**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 17 2018
**Describer:** Dennis Mulligan
**NEON Plot ID:** BONA_001
**Site ID:** S2018AK090001

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090001
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0059
**Soil Name as Described/Sampled:** steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** convex
**Cross Slope Shape:** linear
**Particle Size Control Section:**
**Description origin:** NASIS

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1743090
**Std Longitude:** -147.4785130

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Diagnostic Features:** ochric epipedon 0 to 10 cm.
cambic horizon 10 to 25 cm.
paralithic contact 76 to 100 cm.

| Top Depth (cm) | Bottom Depth (cm) | Restriction Kind | Restriction Hardness |
|---|---|---|---|
| 76 | 100 | bedrock, paralithic | |

**Cont. Site ID:** S2018AK090001 **Pedon ID:** S2018AK090001

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 34.0 | 378.0 | 140 | | | | | | well | | |

Oe--0 to 10 centimeters (0.0 to 3.9 inches); moderately decomposed plant material; many very fine roots and many medium roots and many fine roots and many coarse roots; clear smooth boundary. Lab sample # 19N00321

Bw--10 to 25 centimeters (3.9 to 9.8 inches); silt loam; moderate medium subangular blocky structure; friable, nonsticky, nonplastic; common very fine roots and common medium roots and many fine roots and common coarse roots; 2 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments and 5 percent flat angular strongly cemented 150 to 380-millimeter Sandstone fragments; clear wavy boundary. Lab sample # 19N00322

BC--25 to 52 centimeters (9.8 to 20.5 inches); extremely channery silt loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; common medium roots and common fine roots; 25 percent flat angular strongly cemented 150 to 380-millimeter Sandstone fragments and 40 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; diffuse wavy boundary. Lab sample # 19N00323

C--52 to 76 centimeters (20.5 to 29.9 inches); extremely flaggy sandy loam; structureless massive; friable, nonsticky, nonplastic; 25 percent flat angular strongly cemented 150 to 380-millimeter Sandstone fragments and 55 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear wavy boundary. Lab sample # 19N00324

Cr--76 to 100 centimeters (29.9 to 39.4 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 18 2018
**Describer:** Dennis Mulligan
**NEON Plot ID:** BONA_002
**Site ID:** S2018AK090002

**Pedon ID:** S2018AK090002
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0060
**Soil Name as Described/Sampled:** Steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** convex
**Cross Slope Shape:** convex
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 16 cm.
cambic horizon 16 to 33 cm.

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1634124
**Std Longitude:** -147.5275269

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090002 **Pedon ID:** S2018AK090002

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 16.0 | 496.0 | 193 | | | | | | well | | |

Oe--0 to 5 centimeters (0.0 to 2.0 inches); moderately decomposed plant material; many very fine roots and common medium roots and common fine roots and many coarse roots; clear smooth boundary. Lab sample # 19N00325

A--5 to 16 centimeters (2.0 to 6.3 inches); very dark brown (7.5YR 2.5/2) broken face silt loam; 6 percent clay; moderate medium granular structure; friable, nonsticky, nonplastic; common very fine roots and common medium roots and common fine roots and common coarse roots; 10 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00326

Bw--16 to 33 centimeters (6.3 to 13.0 inches); brown (10YR 4/3) broken face channery silt loam; 6 percent clay; moderate medium subangular blocky structure; friable, nonsticky, nonplastic; common medium roots and common fine roots; 20 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; diffuse smooth boundary. Lab sample # 19N00327

C--33 to 110 centimeters (13.0 to 43.3 inches); olive brown (2.5Y 4/3) broken face channery silt loam; 6 percent clay; structureless massive; friable, nonsticky, nonplastic; common medium roots; 25 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments. Lab sample # 19N00328

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 17 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_003
**Site ID:** S2018AK090003

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090003
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0061
**Soil Name as Described/Sampled:** Histic Pergelic Cryaquept
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** concave
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.2009577
**Std Longitude:** -147.4865847

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090003 **Pedon ID:** S2018AK090003

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 34.0 | 583.0 | 322 | | | | | | well | | |

Oi--0 to 9 centimeters (0.0 to 3.5 inches); dark reddish brown (5YR 3/3) rubbed slightly decomposed plant material; many very fine roots and common medium roots and many fine roots; extremely acid, pH 4.1; clear smooth boundary. Lab sample # 19N00329

Oe--9 to 16 centimeters (3.5 to 6.3 inches); very dark brown (7.5YR 2.5/2) rubbed moderately decomposed plant material; many very fine roots and common medium roots and common fine roots; very strongly acid, pH 4.7; clear smooth boundary. Lab sample # 19N00330

A--16 to 26 centimeters (6.3 to 10.2 inches); very dark brown (10YR 2/2) broken face highly organic silt loam; 10 percent sand; 6 percent clay; weak medium granular structure; friable, nonsticky, nonplastic; common very fine roots and common medium roots and common fine roots; very strongly acid, pH 4.9; abrupt irregular boundary. Lab sample # 19N00331

Bw1--26 to 50 centimeters (10.2 to 19.7 inches); 70 percent dark grayish brown (10YR 4/2) broken face and 30 percent dark brown (10YR 3/3) broken face channery silt loam; 35 percent sand; 7 percent clay; weak fine subangular blocky structure; friable, nonsticky, nonplastic; common very fine roots and common fine roots; 25 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; very strongly acid, pH 5.0; gradual smooth boundary. Lab sample # 19N00332

Bw2--50 to 95 centimeters (19.7 to 37.4 inches); brown (10YR 4/3) broken face channery sandy loam; 50 percent sand; 6 percent clay; weak medium subangular blocky structure; friable, nonsticky, nonplastic; common very fine roots; 20 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; very strongly acid, pH 5.0; abrupt smooth boundary. Lab sample # 19N00333

Ab--95 to 105 centimeters (37.4 to 41.3 inches); very dark brown (7.5YR 2.5/2) broken face highly organic silt loam; 8 percent sand; 5 percent clay; weak medium granular structure; friable, nonsticky, nonplastic; very strongly acid, pH 4.9; abrupt smooth boundary. Lab sample # 19N00334

2C--105 to 120 centimeters (41.3 to 47.2 inches); very dark grayish brown (2.5Y 3/2) broken face channery sandy loam; 45 percent sand; 7 percent clay; very friable, nonsticky, nonplastic; 30 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; strongly acid, pH 5.2. Lab sample # 19N00335

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 19 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_007
**Site ID:** S2018AK090007

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090007
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0062
**Soil Name as Described/Sampled:** Steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** convex
**Particle Size Control Section:**
**Description origin:** NASIS

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1935447
**Std Longitude:** -147.4448096

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Diagnostic Features:** ochric epipedon 0 to 15 cm.
cambic horizon 15 to 68 cm.
paralithic contact 68 to 100 cm.

| Top Depth (cm) | Bottom Depth (cm) | Restriction Kind | Restriction Hardness |
|---|---|---|---|
| 68 | 100 | bedrock, paralithic | |

**Cont. Site ID:** S2018AK090007 **Pedon ID:** S2018AK090007

| 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 | 416.0 | 86 | | | | | | well | | |

Oe--0 to 9 centimeters (0.0 to 3.5 inches); very dark brown (7.5YR 2.5/2) rubbed moderately decomposed plant material; many very fine roots and common medium roots and common fine roots and many coarse roots; clear smooth boundary. Lab sample # 19N00336

A/E--9 to 15 centimeters (3.5 to 5.9 inches); 65 percent black (10YR 2/1) broken face and 35 percent very dark grayish brown (10YR 3/2) broken face very flaggy silt loam; weak coarse granular structure; friable, nonsticky, nonplastic; common very fine roots and common medium roots and common fine roots; 25 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments and 25 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments; clear irregular boundary. Lab sample # 19N00337

Bw--15 to 68 centimeters (5.9 to 26.8 inches); dark yellowish brown (10YR 4/4) broken face extremely channery sandy loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; common very fine roots and common fine roots; 25 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments and 60 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; abrupt irregular boundary. Lab sample # 19N00338

Cr--68 to 110 centimeters (26.8 to 43.3 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 20 2018
**Describer:** Dennis Mulligan
**NEON Plot ID:** BONA_008
**Site ID:** S2018AK090008

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090008
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0063
**Soil Name as Described/Sampled:** Steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1565240
**Std Longitude:** -147.5696990

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090008 **Pedon ID:** S2018AK090008

| 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 | 429.0 | 205 | | | | | | well | | |

Oe--0 to 12 centimeters (0.0 to 4.7 inches); moderately decomposed plant material; clear smooth boundary. Lab sample # 19N00339

Bw--12 to 37 centimeters (4.7 to 14.6 inches); silt loam; very friable, nonsticky, nonplastic; gradual smooth boundary. Lab sample # 19N00340

BC--37 to 56 centimeters (14.6 to 22.0 inches); silt loam; very friable, nonsticky, nonplastic; gradual wavy boundary. Lab sample # 19N00341

Cf--56 to 78 centimeters (22.0 to 30.7 inches); very channery fine sandy loam; very friable, nonsticky, nonplastic; 45 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear wavy boundary. Lab sample # 19N00342

2Cr--78 to 120 centimeters (30.7 to 47.2 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 19 2018
**Describer:** Dennis Mulligan
**NEON Plot ID:** BONA_010
**Site ID:** S2018AK090010

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090010
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0064
**Soil Name as Described/Sampled:** HisticPergelic Cryaquept
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on toeslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1573720
**Std Longitude:** -147.4743100

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090010 **Pedon ID:** S2018AK090010

| 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 | 256.0 | 265 | | | | | | poorly | | |

Oe--0 to 10 centimeters (0.0 to 3.9 inches); moderately decomposed plant material; clear smooth boundary. Lab sample # 19N00343

A--10 to 30 centimeters (3.9 to 11.8 inches); mucky silt loam; friable, nonsticky, nonplastic; abrupt broken boundary. Lab sample # 19N00344

Ajj/Bjj--30 to 45 centimeters (11.8 to 17.7 inches); silt loam; friable, nonsticky, nonplastic; abrupt broken boundary. Lab sample # 19N00345

Bjj/Ajj--45 to 60 centimeters (17.7 to 23.6 inches); fine sandy loam; friable, nonsticky, nonplastic; abrupt wavy boundary. Lab sample # 19N00346

Oeb--60 to 70 centimeters (23.6 to 27.6 inches); mucky peat; abrupt wavy boundary. Lab sample # 19N00347

Cjj/Ajj--70 to 95 centimeters (27.6 to 37.4 inches); silt loam; friable, nonsticky, nonplastic; clear wavy boundary. Lab sample # 19N00348

Cf--95 to 110 centimeters (37.4 to 43.3 inches); silt loam; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 18 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_013
**Site ID:** S2018AK090013

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090013
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0065
**Soil Name as Described/Sampled:** Steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** concave
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1767632
**Std Longitude:** -147.5597875

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090013 **Pedon ID:** S2018AK090013

| 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 | 555.0 | 80 | | | | | | well | | |

Oe--0 to 7 centimeters (0.0 to 2.8 inches); moderately decomposed plant material; clear smooth boundary. Lab sample # 19N00349

A--7 to 11 centimeters (2.8 to 4.3 inches); silt loam; 20 percent sand; 4 percent clay; very friable, nonsticky, nonplastic; 3 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00350

E--11 to 17 centimeters (4.3 to 6.7 inches); silt loam; 15 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 5 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00351

Bw--17 to 27 centimeters (6.7 to 10.6 inches); channery silt loam; 18 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 2 percent medium prominent irregular 5YR 3/4), moist, masses of oxidized iron with clear boundaries Throughout; 15 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; gradual smooth boundary. Lab sample # 19N00352

2C--27 to 80 centimeters (10.6 to 31.5 inches); very channery sandy loam; 60 percent sand; 4 percent clay; very friable, nonsticky, nonplastic; 55 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; gradual smooth boundary. Lab sample # 19N00353

2Cr--80 to 110 centimeters (31.5 to 43.3 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 17 2018
**Describer:** Dennis Mulligan
**NEON Plot ID:** BONA_015
**Site ID:** S2018AK090015

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090015
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0066
**Soil Name as Described/Sampled:** Steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1766500
**Std Longitude:** -147.5022680

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090015 **Pedon ID:** S2018AK090015

| 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 | 476.0 | 196 | | | | | | well | | |

Oe--0 to 7 centimeters (0.0 to 2.8 inches); moderately decomposed plant material; abrupt smooth boundary. Lab sample # 19N00354

Bw--7 to 34 centimeters (2.8 to 13.4 inches); extremely channery silt loam; 23 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 30 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments and 50 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00355

BC--34 to 63 centimeters (13.4 to 24.8 inches); extremely channery silt loam; 25 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 30 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments and 50 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; diffuse smooth boundary. Lab sample # 19N00356

2C--63 to 80 centimeters (24.8 to 31.5 inches); extremely channery sandy loam; 60 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 30 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments and 50 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear wavy boundary. Lab sample # 19N00357

2Cr--80 to 110 centimeters (31.5 to 43.3 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 17 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_016
**Site ID:** S2018AK090016

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090016
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0067
**Soil Name as Described/Sampled:** HisticPergelic Cryaquept
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** convex
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1997872
**Std Longitude:** -147.5077565

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090016 **Pedon ID:** S2018AK090016

| 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 | 661.0 | 352 | | | | | | well | | |

Oi--0 to 18 centimeters (0.0 to 7.1 inches); peat; extremely acid, pH 4.1; clear smooth boundary. Lab sample # 19N00358

A--18 to 20 centimeters (7.1 to 7.9 inches); highly organic silt loam; 16 percent sand; 5 percent clay; very friable, nonsticky, nonplastic; 1 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; very strongly acid, pH 4.8; clear smooth boundary. Lab sample # 19N00359

AB--20 to 45 centimeters (7.9 to 17.7 inches); channery silt loam; 40 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 25 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; strongly acid, pH 5.2; clear smooth boundary. Lab sample # 19N00360

Bw--45 to 75 centimeters (17.7 to 29.5 inches); very channery loam; 45 percent sand; 9 percent clay; very friable, nonsticky, nonplastic; 2 percent medium distinct irregular 5Y 4/1), moist, iron depletions with clear boundaries Throughout and 3 percent medium prominent irregular 10YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; 35 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; moderately acid, pH 5.8; clear smooth boundary. Lab sample # 19N00361

R--75 to 120 centimeters (29.5 to 47.2 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 16 2018
**Describer:** Dennis Mulligan
**NEON Plot ID:** BONA_018
**Site ID:** S2018AK090018

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090018
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0068
**Soil Name as Described/Sampled:** HisticPergelic Cryaquept
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on shoulder of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** convex
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1932430
**Std Longitude:** -147.5378460

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090018 **Pedon ID:** S2018AK090018

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 16.0 | 641.0 | 320 | | | | | | well | | |

Oe--0 to 10 centimeters (0.0 to 3.9 inches); moderately decomposed plant material; clear wavy boundary. Lab sample # 19N00362

A--10 to 12 centimeters (3.9 to 4.7 inches); channery silt loam; 20 percent sand; 6 percent clay; friable, nonsticky, nonplastic; 20 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; abrupt wavy boundary. Lab sample # 19N00363

AB--12 to 34 centimeters (4.7 to 13.4 inches); extremely flaggy silt loam; 20 percent sand; 8 percent clay; friable, nonsticky, nonplastic; 25 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments and 55 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments; clear irregular boundary. Lab sample # 19N00364

Bw--34 to 70 centimeters (13.4 to 27.6 inches); extremely channery silt loam; 25 percent sand; 8 percent clay; friable, nonsticky, nonplastic; 25 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments and 50 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments; abrupt wavy boundary. Lab sample # 19N00365

Cr--70 to 110 centimeters (27.6 to 43.3 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 17 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_019
**Site ID:** S2018AK090019

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090019
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0069
**Soil Name as Described/Sampled:** typic cryochrept
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on shoulder of None Assigned
**Upslope Shape:** convex
**Cross Slope Shape:** convex
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1982723
**Std Longitude:** -147.4814555

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090019 **Pedon ID:** S2018AK090019

| 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 | 690.0 | 338 | | | | | | well | | |

Oe--0 to 5 centimeters (0.0 to 2.0 inches); moderately decomposed plant material; abrupt smooth boundary. Lab sample # 19N00366

A--5 to 9 centimeters (2.0 to 3.5 inches); channery silt loam; 22 percent sand; 5 percent clay; very friable, nonsticky, nonplastic; 20 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00367

AB--9 to 27 centimeters (3.5 to 10.6 inches); channery silt loam; 22 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 5 percent medium distinct irregular 5YR 3/4), moist, masses of oxidized iron with clear boundaries Throughout; 20 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00368

Bw--27 to 44 centimeters (10.6 to 17.3 inches); channery silt loam; 20 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 10 percent medium distinct irregular 2.5Y 2.5/3) masses of oxidized iron with clear boundaries Throughout; 15 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00369

ABb--44 to 60 centimeters (17.3 to 23.6 inches); silt loam; 20 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 3 percent medium distinct irregular masses of oxidized iron with clear boundaries Throughout; 10 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00370

B'w--60 to 67 centimeters (23.6 to 26.4 inches); channery silt loam; 25 percent sand; 6 percent clay; friable, nonsticky, nonplastic; 25 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear smooth boundary. Lab sample # 19N00371

R--67 to 110 centimeters (26.4 to 43.3 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 20 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_021
**Site ID:** S2018AK090021

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090021
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0070
**Soil Name as Described/Sampled:** Steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on shoulder of None Assigned
**Upslope Shape:** convex
**Cross Slope Shape:** convex
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1514911
**Std Longitude:** -147.4569545

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090021 **Pedon ID:** S2018AK090021

| 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 | 445.0 | 256 | | | | | | well | | |

Oe--0 to 6 centimeters (0.0 to 2.4 inches); moderately decomposed plant material; very strongly acid, pH 4.7; abrupt smooth boundary. Lab sample # 19N00372

A--6 to 9 centimeters (2.4 to 3.5 inches); silt loam; 16 percent sand; 5 percent clay; very friable, nonsticky, nonplastic; very strongly acid, pH 4.8; clear irregular boundary. Lab sample # 19N00373

AE--9 to 14 centimeters (3.5 to 5.5 inches); very flaggy silt loam; 25 percent sand; 5 percent clay; friable, nonsticky, nonplastic; 15 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments and 45 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments; strongly acid, pH 5.4; clear irregular boundary. Lab sample # 19N00374

Bw1--14 to 29 centimeters (5.5 to 11.4 inches); very channery silt loam; 35 percent sand; 5 percent clay; very friable, nonsticky, nonplastic; 45 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; moderately acid, pH 5.7; clear smooth boundary. Lab sample # 19N00375

Bw2--29 to 58 centimeters (11.4 to 22.8 inches); very channery silt loam; 40 percent sand; 7 percent clay; very friable, nonsticky, nonplastic; 20 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments and 40 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; moderately acid, pH 5.6; very abrupt irregular boundary. Lab sample # 19N00376

R--58 to 110 centimeters (22.8 to 43.3 inches); bedrock; .

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 19 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_022
**Site ID:** S2018AK090022

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090022
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0071
**Soil Name as Described/Sampled:** HisticPergelic Cryaquept
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on toeslope of None Assigned
**Upslope Shape:** concave
**Cross Slope Shape:** linear
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1573882
**Std Longitude:** -147.4787172

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090022 **Pedon ID:** S2018AK090022

| 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 | 245.0 | 244 | | | | | | very poorly | | |

Oe--0 to 8 centimeters (0.0 to 3.1 inches); mucky peat; clear smooth boundary. Lab sample # 19N00377

A--8 to 16 centimeters (3.1 to 6.3 inches); silt loam; 18 percent sand; 6 percent clay; very friable, nonsticky, nonplastic; abrupt smooth boundary. Lab sample # 19N00378

Cg/Ajj1--16 to 40 centimeters (6.3 to 15.7 inches); silt loam; 15 percent sand; 6 percent clay; friable, nonsticky, nonplastic; 10 percent coarse prominent irregular 7.5YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; clear irregular boundary. Lab sample # 19N00379

Cg/Ojj--40 to 80 centimeters (15.7 to 31.5 inches); silt loam; 15 percent sand; 8 percent clay; friable, nonsticky, nonplastic; clear irregular boundary. Lab sample # 19N00380

Cf--80 to 110 centimeters (31.5 to 43.3 inches); silt loam; . Lab sample # 19N00381

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 18 2018
**Describer:** Dennis Mulligan
**NEON Plot ID:** BONA_023
**Site ID:** S2018AK090023

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090023
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0072
**Soil Name as Described/Sampled:** HisticPergelic Cryaquepts
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on footslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1655930
**Std Longitude:** -147.5115910

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090023 **Pedon ID:** S2018AK090023

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 20.0 | 353.0 | 60 | | | | | | well | | |

Oe--0 to 6 centimeters (0.0 to 2.4 inches); moderately decomposed plant material; clear smooth boundary. Lab sample # 19N00382

B/Ajj--6 to 21 centimeters (2.4 to 8.3 inches); silt loam; 25 percent sand; 5 percent clay; friable, nonsticky, nonplastic; 2 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments and 3 percent flat angular strongly cemented 150 to 380-millimeter Sandstone fragments; clear wavy boundary. Lab sample # 19N00383

C1--21 to 46 centimeters (8.3 to 18.1 inches); extremely channery sandy loam; 70 percent sand; 5 percent clay; friable, nonsticky, nonplastic; 25 percent flat angular strongly cemented 150 to 380-millimeter Schist fragments and 50 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear wavy boundary. Lab sample # 19N00384

C2--46 to 110 centimeters (18.1 to 43.3 inches); extremely channery sandy loam; 70 percent sand; 5 percent clay; friable, nonsticky, nonplastic; 20 percent flat angular strongly cemented 150 to 380-millimeter Sandstone fragments and 55 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments.

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 18 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_027
**Site ID:** S2018AK090027

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090027
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0073
**Soil Name as Described/Sampled:** Steese
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** on backslope of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** convex
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1628256
**Std Longitude:** -147.5960264

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090027 **Pedon ID:** S2018AK090027

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 41.0 | 477.0 | 308 | | | | | | well | | |

Oe--0 to 5 centimeters (0.0 to 2.0 inches); moderately decomposed plant material; clear smooth boundary. Lab sample # 19N00386

A/E--5 to 10 centimeters (2.0 to 3.9 inches); silt loam; 20 percent sand; 7 percent clay; friable, nonsticky, nonplastic; 5 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear wavy boundary. Lab sample # 19N00387

Bw--10 to 28 centimeters (3.9 to 11.0 inches); silt loam; 20 percent sand; 8 percent clay; friable, nonsticky, nonplastic; 3 percent medium distinct irregular 10YR 3/6), moist, masses of oxidized iron with clear boundaries Throughout; 10 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; clear irregular boundary.

2C--28 to 105 centimeters (11.0 to 41.3 inches); loam; 50 percent sand; 8 percent clay; very friable, nonsticky, nonplastic; 50 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments.

**PEDON DESCRIPTION -- NEON Site BONA**

**Print Date:** Nov 10 2018
**Description Date:** Jul 19 2018
**Describer:** Stephanie Schmit
**NEON Plot ID:** BONA_028
**Site ID:** S2018AK090028

**Country:** United States
**State:** Alaska
**County:** Fairbanks North Star Borough
**MLRA:** 231 -- Interior Alaska Highlands
**Soil Survey Area:** AK642 -- North Star Area, Alaska
AK231 -- Interior Alaska Highlands
1-FAI -- Fairbanks, Alaska

**Pedon ID:** S2018AK090028
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 19N0074
**Soil Name as Described/Sampled:** Fairbanks
**Classification:**
**Soil Name as Correlated:**
**Classification:**
**Pedon Type:**
**Pedon Purpose:** research site
**Taxon Kind:**
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:** Alaskan Province
**Physiographic Section:** Yukon-Tanana Upland section
**State Physiographic Area:**
**Local Physiographic Area:**
**Geomorphic Setting:** None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:**
**Description origin:** NASIS
**Diagnostic Features:** ? to ? cm.

**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 65.1768491
**Std Longitude:** -147.4560296

**Latitude:**
**Longitude:**
**Datum:**
**UTM Zone:**
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:**
**Secondary Earth Cover:**
**Existing Vegetation:**
**Parent Material:**
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2018AK090028 **Pedon ID:** S2018AK090028

| 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 | 271.0 | 127 | | | | | | well | | |

Oe--0 to 9 centimeters (0.0 to 3.5 inches); moderately decomposed plant material; clear smooth boundary. Lab sample # 19N00390

Oa/C--9 to 31 centimeters (3.5 to 12.2 inches); highly decomposed plant material; abrupt wavy boundary. Lab sample # 19N00391

Bw--31 to 47 centimeters (12.2 to 18.5 inches); silt loam; 45 percent sand; 5 percent clay; friable, nonsticky, nonplastic; 5 percent medium distinct irregular 7.5YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; clear smooth boundary. Lab sample # 19N00392

C1--47 to 70 centimeters (18.5 to 27.6 inches); silt loam; 60 percent sand; 4 percent clay; friable, nonsticky, nonplastic; 7 percent medium distinct irregular 10YR 3/6), moist, masses of oxidized iron with clear boundaries Throughout; 2 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments; gradual smooth boundary. Lab sample # 19N00393

C2--70 to 110 centimeters (27.6 to 43.3 inches); silt loam; 30 percent sand; 4 percent clay; friable, nonsticky, nonplastic; 5 percent fine prominent irregular 7.5YR 4/6), moist, masses of oxidized iron with clear boundaries Throughout; 15 percent flat angular strongly cemented 2 to 150-millimeter Schist fragments. Lab sample # 19N00394