitude: 19.5543500
Std Longitude: -155.3233800

Latitude: 19 degrees 33 minutes 15.70 seconds north
Longitude: 155 degrees 19 minutes 24.20 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Tropical
Existing Vegetation:
Parent Material: organic material over aa lava
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2018HI001036 **Pedon ID:** S2018HI001036

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
7.0	1,792.7	60	13.6			2,301	365	well		

Oe--0 to 18 centimeters (0.0 to 7.1 inches); dark reddish brown (5YR 2.5/2) moderately decomposed plant material; moderate fine granular, and moderate medium granular structure; very friable, nonsticky, nonplastic; very fine roots and medium roots and fine roots and coarse roots; very fine interstitial and fine irregular pores; abrupt irregular boundary. Lab sample # 18N05239

2C--18 to 30 centimeters (7.1 to 11.8 inches); cobbles; very coarse irregular pores; 75 percent nonflat angular very strongly cemented 75 to 250-millimeter Aa lava fragments.